

## Flora diversity on automechanic and muslim prayer ground in Otun Ekiti, Moba local government, Ekiti state

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### Abstract

Flora diversity of plant species growing in Muslim prayer grounds and mechanic workshops in Otun Ekiti, Moba local government of Ekiti state, Nigeria, were carried out to survey the plant composition and their uses in order to develop plans for their management. Plant variety, occurrence and their habits were documented. A total of 28 plants belonging to 7: Fabaceae, Moraceae, Meliaceae, Anacardiaceae, Arecaceae, Bombacaceae, Sapindaceae among which *Ficus thonningii* was the most dominating plant species with 10 stands (35.72%), *Blighia sapida* 6 stands (21.43%), *Azadiractha indica* 4 stands (14.28%), *Cassia fistula* 3 stands (10.72%), *Mangifera indica* 2 stands (7.14%). *Cocos nucifera*, *Ceiba pentandra* and *Spondias monbin* had 1 stand (3.57%), respectively. Moraceae had the highest percentage (35.71%) followed by Sapindaceae (21.42%), Meliaceae (14.28%), Anacardiaceae and Fabaceae (10.71%) while Bombacaceae and Arecaceae families had the least in abundance (3.57%) and trees were dominant. At the prayer ground 10 different plant species were found: *Cola nitida*, *Tectona grandis*, *Ficus thonningii*, *Sida acuta*, *Vernonia amygdalina*, *Cymbopogon citratus*, *Imperiata cylindrica*, *Tridax procumbens*, *Axonopus compressus*, *Chromolaena odorata* belonging to 6 families: Sterculiaceae, Lamiaceae, Moraceae, Malvaceae, Asteraceae, and Poaceae. Asteraceae and Poaceae (3 species), Sterculiaceae, Lamiaceae, Moraceae and Malvaceae (1 species). The plant habits ranges from trees, grasses, shrub and herbs. *Axonopus compressus* most dominant and *Cymbopogon citratus* rarely found. The plant varieties are of large uses for food, medicine and decorative.

**Keywords:** flora diversity, muslim prayer grounds, automechanic workshop, Otun Ekiti

### Introduction

Plant assessments are good in documenting the species that existed in different locations in the country and these were carried out different researchers' to survey the plant composition and their uses in order to develop plans for their management. Flora diversity is increasingly threatened due to human activities but plants are raw materials for sustainable livelihood and development of people and health care delivery. Therefore, this study was carried out to survey the plant composition and their uses in order to develop plans for their management of plant species growing in Muslim prayer grounds and mechanic workshops in Otun ekiti, Moba local government of Ekiti state.

### Materials and Methods

#### Study area

The study was carried out in Moba local government of Ekiti state being the headquarters of Otun. It is a town situated on 8° 2' 0" North and 5° 9' 0" East.

#### Sampling techniques and data collection

Compilation and classification of plant species occurring in the study area was accomplished. The occurrences of plant samples in the following areas: 1. Automechanic workshop, beside SDA Eleti area, Otun EKiti, 2. Automechanic workshop, beside Saliu Adeoti Memorial high school, Osan road, Otun Ekiti.3. Automechanic workshop, Opp. Olosan palace, Otun road, Osan Ekiti.4. Automechanic workshop, Opp. Moba grammar school, Otun Ekiti 5. Automechanic workshop, Opp. Moba LGEA, Ayetoro road, Otun Ekiti 6. Automechanic workshop, Opp. SDA school B, Ilero

street, Epe road, Otun Ekiti.7. Automechanic workshop, Idi adodo, Inisa Street, Otun Ekiti 8. Automechanic workshop, Igbo ogun street, Otun Ekiti 9. Automechanic workshop, Oke Ibukun Street, Aaye road, Otun Ekiti 10. Automechanic workshop, Opp. Eid praying ground, oke Ibukun Street, Otun Ekiti.11. Automechanic workshop, Opp. Magistrate court, aaye road, Otun Ekiti and Otun muslim central praying ground, oke ibukun street, Aaye road, Otun Ekiti each area were recorded. The local names of the plants were inquired from the workers at the workshops and prayer ground attendants. Local herb sellers and traditionalists also helped in the identification of the plants, their local uses, healing potentials as well as their local names. This helped in understanding the common names and the botanical names of the species found along with their families, and habits as well as their ethno botanical uses. Various plant species were found in the different locations visited, but striking similarities were found in the areas in the area of the families which they belong to, their abundance and their features.

### Results

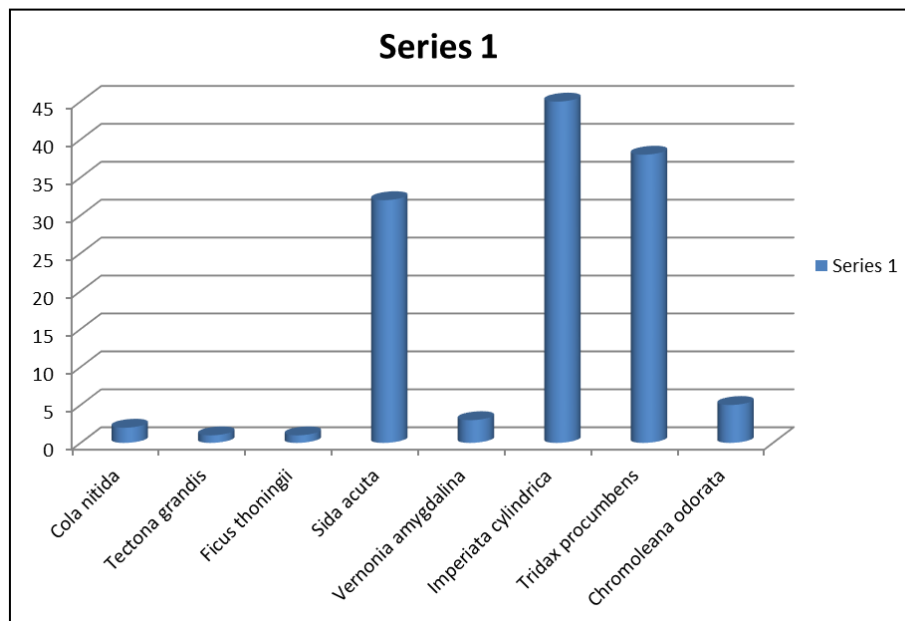
Table 1 and figure 1 described the distribution of plant species in Muslim prayer ground, oke Ibukun Street, Aaye road, Otun Ekiti. There exist only one muslim prayer ground in Otun Ekiti, and there were 10 different plant species found; *Cola nitida*, *Tectona grandis*, *Ficus thonningii*, *Sida acuta*, *Vernonia amygdalina*, *Cymbopogon citratus*, *Imperiata cylindrica*, *Tridax procumbens*, *Axonopus compressus*, *Chromolaena odorata*. The plant species belong to 6 families, which were: Sterculiaceae, Lamiaceae,

Moraceae, Malvaceae, Asteraceae, and Poaceae families. There were 3 plant species from the Asteraceae and Poaceae families, while there was one (1) species in the Sterculiaceae, Lamiaceae, Moraceae and Malvaceae families. The plant habits ranges from trees, grasses, shrub and herbs, as there was no climber in the study site. This was a result of the geographical/vegetative nature of the area, being a tropical rain forest, predominated by trees of different storeys. The population distribution of the plant species in Muslim prayer ground, Otun Ekiti. From the study, grasses like *Axonopus compressus* was the most dominating plant species which covered almost all the land, while *Cymbopogon citratus* was

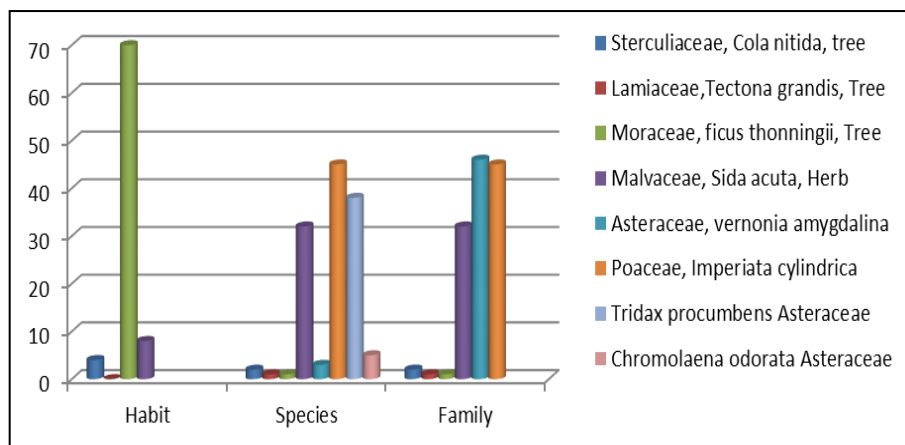
less dominating. There were 2 (1.58%) stands of *Cola nitida*, *Tectona grandis* and *Ficus thonningii* 1(0.79%) stand, 32 stands of *Sida acuta* (25.19%), 3 stands of *Vernonia amygdalina* (2.37%), 45 stands of *Imperiata cylindrica* (35.43%), 38 stands of *Tridax procumbens* (29.92%) and 5 stands of *Chromolaena odorata* (3.93%). From figure 2, it was recorded and observed that Asteraceae family dominated the Muslim prayer ground in Otun Ekiti with 36.25%, closely followed by Poaceae (35.43%), Malvaceae (25.29%), Sterculiaceae (1.57%), while Lamiaceae and Moraceae families were 0.78%, respectively.

**Table 1:** Plant Distribution in Otun Central Eid Prayer Ground

S/n	Botanical name	Common name	Family	Yoruba name	Habit	No of stands
1.	<i>Cola nitida</i>	Kolanut	Sterculiaceae	Obi	Tree	2
2.	<i>Tectona grandis</i>	Teak	Lamiaceae	Tiki	Tree	1
3.	<i>Ficus thonningii</i>	Fig tree	Moraceae	Odan	Tree	1
4.	<i>Sida acuta</i>	Stubborn weed/wire weed	Malvaceae	Olosenpetu	Herb	32
5.	<i>Vernonia amygdalina</i>	Bitter leaf	Asteraceae	Ewuro	Shrub	3
6.	<i>Cymbopogon citratus</i>	Lemon grass	Poaceae	Koriko oba	Grass	Less dominating
7.	<i>Imperiata cylindrica</i>	Spear grass	Poaceae	Ekan/aga	Grass	45
8.	<i>Tridax procumbens</i>	Tridax	Asteraceae	Igbalode	Herb	38
9.	<i>Axonopus compressus</i>	Carpet grass	Poaceae	Koko esin	Grass	More dominating
10.	<i>Chromolaena odorata</i>	Siam weed	Asteraceae	Akintola	Shrub	5



**Fig 1:** The frequency distribution of the families in Muslim prayer ground, Otun Ekiti.



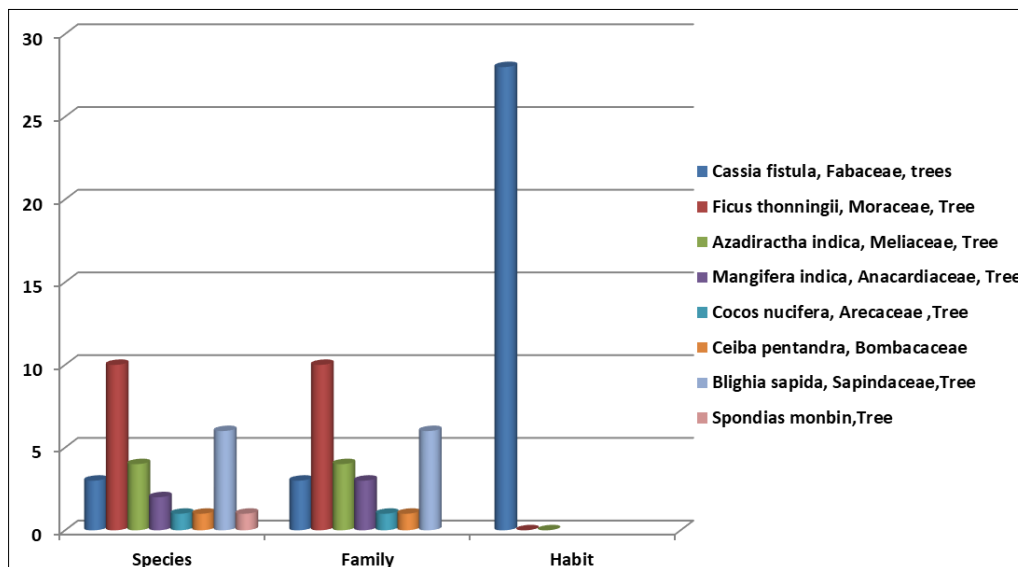
**Fig 2:** The frequency distribution of plant species, family and habit in Muslim prayer ground, Otun Ekiti.

At the auto mechanic workshops, a total of 28 plants which were all trees belonging to 7 families: Fabaceae, Moraceae, Meliaceae, Anacardiaceae, Arecaceae, Bombacaceae, Sapindaceae among which *Ficus thonningii* was the most Dominating plant species with 10 stands in all (35.72%), while *Blighia sapida* was also found to be more dominating with 6 stands in all (21.43%). There were 4 stands of *Azadiractha indica* which formed 14.28% of the total population, 3 stands of *Cassia fistula* (10.72%), 2 stands of *Mangifera indica* (7.14%).

There was 1 stand each of *Cocos nucifera*, *Ceiba pentandra* and *Spondias monbin*, which contributed 3.57% each to the total population. The percentage frequency of families of plants found in auto mechanic workshops varied in which Moraceae had the highest percentage (35.71%) followed by Sapindaceae (21.42%), Meliaceae (14.28%), Anacardiaceae and Fabaceae (10.71%) while Bombacaceae and Arecaceae families had the least in abundance (3.57%) in all (Table 2 and figure 3).

**Table 2:** Distribution of plant species in auto mechanic workshops in Otun Ekiti

Location/area	Botanical name	Common name	Family	Habit	No of stands
Beside SDA, Eleti Otun ekiti.	<i>Cassia fistula</i>	Acacia	Fabaceae	Tree	1
Beside Saliu Adeoti Memorial high school, Osan road, Otun Ekiti.	<i>Ficus thonningii</i>	Fig tree	Moraceae	Tree	3
Opp. Olosan palace, otun road, Osan Ekiti.	<i>Cassia fistula</i>	Acacia	Fabaceae	“	1
	<i>Azadiractha indica</i>	Neem tree	Meliaceae	“	1
	<i>Ficus thonningii</i>	Fig tree	Moraceae	“	1
Opp. Moba grammar school, Otun Ekiti	<i>Ficus thonningii</i>	Fig tree	Moraceae	“	2
Opp. Moba LGEA, Ayetoro road, Otun Ekiti	<i>Ficus thonningii</i>	Fig tree	Moraceae	“	2
	<i>Spondias monbin</i>	Hog plum	Anacardiaceae	“	1
	<i>Mangifera indica</i>	Mango	Anacardiaceae	“	1
Opp. SDA school B, Ilero street, epe road, Otun Ekiti.	<i>Cassia fistula</i>	Acacia	Fabaceae	“	1
	<i>Cocos nucifera</i>	Coconut	Arecaceae	“	1
	<i>Ficus thonningii</i>	Fig tree	Moraceae	“	2
Idi adodo, inisa street, otun Ekiti	<i>Azadiractha indica</i>	Neem tree	Meliaceae	“	2
	<i>Ceiba pentandra</i>	Silk cotton	Bombacaceae	“	1
Igbo ogun street, Otun Ekiti	<i>Blighia sapida</i>	Akee apple	Sapindaceae	“	1
	<i>Azadiractha indica</i>	Neem tree	Meliaceae	“	1
	<i>Blighia sapida</i>	Akee apple	Sapindaceae	“	1
Oke ibukun street, aaye road, Otun Ekiti	<i>Blighia sapida</i>	Akee apple	Sapindaceae	Tree	3
Opp. Eid praying ground, oke ibukun street, Otun Ekiti.	<i>Mangifera indica</i>	Mango	Anacardiaceae	Tree	1
	<i>Blighia sapida</i>	Akee apple	Sapindaceae	Tree	1



**Fig 3:** The frequency distribution of plant species, family and habits in auto mechanic workshops in Otun Ekiti.

**Discussion**

Plants in auto mechanic and Muslim prayer grounds was assessed in Otun Ekiti. *Ficus thonningii* and *Blighia sapida* dominated in all the areas. Various plant species were found in the different locations visited, but striking similarities were found in the areas in the area of the families which they belong to, their abundance and their features. *Ficus thonningii* is good for bruises, *Blighia sapida* for ulcer

(Mathur *et al.*, 2011) <sup>[1]</sup>, *Ceiba pentandra* as stimulant and laxative, *Cocos nucifera* as edible fruit and ornamentals, *Cassia fistula* as ornamentals, *Mangifera indica* as food, antimalaria and antioxidant (Pavez, 2016) <sup>[2]</sup>. This validates the significance of plant species for sustainable livelihood and health care delivery. This also showed plants that are capable for bioremediation of polluted environments like auto mechanic workshops.

### Conclusion

Flora diversity of plant species growing in Muslim prayer grounds and mechanic workshops in Otun Ekiti, Moba local government of Ekiti state, Nigeria, were carried out to survey the plant composition and their uses in order to develop plans for their management. Plant variety, occurrence and their habits were documented for bioremediation of polluted environments like auto mechanic workshops.

### References

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