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**THE TRACHEOPHYTES (ANGIOSPERMS AND PTERIDOPYTES) OF AUGUSTINE UNIVERSITY  
CAMPUS, ILARA-EPE, LAGOS STATE, NIGERIA**

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**ABSTRACT**

This study was carried out to assess the avalanche of species existing in an undisturbed vegetation in Lagos State, Nigeria, prior to developmental activities. One hundred and eighty-eight (188) plant species (Angiosperms and Pteridopytes) across 68 families were recorded, following standard taxonomic protocols. The trees and shrubs were dominant and cut across 25 and 24 families, respectively. The family Rubiaceae had the highest number of species represented, with 18, followed by Euphorbiaceae with 17, then Papilionaceae and Apocynaceae with 10 each. This preliminary survey showed that the study area is a rich biodiversity hotspot especially as it accommodated some unique species of South-Western Nigeria. Even though urbanization and the development of the study site is inevitable, the conservation of the Eredo-Sugbo area of the site should be encouraged as much as possible.

**Keywords** – Taxonomy, biodiversity, conservation

**INTRODUCTION**

Forests constitute one of the principal renewable natural resources of mankind, and they are essential in maintaining environmental stability, provision of raw materials for wood-based industries and provision of food, livelihood and employment for millions of people, particularly in the rural areas (Food and Agriculture Organization (FAO), 2010; Sanwo *et al.*, 2015). According to Achard *et al.* (2002) and FAO (2015), the world's most biologically diverse ecosystems are being lost at an alarming rate with grave consequences for biodiversity. Raghubanshi and Tripathi (2009) also noted that the continuous loss of biodiversity has resulted from habitat destruction. Such habitats are degraded, thereby causing serious impact on species development and throwing the ecosystem processes off balance. FAO (2015) pointed out clearly that Nigeria has one of the highest annual deforestation rates in the world.

It is noteworthy, therefore, to state that most forests in Nigeria have been fragmented and there is a growing interest in qualifying habitat characteristics such as forest structure, floristic composition and plant species richness in intact and degraded forest fragment and forest landscape as earlier mentioned by Myers *et al.* (2000). Nevertheless, the assessment of biodiversity has continued to create a centre of attention among scientists all over the world. In the last 14 years, efforts have been made by some authors to document the existing floral species in some localities of South-Western Nigeria (Soladoye *et al.*, 2005, 2011; Ariwaodo *et al.*, 2012; Soladoye *et al.*, 2013, 2015), but the records are still inadequate to estimate the remaining biodiversity in the area. However, Ssegawa and Nkutu (2006) noted that the knowledge of floristic composition and structure

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of forests is useful in identifying and monitoring the state of the forests. This has become very crucial in the face of the ever-increasing threat to the forest ecosystem and eventual species extinction. This study, therefore, took into account the rich biodiversity hotspot of Ilara-Epe community in an attempt to provide a comprehensive data of the tracheophytes within Augustine University Campus before the complete take-off of developmental activities.

## MATERIALS AND METHODS

### *Study site*

The university is located on 153.84 hectares of land, and lies between latitudes 6° 39.194'N and 6° 39.475'N and longitudes 4° 00.310'E and 4° 01.263'E, along Igbonla Road in Ilara-Epe, Epe Local Government Area of Lagos State (Figure 1). The site is mostly of farmlands, and was massed up from individuals and out-lying communities at the centre of which is the Ilara community. Other out-lying communities include Odo-Ragunsin on the Ijebu Ode-Epe Road, Odo-Yangunsin, the North-Eastern neighbour of Ilara and together with Igboye at the extreme northern end. There are also Ibonwon and Odo-Shiwola communities on the southern flanks of Ilara community.

### *Species enumeration*

Repeated visits were made to the study area for collection of plant samples across the undisturbed and disturbed vegetation of the university campus. The site was divided into four compartments. In each compartment, 3 plots of 50 m x 50 m each were randomly mapped out using measuring tapes and ropes. This was to ensure that all existing species within the campus were carefully documented. Most of the species were identified on the field using taxonomic keys provided in Hutchinson *et al.* (1954, 1958, 1963, 1968, 1972), Lowe and Stanfield (1974), Lowe (1989) and Keay (1989), while others were taken to the Forest Herbarium Ibadan (FHI) (Holmgren *et al.*, 1990) for proper identification. The collected samples were dried, poisoned and mounted in line with conventional herbarium practice. The prepared voucher specimens were deposited at the Augustine University Herbarium (AUHI). Vouchers were only prepared for fertile specimens as many others were sterile during the period of collection.

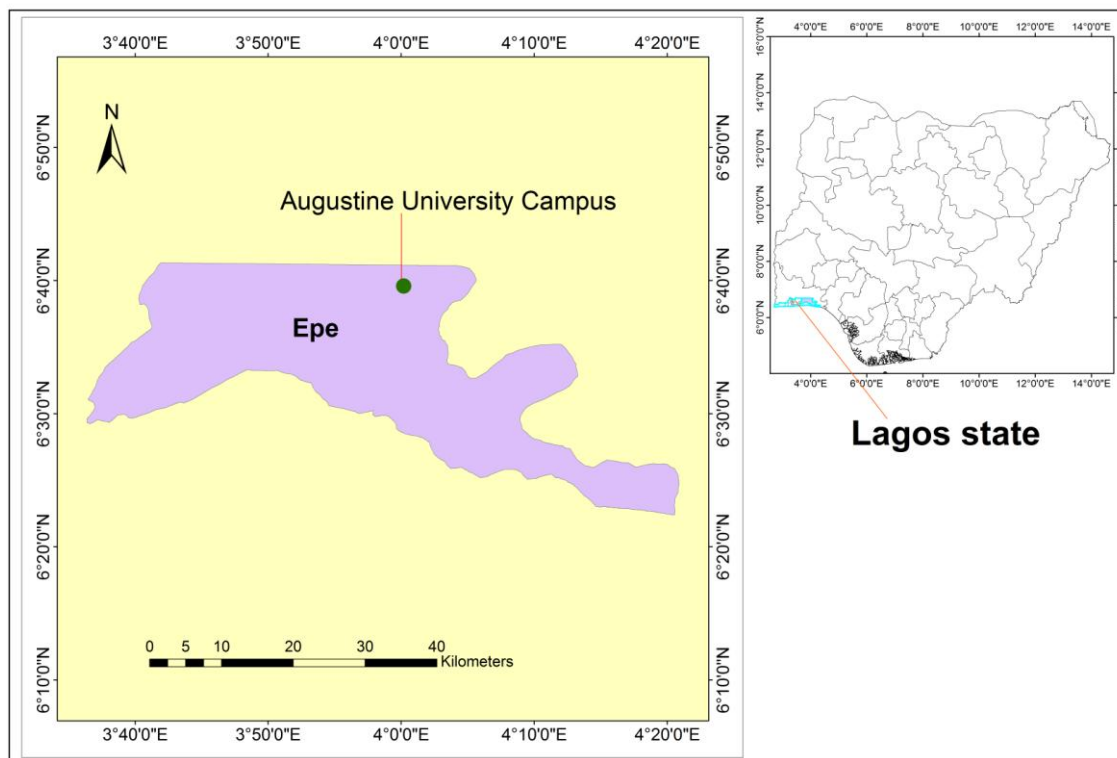


Figure 1. Map of Lagos State showing the location of Augustine University Campus, Ilara-Epe

## RESULTS AND DISCUSSION

A total of one hundred and eighty-two (182) angiosperms belonging to sixty-two (62) families across 9 plant forms or habits were recorded from the survey (Table 1). The families that had the highest number of plant species recorded were Rubiaceae (18 species), Euphorbiaceae (17 species), Papilionaceae (10 species) and Apocynaceae (10 species). Others include Sterculiaceae (8 species), Poaceae (7 species) and Asteraceae (6 species). Collectively, the legumes (Caesalpiniaceae – 5, Mimosaceae - 5 and Papilionaceae - 10) constituted the highest number of species recorded amounting to a total of 20 species. Twelve (12) families had 2 species while thirty-five (35) families had only 1 species represented (Table 2). This was an indication of their importance in ecosystem maintenance. The pteridophytes were represented by six (6) families, namely, Dennstaedtiaceae, Lycopodiaceae, Nephrolepidaceae, Schizaceae, Sellaginellaceae and Thelypteridaceae with one species each. Further findings showed that the trees dominated the ecosystem with 62 different species (33% of the total enumeration). This was closely followed by shrubs and herbs which constituted 49 (26.1%) and 22 (18.1%) species, respectively (Figure 2). The reason for such dominance could be attributed to the fact that the study area has been undisturbed for many years. It was a true representation of typical evergreen tropical rain forest vegetation, and could be said to be an extension of the Omo Biosphere Reserve owing to its rich and unique species diversity in the South-Western zone of Nigeria.

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Table 1. Identified species of Augustine University Campus, Ilara-Epe, Lagos State

S/N <sub>o</sub>	Botanical name	Family	Habit	Voucher N <sub>o</sub>
1.	<i>Acacia ataxacantha</i> DC.	Mimosaceae	Shrub	-
2.	<i>Acridocarpus smeathmannii</i> (DC.) Guill & Perr.	Malphiaceae	Shrub	AUHI042
3.	<i>Adenia lobata</i> (Jacq.) Engl.	Passifloraceae	Creeper	-
4.	<i>Aframomum melegueta</i> K. Schum.	Zingiberaceae	Herb	-
5.	<i>Agalaea obliqua</i> (P. Beauv.) Baill	Connaraceae	Shrub	AUHI024
6.	<i>Albizia ferruginea</i> (Guill. & Perr.) Benth.	Mimosaceae	Tree	-
7.	<i>Albizia zygia</i> (DC.) J. F. Macbr.	Mimosaceae	Tree	-
8.	<i>Alchornea cordifolia</i> (Schum & Thonn)	Euphorbiaceae	Shrub	AUHI014
9.	<i>Alchornea laxiflora</i> (Benth.) Pax & K.Hoffm	Euphorbiaceae	Shrub	-
10.	<i>Allanblackia floribunda</i> Oliv.	Guttiferae	Tree	AUHI028
11.	<i>Allophylus spicatus</i> (Poir) Radlk.	Sapindaceae	Shrub	AUHI069
12.	<i>Alstonia congensis</i> De Wild.	Apocynaceae	Tree	-
13.	<i>Alternanthera sessilis</i> (L.) DC	Amaranthaceae	Herb	AUHI008
14.	<i>Amphimas pterocarpoides</i> Harms	Papilionaceae	Tree	-
15.	<i>Anchomanes difformis</i> (Bl.) Engl.	Araceae	Herb	-
16.	<i>Ancistrophyllum secundiflorum</i>	Orchidaceae	Orchid	-
17.	<i>Aneilima beniniense</i> (P. Beauv.) Kunth	Commelinaceae	Herb	-
18.	<i>Angylocalyx oligophyllus</i> (Baker) Baker.f.	Papilionaceae	Shrub	AUHI068
19.	<i>Anthocleista djalensis</i> A Chev.	Loganiaceae	Tree	-
20.	<i>Anthothona macrophylla</i> P. Beauv	Caesalpiniaceae	Tree	-
21.	<i>Antiaris toxicaria</i> Loesch	Moraceae	Tree	-
22.	<i>Antidesma membranaceum</i> Mull. Arg.	Euphorbiaceae	Shrub	-
23.	<i>Aspilia africana</i> (Pers.) C.D. Adams	Asteraceae	Herb	AUHI045
24.	<i>Baissea axillaris</i> (Benth.) Hua	Apocynaceae	Climber	-
25.	<i>Baphia nitida</i> Lodd.	Papilionaceae	Tree	AUHI013
26.	<i>Baphia pubescens</i> Hook.f.	Papilionaceae	Shrub	AUHI011
27.	<i>Blighia sapida</i> Koenig	Sapindaceae	Tree	-
28.	<i>Byrsocarpus coccineus</i> Schum & Thonn	Connaraceae	Climber	AUHI019
29.	<i>Calopogonium mucunoides</i> Desv.	Papilionaceae	Creeper	AUHI006
30.	<i>Carapa procera</i> DC.	Meliaceae	Tree	-
31.	<i>Carpolobia lutea</i> G. Don	Polygalaceae	Shrub	AUHI027
32.	<i>Centrosema pubescens</i> Benth.	Papilionaceae	Climber	AUHI010
33.	<i>Cephaelis peduncularis</i> Salisb. var. <i>peduncularis</i>	Rubiaceae	Shrub	AUHI063
34.	<i>Chassalia kolly</i> (Schum) Hepper	Rubiaceae	Shrub	AUHI056
35.	<i>Chromolaena odorata</i> King & Robinson	Asteraceae	Herb	AUHI054
36.	<i>Cissampelos mucronata</i> A. Rich.	Menispermaceae	Climber	-
37.	<i>Cissampelos owariensis</i> P. Beauv	Menispermaceae	Climber	AUHI031
38.	<i>Cissus aralioides</i> (Welw. ex Baker)	Vitaceae	Climber	-
39.	<i>Cissus</i> sp. sp.	Vitaceae	Creeper	AUHI079
40.	<i>Cleistopholis patens</i> (Benth.) Engl. & Diels	Annonaceae	Tree	-
41.	<i>Clerodendrum splendens</i> G.Don.	Verbenaceae	Climber	-

42.	<i>Cnestis ferruginea</i> DC.	Connaraceae	Shrub	AUHI051
43.	<i>Cnestis longiflora</i> Schellenb.	Connaraceae	Shrub	AUHI050
44.	<i>Cola gigantea</i> A. Chev.	Sterculiaceae	Tree	-
45.	<i>Cola heterophylla</i> (P. Beauv.) Schott. et Endl.	Sterculiaceae	Tree	AUHI040
46.	<i>Cola hispida</i> Brenan et Keay	Sterculiaceae	Tree	-
47.	<i>Cola millenii</i> K. Schum.	Sterculiaceae	Tree	-
48.	<i>Cola</i> sp. sp.	Sterculiaceae	Tree	AUHI041
49.	<i>Combretum dolichopetalum</i> Engl. & Diels.	Combretaceae	Climber	AUHI005
50.	<i>Combretum paniculatum</i> Vent.	Combretaceae	Climber	-
51.	<i>Combretum racemosum</i> P. Beauv.	Combretaceae	Climber	-
52.	<i>Craterispermum cerinanthum</i> Hiern	Rubiaceae	Tree	AUHI075
53.	<i>Crinum jagus</i> (J. Thomps.) Dandy	Amaryllidaceae	Herb	-
54.	<i>Croton lobatus</i> L.	Euphorbiaceae	Herb	AUHI023
55.	<i>Culcasia saxatilis</i> A. Chev.	Araceae	Climber	-
56.	<i>Cuviera acutiflora</i> DC	Rubiaceae	Tree	AUHI004
57.	<i>Cyclosorus dentatus</i> (Forsk) Chinz	Thelypteridaceae	Fern	AUHI067
58.	<i>Cyrtosperma senegalense</i> Schott Engl.	Araceae	Herb	-
59.	<i>Dalbergiella welwitschii</i> (Baker) Baker f.	Papilionaceae	Shrub	-
60.	<i>Desmodium ramosissimum</i> G. Don	Papilionaceae	Herb	AUHI032
61.	<i>Desplatsia subericarpa</i> Bocq.	Tiliaceae	Tree	-
62.	<i>Dialium guineense</i> Willd.	Caesalpiniaceae	Tree	AUHI025
63.	<i>Dichapetalum madagascariensis</i> Poir.	Dichapetalaceae	Shrub	-
64.	<i>Dicranolepis grandiflora</i> Engl.	Thymelaeaceae	Shrub	AUHI059
65.	<i>Digitaria</i> sp. sp.	Poaceae	Grass	-
66.	<i>Dioscorea smilacifolia</i> De Wild	Dioscoreaceae	Climber	AUHI061
67.	<i>Diospyros barteri</i> Hiern	Ebenaceae	Shrub	-
68.	<i>Discoglypemma caloneura</i> (Pax) Prain	Euphorbiaceae	Shrub	-
69.	<i>Dissotis erecta</i> (Gild)nPierre	Melastomataceae	Shrub	AUHI016
70.	<i>Dissotis rotundifolia</i> (Sm.) Triana	Melastomataceae	Creepers	AUHI038
71.	<i>Drypetes molunduana</i> Pax et K. Hoffm.	Euphorbiaceae	Tree	-
72.	<i>Elaeis guinensis</i> Jacq.	Arecaceae	Tree	-
73.	<i>Eluesine indica</i> (L.) Gaertn.	Poaceae	Grass	-
74.	<i>Emilia coccinea</i> (Sims.) G. Don	Asteraceae	Herb	AUHI037
75.	<i>Entandrophragma cylindricum</i> (Sprague) Srague	Meliaceae	Tree	-
76.	<i>Euadenia trifoliata</i> (Schumach. & Thonn.) Oliv	Capparaceae	Tree	-
77.	<i>Euphorbia hirta</i> L.	Euphorbiaceae	Herb	AUHI012
78.	<i>Euphorbia hyssopifolia</i> L.	Euphorbiaceae	Herb	AUHI039
79.	<i>Ficus exasperata</i> Vahl	Moraceae	Tree	-
80.	<i>Ficus sur</i> Forssk.	Moraceae	Tree	-
81.	<i>Funtumia africana</i> (Benth.) Stapf.	Apocynaceae	Tree	AUHI020
82.	<i>Geophila obvallata</i> (Schumach.) Didr.	Rubiaceae	Herb	-
83.	<i>Geophila repens</i> (L.) I.M. Johnst.	Rubiaceae	Herb	AUHI053

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84.	<i>Glyphaea brevis</i> (Spreng.) Monachino	Tiliaceae	Shrub	-
85.	<i>Gomphrena celosioides</i> Mart.	Amaranthaceae	Herb	AUHI009
86.	<i>Griffonia simplicifolia</i> (DC.) Baill	Caesalpiniaceae	Shrub	-
87.	<i>Harungana madagascariensis</i> Lam. ex Poir.	Guttiferae	Shrub	-
88.	<i>Hedranthera barteri</i> (Hook.f.) Pichon	Apocynaceae	Herb	AUHI017
89.	<i>Hevea brasiliensis</i> (Willd. ex A.Juss.) Mull.Arg.	Euphorbiaceae	Tree	-
90.	<i>Hylodendron gabunense</i> Taub	Caesalpiniaceae	Tree	-
91.	<i>Icacina trichantha</i> Oliv.	Icacinaceae	Herb	AUHI034
92.	<i>Ipomoea involucrata</i> P. Beauv.	Convolvulaceae	Climber	-
93.	<i>Irvingia gabonensis</i> (Aubry-Lecomte ex O'Rorke) Baill.	Irvingiaceae	Tree	-
94.	<i>Jateorhiza macrantha</i> (Hook.f.) Exell	Menispermaceae	Climber	-
95.	<i>Landolphia calabarica</i> (Stapf.) Bruce	Apocynaceae	Climber	AUHI018
96.	<i>Landolphia dulcis</i> var. <i>barteri</i> (Stapf) Pichon	Apocynaceae	Climber	AUHI070
97.	<i>Landolphia owariensis</i> P. Beauv.	Apocynaceae	Climber	-
98.	<i>Lecaniodiscus cupanioides</i> Planch. ex Benth.	Sapindaceae	Tree	-
99.	<i>Leea guineensis</i> G.Don	Leeaceae	Herb	-
100.	<i>Lovoa trichiloides</i> Harms	Meliaceae	Tree	-
101.	<i>Ludwigia abyssinica</i> A. Rich.	Onagraceae	Herb	-
102.	<i>Ludwigia decurrens</i> Walter	Onagraceae	Herb	-
103.	<i>Lycopodium cernuum</i> L.	Lycopodiaceae	Fern	AUHI062
104.	<i>Lygodium microphyllum</i> (Cav.) R.Br.	Schizaceae	Fern	AUHI066
105.	<i>Macaranga heudelotii</i> Baill	Euphorbiaceae	Shrub	-
106.	<i>Macrosphyra longistyla</i> Hook.f	Rubiaceae	Shrub	AUHI060
107.	<i>Maesobotrya barteri</i> (Baill) Hutch var <i>barteri</i>	Euphorbiaceae	Tree	AUHI043
108.	<i>Mallotus oppositifolius</i> (Geiseler) Mull. Arg.	Euphorbiaceae	Shrub	-
109.	<i>Malvastrum coromandelianum</i> (L.) Garcke	Malphiaceae	Herb	AUHI029
110.	<i>Maranthocloa lucentha</i> (K. Schum.) Milne-Redh.	Maranthaceae	Shrub	-
111.	<i>Margaritaria discoidea</i> (Baill.) Webster	Euphorbiaceae	Tree	-
112.	<i>Melanthera scandens</i> (Schum. & Thonn.) Roberty	Asteraceae	Herb	-
113.	<i>Microdesmis puberula</i> Hook.f. ex Planch.	Pandaceae	Shrub	-
114.	<i>Millettia thonningii</i> (Schum. & Thonn.) Bak.	Papilionaceae	Tree	-
115.	<i>Mimosa pigra</i> L.	Mimosaceae	Climber	AUHI035
116.	<i>Mitracapus scaber</i> Zucc. ex Schult. Et Schult.	Rubiaceae	Herb	-
117.	<i>Mitragyna stipulosa</i> (DC.) Kuntze	Rubiaceae	Tree	-
118.	<i>Monodora myristica</i> (Gaertn.) Dunal	Annonaceae	Tree	-
119.	<i>Morinda morindoides</i> (Bak.) Milne-Redh.	Rubiaceae	Tree	AUHI076
120.	<i>Musanga cecropioides</i> R. Br. ex Tedlie	Moraceae	Tree	-
121.	<i>Mussaenda landolphoides</i> Wernham	Rubiaceae	Shrub	AUHI003
122.	<i>Napoleonaea vogelii</i> Hook. Et Planch.	Lecythidiaceae	Tree	AUHI030
123.	<i>Nephrolepis biserrata</i> (Sw.) Schott.	Nephrolepidaceae	Fern	AUHI064
124.	<i>Newbouldia laevis</i> (P. Beauv.) Seem. ex Bureau.	Bignoniaceae	Tree	-

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125.	<i>Ochna afzelii</i> R. Br. ex Oliv.	Ochnaceae	Shrub	-
126.	<i>Oplismenus burmannii</i> (Retz.) P. Beauv.	Poaceae	Grass	-
127.	<i>Ostryoderis</i> sp sp.	Papilionaceae	Shrub	-
128.	<i>Ouratea flava</i> (Schum & Thonn) Hutch & Dalz. ex Stapf.	Ochnaceae	Shrub	AUHI052
129.	<i>Oxyanthus gracilis</i> Hiern	Rubiaceae	Shrub	-
130.	<i>Oxyanthus racemosus</i> (Schum & Thonn) Keay	Rubiaceae	Shrub	AUHI074
131.	<i>Oxytenanthera abyssinica</i> (A. Rich.) Munro	Poaceae	Grass	-
132.	<i>Palisota ambigua</i> (P. Beauv.) C.B. Clarke	Commelinaceae	Herb	-
133.	<i>Panicum maximum</i> Jacq.	Poaceae	Grass	-
134.	<i>Parquetina nigrescens</i> (Afzel.) Bullock	Periplocaceae	Climber	AUHI021
135.	<i>Paspalum orbiculare</i> G. Forst.	Poaceae	Grass	-
136.	<i>Passiflora foetida</i> L.	Passifloraceae	Creeper	AUHI033
137.	<i>Pauridiantha hirtella</i> (Benth.) Bremek.	Rubiaceae	Tree	AUHI073
138.	<i>Pavetta corymbosa</i> (DC.) Williams var. <i>neglecta</i> Bremek.	Rubiaceae	Tree	AUHI001
139.	<i>Pennisetum purpureum</i> Schumach.	Poaceae	Grass	-
140.	<i>Pentaclethra macrophylla</i> Benth.	Mimosaceae	Tree	AUHI078
141.	<i>Phyllanthus amarus</i> Schum. et Thonn	Euphorbiaceae	Herb	-
142.	<i>Phyllanthus muellerianus</i> (O Ktze) Exell	Euphorbiaceae	Shrub	-
143.	<i>Phyllanthus niruri</i> L.	Euphorbiaceae	Herb	-
144.	<i>Picralima nitida</i> Stapf Th. & H. Dur	Apocynaceae	Tree	-
145.	<i>Piper guineensis</i> Schum. & Thonn.	Piperaceae	Climber	-
146.	<i>Pleioceras barteri</i> Baill	Apocynaceae	Tree	AUHI007
147.	<i>Polysphaeria arbuscula</i> K. Schum	Rubiaceae	Shrub	AUHI072
148.	<i>Pteridium aquilinum</i> (L.) Kuhn.	Dennstaedtiaceae	Fern	AUHI065
149.	<i>Pycnanthus angolensis</i> (Welw.) Warb	Myristicaceae	Tree	-
150.	<i>Pyrenacantha staudtii</i> (Engl.) Engl.	Icacinaceae	Climber	-
151.	<i>Raphia hookeri</i> Mann & Wendl.	Arecaceae	Tree	-
152.	<i>Raphia vinifera</i> P.Beauv.	Arecaceae	Tree	-
153.	<i>Rauvolfia vomitoria</i> Afzel.	Apocynaceae	Tree	-
154.	<i>Ricinidendron heudelotii</i> (Baill.) Pierre ex Pax	Euphorbiaceae	Tree	-
155.	<i>Rinorea kibbiensis</i> Chipp	Violaceae	Shrub	-
156.	<i>Ritchia longipedicellata</i> Gilg	Capparaceae	Shrub	-
157.	<i>Rothmania longiflora</i> Salisb.	Rubiaceae	Shrub	AUHI047
158.	<i>Rutidea olenotricha</i> Hiern	Rubiaceae	Shrub	AUHI071
159.	<i>Sacamone afzelii</i> (Roem. et Schult.) K. Schum.	Asclepiadaceae	Climber	-
160.	<i>Salacia pallescens</i> Oliv.	Celastraceae	Shrub	-
161.	<i>Sarcophrynium brachystachyum</i> K. Schum	Maranthaceae	Shrub	AUHI002
162.	<i>Scleria naumanniana</i> Boeck.	Cyperaceae	Sedge	AUHI057
163.	<i>Scoparia dulcis</i> L.	Scropulariaceae	Herb	AUHI077
164.	<i>Scottellia mimfiensis</i> Gilg.	Flacourtiaceae	Tree	-

165.	<i>Selaginella myosorus</i> (Sw.) Alston	Sellaginellaceae	Fern	-
166.	<i>Senna hirsuta</i> L.	Caesalpiniaceae	Shrub	-
167.	<i>Sida corymbosa</i> R. E. Fr.	Malvaceae	Herb	-
168.	<i>Sida veronicifolia</i> Lam.	Malvaceae	Herb	-
169.	<i>Smilax anceps</i> Willd.	Smilacaceae	Climber	-
170.	<i>Solanum turvum</i> Sw.	Solanaceae	Shrub	-
171.	<i>Spenocentrum jollyanum</i> Pierre.	Menispermaceae	Shrub	AUHI015
172.	<i>Spiropetalum heterophyllum</i> Gilg.	Connaraceae	Shrub	AUHI055
173.	<i>Spondis mombin</i> L.	Anacardiaceae	Tree	-
174.	<i>Stachytarpheta cayennensis</i> (L.H. Rich) Schum	Verbenaceae	Herb	AUHI048
175.	<i>Stachytarpheta indica</i> (L.) Vahl.	Verbenaceae	Herb	AUHI049
176.	<i>Sterculia tragacantha</i> Lindl.	Sterculiaceae	Tree	-
177.	<i>Theobroma cacao</i> L.	Sterculiaceae	Tree	-
178.	<i>Trema orientalis</i> (L.) Bl.	Ulmaceae	Tree	AUHI022
179.	<i>Trichilia monadelpha</i> (Thonn.) J.J. de Wilde	Meliaceae	Tree	-
180.	<i>Trichilia prieuriana</i> A.Juss.	Meliaceae	Tree	-
181.	<i>Tridax procumbens</i> L.	Asteraceae	Herb	AUHI046
182.	<i>Triunfetta rhomboidea</i> Jacq.	Tiliaceae	Shrub	AUHI058
183.	<i>Urena lobata</i> L.	Malvaceae	Shrub	-
184.	<i>Vernonia cinera</i> L.	Asteraceae	Herb	-
185.	<i>Vitex grandiflora</i> Gurke	Verbenaceae	Tree	AUHI044
186.	<i>Waltheria indica</i> L.	Sterculiaceae	Shrub	AUHI026
187.	<i>Xylopiya aethiopica</i> A. Rich	Annonaceae	Tree	AUHI036
188.	<i>Zanthoxylum leprieurii</i> Guill. & Perr.	Rutaceae	Tree	-

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Table 2. Species distribution across plant families within the study area

S/No	Family	No of species	% composition
1.	Amaranthaceae	2	1.1
2.	Amaryllidaceae	1	0.5
1.	Anacardiaceae	1	0.5
2.	Annonaceae	3	1.6
3.	Apocynaceae	10	5.3
4.	Araceae	3	1.6
5.	Arecaceae	3	1.6
6.	Asclepiadaceae	1	0.5
7.	Asteraceae	6	3.2
8.	Bignoniaceae	1	0.5
9.	Caesalpiniaceae	5	2.7
10.	Capparaceae	2	1.1
11.	Celastraceae	1	0.5
12.	Combretaceae	3	1.6
13.	Commelinaceae	2	1.1
14.	Connaraceae	5	2.7
15.	Convolvulaceae	1	0.5
16.	Cyperaceae	1	0.5
17.	Dennstaedtiaceae	1	0.5
18.	Dichapetalaceae	1	0.5
19.	Dioscoreaceae	1	0.5
20.	Ebenaceae	1	0.5
21.	Euphorbiaceae	17	9.0
22.	Flacourtiaceae	1	0.5
23.	Guttiferae	2	1.1
24.	Icacinaceae	2	1.1
25.	Irvingiaceae	1	0.5
26.	Lecythidiaceae	1	0.5
27.	Leeaceae	1	0.5
28.	Loganiaceae	1	0.5
29.	Lycopodiaceae	1	0.5
30.	Malphiaceae	2	1.1
31.	Malvaceae	3	1.6
32.	Maranthaceae	2	1.1
33.	Melastomataceae	2	1.1
34.	Meliaceae	5	2.7
35.	Menispermaceae	4	2.1
36.	Mimosaceae	5	2.7

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37.	Moraceae	4	2.1
38.	Myristicaceae	1	0.5
39.	Nephrolepidaceae	1	0.5
40.	Ochnaceae	2	1.1
41.	Onagraceae	2	1.1
42.	Orchicadeae	1	0.5
43.	Pandaceae	1	0.5
44.	Papilionaceae	10	5.3
45.	Passifloraceae	2	1.1
46.	Periplocaceae	1	0.5
47.	Piperaceae	1	0.5
48.	Poaceae	7	3.7
49.	Polygalaceae	1	0.5
50.	Rubiaceae	18	9.6
51.	Rutaceae	1	0.5
52.	Sapindaceae	3	1.6
53.	Schizaceae	1	0.5
54.	Scropulariaceae	1	0.5
55.	Sellaginellaceae	1	0.5
56.	Smilacaceae	1	0.5
57.	Solanaceae	1	0.5
58.	Sterculiaceae	8	4.3
59.	Thelypteridaceae	1	0.5
60.	Thymelaeaceae	1	0.5
61.	Tiliaceae	3	1.6
62.	Ulmaceae	1	0.5
63.	Verbenaceae	4	2.1
64.	Violaceae	1	0.5
65.	Vitaceae	2	1.1
66.	Zingiberaceae	1	0.5
		188	100%

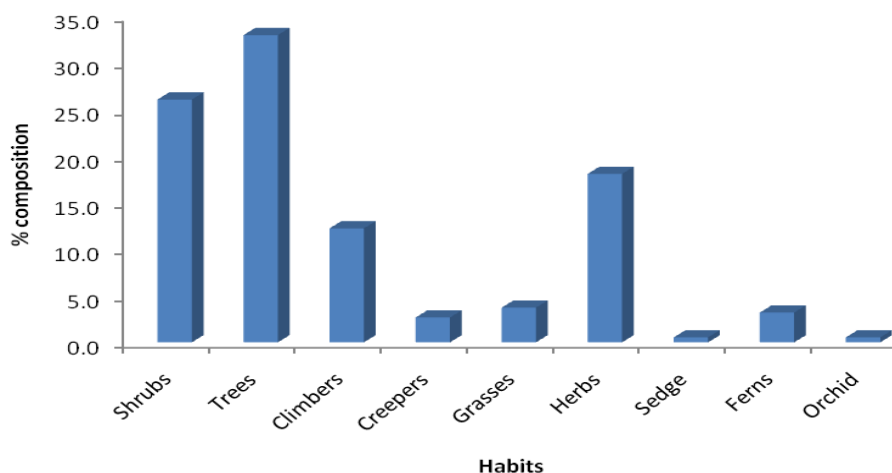


Figure 2. Percentage species composition across plant habits within the study area

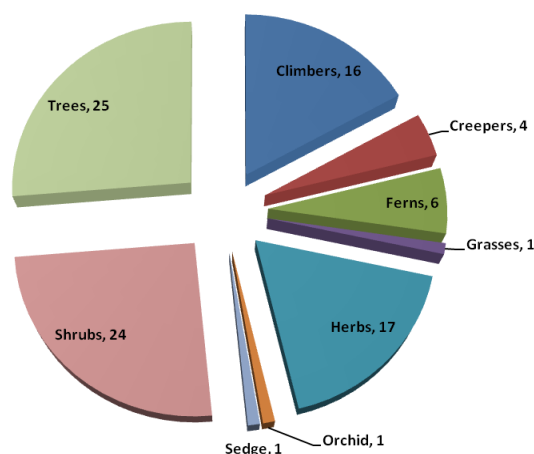


Figure 3. Distribution of plant families across the identified habits within the study area

Similarly, the trees and shrubs dominated the distribution of families across the different life forms, with 25 and 24 families represented, respectively. The herbs and climbers had 17 and 16 families, while the ferns and creepers had 6 and 4 families represented, respectively. All the grasses identified were of the same family – Poaceae (Figure 3). Interestingly, compartment 2, plot 3 (Cocoa area) and compartment 4, plot 2 (Sugbo area) appeared to be distinct and accommodated a number of unique species within the study area. Some of these include *Ancistrophyllum secundiflorum* (Orchid), *Geophila repens*, *Geophila obvallata*, *Desplatsia subericarpa*, *Drypetes molunduana*, *Hevea brasiliensis* (rubber tree), *Hylodendron gabunense* and *Pyrenacantha staudtii*. Other notable species encountered during the survey include *Alstonia congensis* (a species only known to be abundant around Epe area of Lagos State), *Allanblackia floribunda*, *Carapa procera*, *Cuviera acutiflora*, *Cyrtosperma senegalense*, *Funtumia africana*, *Griffonia simplicifolia*, *Lovoa trichiloides*, *Macaranga heudelotii*, *Megaphrynium macrostachyum*, *Monodora myristica*, *Pauridiantha hirtella*, *Rinorea kibbiensis* and *Zanthoxylum leprieurii*. Pteridophytes were not left out, as *Pteridium aquilinum*, *Cyclosorus dentatus*, *Nephrolepis biserrata*, amongst others, were also recorded.

The diversity indices for the study area were encouraging and the watershed around the site still served as a repository of rare and threatened species as there was currently no exploitation within the area. Agarwal (2000) noted that watershed management requires a multipurpose approach to improving land and increasing water availability for crop production, livestock and human use through soil and moisture conservation measure. This is applicable to the study area as its potential was yet to be maximally utilized for high productivity by the farmers around the site. Aju (2016) noted that properly managed forested watershed can help maintain ecological balance, minimize the occurrence of flood and drought and could mitigate the effect of adverse climatic changes due to its known environmental and economic benefits. Augustine University Campus and its neighbouring communities could take advantage of the watershed provided by the vegetation.

### CONCLUSION

This study has shown the relevance of species enumeration in the management and conservation of biological diversity. The large number of flora recorded suggested that the study area could be a resource centre for useful plants in the manufacture of synthetic drugs. The sustainable collection and use of these important genetic resources to mitigate against the eventual disappearance of species should be encouraged. This could be achieved in collaboration with the neighbouring communities and the rural dwellers who are the primary custodians of the study area.

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