

ETHNOBOTANICAL UTILIZATION OF PLANTS BY THE PEOPLE OF OMUMA (AMIMO), ORU EAST LOCAL GOVERNMENT AREA, IMO STATE, NIGERIA

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ABSTRACT

A survey of the ethnobotanical uses of plants by the people of Omuma was carried out in 2014 at Omuma (Amimo), Oru East Local Government Area, Imo State, Nigeria with a view to documenting the ethno botanical utilization of the vast indigenous plant species of this people. Plant parts (leaves, flowers, seeds, fruits and barks) were collected to ease accurate identification of plants. Some plants were identified on the field, ten locals who have resided in the village with vast indigenous knowledge contributed in no small measure in providing useful ethnobotanical information in Ibo Language through two interpreters as some could not converge their information in English Language. A total of thirty two (32) plant species were collected, photographs of plants were taken as well as plant press. These 32 indigenous plant species collected belong to 29 families. The plant habits varied from tree, shrub and herb. The percentage utilization showed that trees the most were frequently used, contributing 43.88% of the plants surveyed. This was closely followed by Herbs (34.36%) and Shrubs (18.75%). These indigenous plants were employed for diverse uses such as for food, medicine and general utilities. It is assumed that, this information on ethnobotanical uses of these plants will help to re-awaken efforts on the ecological significance of these plants as well as conservation and cultivation for optimum utilization of these nature's abundance gifts to the people of Omuma.

Key words: Ethnobotany, Imo State, utility, Omuma.

INTRODUCTION

The importance of ethnobotanical utilization of plants among diverse native people of the world cannot be overemphasized due to the increasing awareness of the vast potentials inherent in plants. In Nigeria, as well as Africa, plant utilization serves as means of income generation, medicine, food and utility. The survival and continuation of generations depend greatly on the indigenous knowledge of the people. In Nigeria, the utilization of plants varies from tribe to tribe, clan to clan, ecological locations as well as from people to people. For example, a plant used for food in Clan X may be used as medicine in Clan Y. The traditional African healing system is designated diverse names such as folk medicine, native medicine, herbal medicine and ethno medicine (Louwi *et al.*, 2002). Herbal and traditional medicine has been a major aspect of socio-cultural heritage in Africa decades even before the introduction of conventional medicine. It was once believed to be primitive and wrongly challenged by foreign religions during the colonial era in Africa

and subsequently by the conventional or Orthodox medicinal practitioners (Okigbo and Mmeka, 2006). The utilization of plants for disease control by the use of medicinal plants in community will continue to play important role in medical health care delivery in the developing countries of the world (Akharaiyi and Boboye, 2010).

Study area

The study was conducted in Omuma (Amimo) autonomous community, Imo State, Nigeria. Omuma (Amimo) is located within the southeastern part of the country and lies within longitude 6°35' and 7°25' east and latitude 5°12', and 5°56' north (Imo State Government, 2000) (Figure 1). Omuma (Amimo) has a tropical climate with two distinct seasons in a year, rainy and dry seasons. Mean annual rainfall is 2,000 mm, a humidity range of 51 and 84%, while mean temperature ranges between 25 and 34°C (Break Consultant Limited, Geomatics International Inc, and Geomatics, 1999). Omuma as a community is made up of four villages which are Umuhu, Ozuh, Etiti and Abia under one traditional ruler (Figure 1).

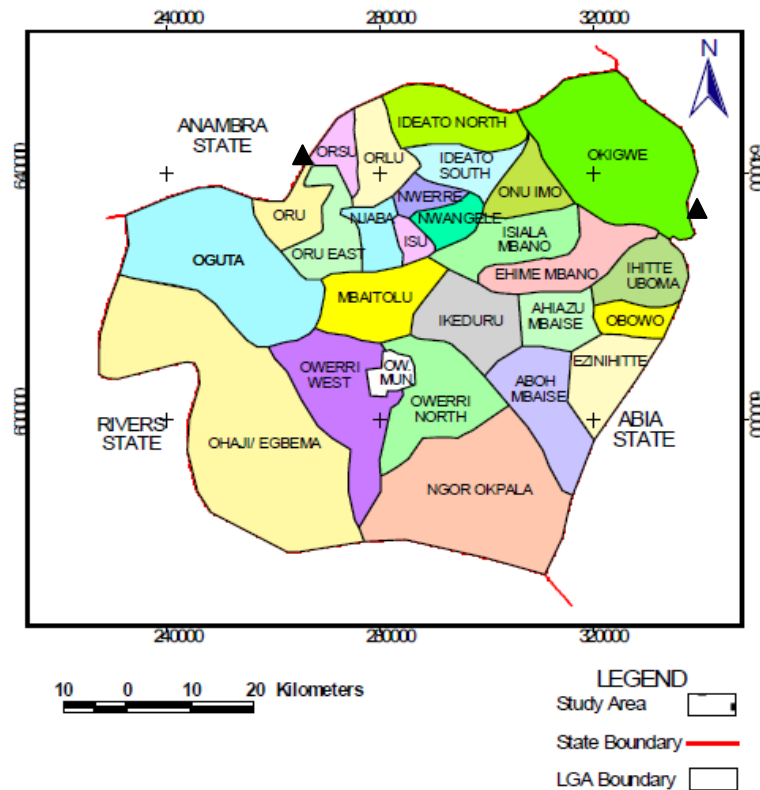


Figure 1. Map of Imo State showing the study area.
Source: Ogbuagu and Ayoade (2012).

Methods of application

Plants were randomly collected *in situ*. They were designated as trees, shrubs and herbs. Some of the plants were identified on the field. Plants press, seeds, flowers as well as barks were collected on the field to ease identification. Photographs of plants were captured to create a plant album.

Ethnobotanical information

Ten locals who have resided in the village with vast indigenous knowledge contributed in no small measure in providing useful ethnobotanical information in Ibo Language through two interpreters as some could not converge their information in English Language

RESULTS

A total of thirty-two (32) indigenous plant which constitute 32 genera, 29 species and 29 families which are of great importance to the people of Omuma (Amimo), Imo State were collected. The plants have different types

of habits which range from trees, herbs and shrubs (Table 1).

Plants collected showed that the trees had the highest percentage plant utilization, while shrubs were least in the preference as compared to herbs which is closely followed by the percentage value for trees (Figure 2).

The different plants play vital roles for the treatment of various ailments as well as for the sustainability of the locals (Table 1).

The different plants and plant parts (leaves, roots, barks, seeds and fruits) are used for diverse purposes from food to medicine. The mode of administration varies from plant to plant (Table 2).

DISCUSSION

The 32 indigenous plants collected play very vital roles in the collective lives of the Omuma (Amimo) people. The utilization of these plants showed the people's preference accord them. The number of species collected showed the rich floral of the ecosystem. The diverse utilization of these plants by the people showed varied mode of administration of the plants in

Table 1. Family, botanical names and uses.

S/N	Family name	Botanical name	Uses
1	Euphorbiaceae	<i>Phyllanthus fraternus</i> (Web.)	The leaf is use to cure fever and stomach.
2	Arecaceae	<i>Elaeis guineensis</i> (Jacq.)	Oil from the seed is administered as an antidote for poisons and is also used to treat severe skin ailment and convulsion. Unripe kernel is believed to prevent fibroids. It serves as income generation
3	Lamiaceae	<i>Occimum gratissimum</i> (L.)	It is a remedy for constipation as well as worms in the Gastrointestinal tract (GIT).The leaves are used as spices in cooking food. The liquid extract from the leave is use to fall the navel of a new born baby
4	Portulacaceae	<i>Talinum triangulare</i> (Willd)	Water leaf is used as vegetable in cooking food; it also gives blood to the bodya serves and it also serves income generation
5	Zingiberaceae	<i>Zingiber officinale</i> (Rosco.)	The fresh juice extracted from ginger is poured on the skin to treat burns. The oil from ginger is sometimes applied on skin to treat pains. Ginger is used as spices in cooking soup, boiling meat and as income generation
6	Asteraceae	<i>Vernonia amygdalina</i> (Del)	The leaf is used as vegetable for cooking soup. It cures measles, small pox and chicken pox. If mixed with lime and orange juice and taken for a fort-night is a cure for pile. Root epidermis is said to treat diarrhea. The juice extracted from the leaf cures fever, malaria, stomach upset when taken. The leaf serves as source of income generation
7	Cucurbitaceae	<i>Telifera occidentalis</i> (Hook.)	The leaf serves as blood tonic and as vegetable for soup preparation. And as an income generation
8	Caricaceae	<i>Carica papaya</i> (Linn.)	The leaves serve as treatment for malaria, Jaundice, diabetes and constipation. The fruit is edible and is eaten when ripe, serves as source of vitamin
9	Myrtaceae	<i>Psidium guajava</i> (Linn.)	The leaves increase blood level. A decoction of the leaf and bark of the root and other herbs cures diarrhea, dysentery and malaria. The stem and decoction of other leaf is used to cure hypertatis. The root when mixed with other herb is used to cure erection in men. The stem is used in brushing the teeth and at the same time help the teeth in fighting against bacteria
10	Gnetaceae	<i>Gnetum africanum</i> (Welw.)	The leaves serve as vegetable and are used in cooking soup and are a cure for high blood pressure, sore throats and as income generation
11	Fabaceae	<i>Pterocarpus soyauxii</i> (Taub.)	It serves as vegetable in preparing soup and as income generation
12	Asclepiadaceae	<i>Gangronema latifolium</i> (Benth.)	It leaves serves as vegetable for cooking soup and as a remedy for sore throat; it is used for treating the womb after childbirth and as a cure for stubborn cough, catarrh and also taken to treat running stomach

13	Anarcadiaceae	<i>Mangifera indica</i> (Linn.)	Fresh leaves and bark of mango with the leaves of Pawpaw is used to treat fever, anaemia and diabetes. Is used for bathing early in the morning to treat malaria and fever.the fruit is edible and serves as source of vitamin and income generation.
14	Rutaceae	<i>Citrus sinensis</i> (Linn.)	The fruit of orange serves as a source of vitamin. The stem and bark when mixed with other herbs cures fever, dysentery and headache. It serves as income generation
15	Bursaraceae	<i>Dacryoides edulis</i> (H.J)	The fruit is eaten as a remedy for heat condition. Resin from the stem is used to treat skin parasite. The kernel is used as foddors for sheep or goats. It serves as income generation
16	Bignoniaceae	<i>Newbouldia laevis</i> (P.Beauv)	The leaves extract is used to treat eye problem. The root extract is used to treat ear problem. The leaf when heated on the fire drives away cold. The tree serves as boundary demarcation and poison repellent
17	Malvaceae	<i>Cola nitida</i> (Schott.)	It serves as a symbol in some cultures in ceremonies and for welcoming visitors. It is used in treating whooping cough when taken orally. It serves as income generation
18	Moraceae	<i>Artocarpus altilis</i> (Parkinson) Fosberg.	It cures diabetes and reduce high blood pressure
19	Malvaceae	<i>Abelmoschus esculenta</i> (Linn.)	It serves as vegetable and is used in preparing soup. It is also used in improving the voice and as income generation
20	Solanaceae	<i>Capsicum frutescens</i> (L.)	The fruits and seed of pepper are highly pungent. It adds taste to food. It is used as a stimulant and in enhancing the circulation of blood especially in cold conditions. Preparations of fruit are taken against fever and dysentery. They are also used as pesticide against grains and as income generation
21	Euphorbiaceae	<i>Manihot esculenta</i> (Crantz.)	The premature root is used to treat eye problem. The tuber when processed is used in making akpu etc. and they serves as food and as income generation
22	Poaceae	<i>Zea mays</i> (L.)	The grain is processed and it serves as food. It serves as income generation
23	Araceae	<i>Colocasia esculenta</i> (L) Schott.	It is used as food thickener and also used to cure diabetes, STDs, to regulate menstruation and increase fertility. It serves as income generation
24	Zingiberaceae	<i>Afromomum meleguata</i> (K. Schum)	The leaves cure measles. The seed is served together with cola and It serves as income generation
25	Solanaceae	<i>Solanum aethiopicum</i> (L.)	The leaves serve as blood tonic. The fruit is eaten together with groundnut paste, it serves as food. The leave is used in cooking soup and serves as income generation

26	Moringaceae	<i>Moringa oleifera</i> (LAM.)	The juice from the leaf improves the quality and flow of mother's milk when breastfeeding. The leaves when blended into powdery form can be used in the treatment of skin disease. The seeds when eaten raw act as a dewormer and treat liver and spleen problems and pain of the joint. The leaf is used in preparing soup
27	Apocynaceae	<i>Alstonia boonie</i> (De wild)	The leaves, stem, and latex is use in treating malaria, dysentery/ diarrhea and snake/ scorpion bites
28	Musaceae	<i>Musa paradisaica</i> (Linn.)	The stem is used as an anti poison and it is used for the treatment of hormonal imbalance when boiled with other herb. The banana produce is eaten as fruit and it serves as income generation. The leaf is used in wrapping agidi etc.
29	Rosaceae	<i>Persia Americana</i> (Mill.)	The fruit when taken cures hypertension, stomach ulcer and as income generation. The seed regulates high blood pressure
30	Moraceae	<i>Chlorophora excelsa</i> (Welw.) Benth & Hook.	The root is boiled and taken as blood tonic
31	Clusiaceae	<i>Garcinia kola</i> (Heckel)	The seed are chewed to treat throat infection. It is used to neutralize poison. The infusion of the root with a little salt is a remedy for asthma, it is useful against tuberculosis. It is use in some cultures in welcoming visitors and serves as a source of income generation
32	Piperaceae	<i>Piper guineesis</i> (Schum & Thorn)	It is used in cooking and spicing up food like pepper soup, when taken by nursing mothers it stabilizes the womb and it serves as income generation

Source: Field survey, (2014).

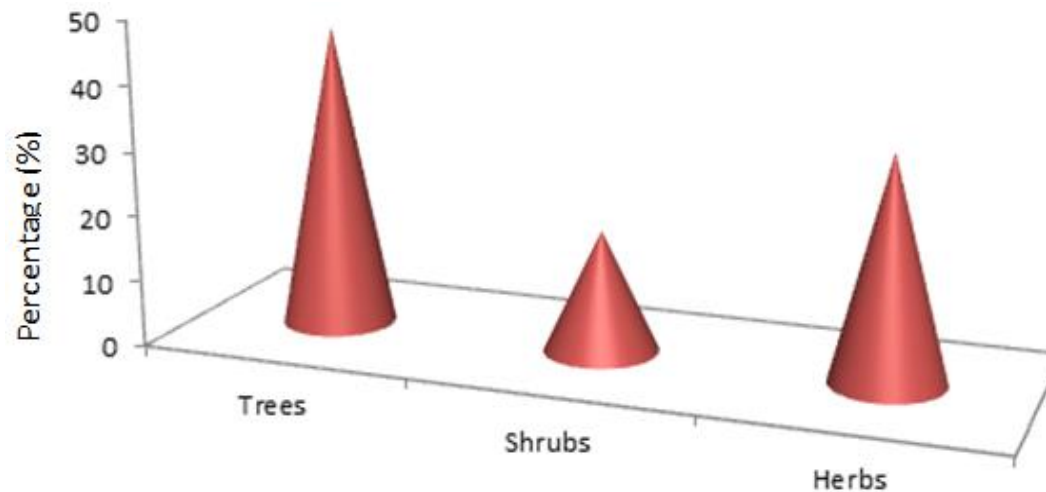


Figure 2. Percentage of plant habits collected from Omuma (Amimo), Oru East Local Government Imo State.**Table 2.** Part used, botanical name and mode of administration

S/N	Part used	Botanical name	Mode of administration
1.	Leaf	<i>Phyllanthus fraternus</i> (Web.)	It cures fever and stomach upset by decoction of the leaf
2.	Seed, nut	<i>Elaeis guineensis</i> (Jacq.)	Oil from the seed is administered as an antidote for poisons. Oil from the kernel is used to treat severe skin ailment and convulsion by rubbing it in the body of little children. Unripe kernel is believed to prevent fibroids when at least 25-30 nuts are chewed every day for 12 weeks
3.	Leaf	<i>Occimum gratissimum</i> (L.)	A glass of leaf extract taken before a meal is a remedy for constipation as well as worms in the gastrointestinal tract (GIT). As treatment for diabetes mellitus, the same amount of <i>O. gratissimum</i> leaves and mistletoe. <i>Viscum album</i> in water taken a glass 3X daily until symptoms disappears. It is boiled and the extract is taken by nursing mothers to wash away blood. The liquid extract from the leaves fall the navel of a new baby
4.	Leaf	<i>Talinum triangulare</i> (Willd)	Water leaf is used as vegetable in cooking soup; it also gives blood to the body
5.	Rhizome	<i>Zingiber officinale</i> (Rosc.)	The fresh juice extracted from ginger is poured on the skin to treat burns. The oil from ginger is sometimes applied on skin to treat pains. Ginger is used as spices in cooking soup
6.	Leaf, root, Sap	<i>Vernonia amygdalina</i> (Del)	It cures measles, small pox and chicken pox when the leave is squeezed and mixed with palm wine and it is rubbed all over the body, drinks some of the extract for a fast relief. If mixed with lime and orange juice and taken for a fort-night is a cure for pile. Root epidermis is said to treat diarrhea. The sap from the leaf is an anti fungal. The juice extracted from the leaf cures fever, malaria, stomach upset when taken orally
7.	Leaf	<i>Telifera occidentalis</i> (Hook.)	The leaf serves as vegetable for soup preparation and as blood tonic when cooked
8.	Leaf, fruit	<i>Carica papaya</i> (Linn.)	The leaves are squeezed into one liter of water and a glassful is taken 3 times daily for 7days to serves as treatment for malaria and Jaundice. Similarly, the green leaves are squeezed into one liter of water, 1 glassful is taken 3times daily to treat diabetes and constipation. The leaves are mixed with other leaves, boiled and the extract is taken to cure malaria and fever. The fruit is edible and is eaten when ripe, serves as source of vitamin
9.	Leaf, bark, root, stem	<i>Psidium guajava</i> (Linn.)	Leaves are soaked in salt water, washed , squeezed and the product made up with fresh water to give a greenish liquid and is taken 1 glass 2X daily for one week to increase blood level. A decoction of 50g of the leaf and bark of the root is made in one liter of water and a glass is taken every 4 hours to cure diarrhea and dysentery. A decoction of the leaf and the leaf of pawpaw, mango leave is used to cure malaria. The stem and decoction of other leaf is used to cure hypertatis. The root when mixed with other herb is used to cure erectile dysfunction in men

10.	Leaf	<i>Gnetum africanum</i> (Welw.)	The leaves serves as vegetable in soup and when eaten cures high blood pressure, sore throats
11.	Leaf	<i>Pterocarpus soyauxii</i> (Taub.)	It serves as vegetable in preparing soup
12.	Leaf	<i>Gangronema latifolium</i> (Benth.)	It serves as vegetable in preparing soup
13.	Leaf, fruit	<i>Mangifera indica</i> (Linn.)	Fresh leaves and bark of mango are boiled together with the leaves of Pawpaw and Neem. A glassful of the mixture is taken 3X daily to treat to treat fever, anaemia and diabetes and when bathing early in the morning with it, treats malaria and fever. The fruit is edible when eaten and serves as source of vitamin
14.	Leaf, fruit stem, bark	<i>Citrus sinensis</i> (Linn.)	The fruit peel of orange serves as a source of vitamin. The stem and bark when mixed with other herbs boiled and taken, is a cure for fever, dysentery and headache
15.	Leaf, fruit, fodder, stem	<i>Dacryoides edulis</i> (H.J)	The fruit is eaten as a remedy for heat condition. Resin from the stem is used to treat skin parasite
16.	Leaf	<i>Newbouldia laevis</i> (P.Beauv)	The leaves are squeezed and the liquid extract is used in treating eye problem. The roots are pounded and the juice extracted from it is used to treat ear problem. The leaf when heated on the fire drives away cold
17.	Seed	<i>Cola nitida</i> (Schott.)	It is used in treating whooping cough when taken orally
18.	Fruit	<i>Artocarpus altilis</i> (Parkinson) Fosberg.	Peel and filter the scales from the seed, boil the seed, drop small potash to soften it and allow it to be cooked. When eaten it cures diabetes and reduce high blood pressure.
19.	Fruit	<i>Abelmoschus esculenta</i> (Linn.)	It serves as vegetable and it is used in preparing soup.
20.	Fruit and seed	<i>Capsicum frutescens</i> (L.)	The fruits and seed of pepper are highly pungent. It adds taste to food. It is used as a stimulant and in enhancing the circulation of blood especially in cold conditions. Preparations of fruit are taken against fever and dysentery. They are also used as pesticide against grain
21.	Tuber, root	<i>Manihot esculenta</i> (Crantz.)	The premature root is used to treat eye problem. The tuber when processed in to flour
22.	Fruit	<i>Zea mays</i> (L.)	The grain is processed and is used in making pap and other things which serves as food. The maize is chewed and spat on the swollen cheek.

23.	Corm	<i>Colocasia esculenta</i> (L.) Schott.	It is used as food thickener
24.	Leaf, seed	<i>Aframomum meleguata</i> (K. Schum)	Boil the leaf in water together with the leaf of Pawpaw. Bath and drink the water, it cures measles for fast relief
25.	Leaf, fruit	<i>Solanum aethiopicum</i> (L.)	The leaves serve as blood tonic when chewed. The fruit is eaten together with groundnut paste, it serves as food. The leaf is used in cooking soup.
26.	Leaf, seed	<i>Moringa oleifera</i> (LAM.)	The juice from the leaf improves the quality and flow of mother's milk when breastfeeding. The leaves when blended into powdery form can be used in the treatment of skin disease. The seeds when eaten raw act as a dewormer and treat liver and spleen problems and pain of the joint. Take 1teaspoon full of <i>Moringa</i> miracle leaf powder into a cup of hot water, stir and drink, preferably after meals
27.	Leaf	<i>Alstonia boonie</i> (De wild)	Treatment for malaria; decoction of stem bark with lime is taken, one glass cup morning and evening. For dysentery and diarrhea, stem bark is fermented in water or palm wine, one cup morning and evening. For snake and scorpion bite, the latex is applied directly to the site of bite
28.	Stem,Fruit, Leaf	<i>Musa paradisaica</i> (Linn.)	The stem is used as an anti poison and it is used for the treatment of hormonal imbalance when boiled with other herb. The banana produce is eaten as fruit
29.	Seed, Fruit	<i>Persia americana</i> (Mill.)	The seed is dried, grinded and mixed with pap or food
30.	Root	<i>Chlorophora excelsa</i> (Welw.) Benth & Hook.	The root is boiled and taken as blood tonic
31.	Seed	<i>Garcinia kola</i> (Heckel)	The seed are chewed to treat throat infection. The infusion of the root with a little salt is a remedy for asthma, it is useful against tuberculosis
32.	Leaf	<i>Piper guineensis</i> (Schum & Thorn)	It is used in spicing up food. The leaf is also used in cooking soup

Source: Field survey, (2014).

medicine, food, religious belief as well as their cultural activities. The formal and informal uses of these plants now have a wider acceptance due to elaborate researches on the vast potentials of native plants.

Several authors have reported the

utilization of plants in previous works. The medicinal and aphrodisiac utilization of plants in Urhonigbe Forest Reserve was reported by Erhenhi and Obadoni (2015). The oil from ginger was sometimes applied on skin to treat pains. Ginger was used as spices in cooking

soup, boiling meat and as income generation. *Zingiber officinale* is a very good spice used for seasoning and preserving meat according to (Idise, 2011).

Different plants may be used to cure the same ailment but their methods of preparation

may vary or differ. When one plant is not available, a substitute that serves the same purpose is used. While the leaves of *Carica papaya* was combined with *Mangifera indica* leaves for treatment of malaria, they were used as a heart tonic, analgesic and to treat stomach fungal infections, the fruit can directly be applied topically to skin sores (Lohiya et al., 2002).

Idu et al. (2007 and 2008) reported the use of *Azadirachta indica* leaves and bark for the treatment of malaria. The juice extracted from the leaf cures fever, malaria, and stomach upset when taken. The leaf of *Vernonia amygdalina* (Del) was used to cure measles, small pox and chicken pox when the leaf is squeezed and mixed with palm wine and is rubbed all over the body, some of the extract is drunk for fast relief. Whereas, Ogie-Odia et al. (2010) reported the use of *Chromolaena odorata* (L.) King & Robinson leaves used to treat skin wounds as well as for healing skin wounds.

CONCLUSION AND RECOMMENDATION

It is the hope that, this information on ethnobotanical utilization of plants of the people of Omuma (Amimo), Oru East Local Government Area, Imo State will help to inform, educate and or enlighten the people of Omuma on the enormous ethnobotanical potentials of the vast and rich ecological flora inherent in their region as well as protecting, utilizing and conserving these plants for future generations.

Conflicts of interest

The author has none to declare.

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