



Checklist of Weeds in University of Port Harcourt and Its Environs

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ABSTRACT: We took inventory of the weeds in and around the University of Port Harcourt to determine their family, genus and species compositions and thereby generate their checklist. Three hundred and twenty-two (322) species of weeds belonging to 172 genera and 45 families were identified. Among these weed species, the grasses (Poaceae) having 72 species and 40 genera was the dominant weed identified. This is followed by Fabaceae (25 species in 16 genera), Cyperaceae (53 species in 14 genera), Asteraceae (15 species in 12 genera) and Commelinaceae (20 species in 8 genera). Others include Tiliaceae (7 species in 6 genera), Euphorbiaceae (13 species in 7 genera), Amaranthaceae (5 species in 4 genera), Rubiaceae (6 species in 5), Convolvulaceae (10 species in 4 genera), Solanaceae (8 species in 4 genera), Cucurbitaceae (5 species in 4 genera), Malvaceae (7 species 3 genera) and Verbenaceae (5 species in 3 genera). Anacardiaceae, Asclepiadaceae, Boraginaceae, Crassulaceae, Hydrophyllaceae, Loganiaceae, Lythraceae, Melastomataceae, Sapinaceae, Sapindaceae, Selaginellaceae, Sphenocleaceae, Sterculiaceae and Urticaceae with one species in one genus were the least dominant families. These weeds are found in wet or dry land (open fields, cultivated Lands, abandoned fallow and lawns) but predominantly found in open fields. The Perennials (54.98%) are the dominant weeds followed by annuals (42.42%) while bi-annuals (2.60%) were the least. The broad leaves were the dominant weeds and constituted 76.47% of the weeds identified, followed by grasses 14.03% and sedges 9.50%. This finding, therefore, presents the first comprehensive inventory of weeds in the University of Port Harcourt.

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Weeds are genetically diverse and many common weed species also have the ability to establish themselves rapidly in the field (Mikulka and Chodová, 2000). This is primarily due to their ability to produce a large number of viable seeds or vegetative tissues such as rhizomes in a single growing season (Shetto *et al.*, 1994). In recent times, a considerable increase in infestation of arable land with perennial weeds have been reported (Winkler, 2000). This trend was attributed to the failure of the farmers to carry out cultural practices as well as poor weed control management practices during this process (Mikulka and Chodová, 2000). Weeds compete with crops for water, soil nutrients, light and space and thus reduce crop yields (Sankaran and Mani, 1972; Rao, 1983; Croon *et al.*, 1984; Rain, 1984) and are major causes of low yield in cassava and the main constraint limiting the competitiveness of cassava farmers in the country (Daily Post, 2018). They also contribute to a reduction in maize yield (Shetto *et al.*, 1994; Crammer 1976), rice, wheat, sorghum and millet (Crammer, 1976). West Africa lies in the tropics and sub-humid tropics which are characterized by high temperatures and humid ecosystems, a situation which makes the region

conducive to weed growth. Hence, weeds constitute a significant component of the pest complex in African farms, consequently, an important constraint in the agricultural production system (Takim and Amodu, 2013). Identification and proper documentation of the weeds help the farmers to identify the best practice to tackle the different species of weeds. In and around the University of Port Harcourt, there is no comprehensive data on the weeds and presents the checklist of the weed in this area for the first time.

MATERIALS AND METHODS

The weed enumeration was based on plot-less sampling technique. The sampling of the grasses were done randomly along the roads, foot paths, tracts, open fields, farms, etc without any specific plot or quadrat size (Mueller-Dombois and Ellenberg, 1974). The weeds were identified using the handbook of West African Weeds (Akobundu and Agyakwa, 1998; Akobundu *et al.*, 2017; Hutchinson and Dalziel, 1954; Lowe, 1974; Stanfield and Lowe, 1970). Data on weeds species were collected at monthly intervals for five months during the blooming period (June to October) in 2016 and 2017.

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RESULTS AND DISCUSSION

A total of 322 weed species belonging to 172 genera and 45 families were identified in and around the University of Port Harcourt (Tables 1 and 2). Based on the number of species, Poaceae family had the maximum species composition of 72 species (22.36%) out of 322 weed species identified. It is followed by Cyperaceae 53 (16.46%), Fabaceae 25 (7.76%), Asteraceae 15 (4.66%), Euphorbiaceae 13 (4.04%), Convolvulaceae 10 (3.11%), Moraceae 9 (2.80%), Solanaceae 8 (2.48%), Tiliaceae and Malvaceae 7 (2.17%) each, Tiliaceae and Rubiaceae 6 (1.86%) each, and Amaranthaceae, Cucurbitaceae, Verbenaceae and Vitaceae 5 (1.55%). The least number of species were in Zingiberaceae, Anacardiaceae, Asclepiadaceae, Boraginaceae,

Crassulaceae, Hydrophyllaceae, Loganiceae, Lythraceae, Melastomataceae, Sapinaceae, Sapindaceae, Selaginellaceae, Sphenocleaceae, Sterculiaceae and Urticaceae (Table 2). Also, members of the family Poaceae with 40 genera (23.26%) had the highest number of genera, followed by Fabaceae 16 (9.30%), Cyperaceae, 14 (8.14%), Asteraceae 12 (6.97%), Commelinaceae 8 (4.65%), Euphorbiaceae 7 (4.07%), Tiliaceae, Rubiaceae and Cucurbitaceae 5 (2.91%) each, Convolvulaceae, Amaranthaceae and Solanaceae 4 (2.33%) genera each, Malvaceae, Verbenaceae, Acanthaceae, Apocynaceae and Araceae 3 (1.74%) genera each and Scrophulariaceae, Portulacaceae, Lamiaceae, Passifloraceae, Piperaceae and Sapindaceae 2 (1.16%) genera each (Table 2).

Table 1: Checklist of weed species identified in the study area

S/N	Name of Weed	Family	Habitat	Lifeform
1	<i>Asystasia gangetica</i> (Linn.) T. Anders	Acanthaceae	OF	A
2	<i>Hypoestes forskalei</i> (Vahl) Soland. Ex Roem. & Schult.	Acanthaceae	OF	A
3	<i>Hypoestes</i> sp.	Acanthaceae	OF	A
4	<i>Nelsonia canescens</i> (Lam.) Spreng.	Acanthaceae	OF	BA
5	<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	OF/WL	A
6	<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	OF/CL	A
7	<i>Amaranthus viridis</i> Linn.	Amaranthaceae	OF/CL	A
8	<i>Celosia leptostachya</i> Benth.	Amaranthaceae	OF	A
9	<i>Cyathula prostrata</i> (L.) Blume	Amaranthaceae	OF	A
10	<i>Gomphrena celosioides</i> Mart.	Amaranthaceae	OF	A
11	<i>Spondias mombin</i> Linn.	Anacardiaceae	OF	P
12	<i>Rauvolfia vomitoria</i> Afzel.	Apocynaceae	OF	P
13	<i>Tabernaemontana longiflora</i> Benth.	Apocynaceae	OF	P
14	<i>Voacanga africana</i> Stapf	Apocynaceae	OF	P
15	<i>Colocasia esculenta</i> (Linn.) Schott	Araceae	OF/CL	P
16	<i>Syngonium podophyllum</i> Schott	Araceae	WL/BF	P
17	<i>Xanthosoma mafaffa</i> Schott	Araceae	OF/CL	P
18	<i>Pergularia daemia</i> (Forsk.) Chiov.	Asclepiadaceae	OF/BF	P
19	<i>Ageratum conyzoides</i> Linn.	Asteraceae	OF	A
20	<i>Aspilia Africana</i> (Pers.) C.D. Adams	Asteraceae	OF	A
21	<i>Chromoleana odorata</i> (L.) R.M. King & Robinson	Asteraceae	OF	P
22	<i>Eclipta alba</i> (L.) Hassk	Asteraceae	OF/WL	A
23	<i>Eleutheranthera ruderalis</i> (Sw.) Sch.Bip.	Asteraceae	OF	A
24	<i>Emilia coccinea</i> (Sims) G.Don	Asteraceae	OF	A
25	<i>Emilia praetermissa</i> Milne-Readhead	Asteraceae	OF	A
26	<i>Emilia sonchifolia</i> (Linn.) DC.	Asteraceae	OF	A
27	<i>Ethulia conyzoides</i>	Asteraceae	WL	A
28	<i>Melanthera scadens</i> (Schum. & Thonn.) Roberty	Asteraceae	OF	P
29	<i>Spilanthes</i> sp.	Asteraceae	OF	P
30	<i>Synedrella nodiflora</i> Gaertn.	Asteraceae	OF	A
31	<i>Tridax procumbens</i> Linn.	Asteraceae	OF	BA
32	<i>Vernonia cinerea</i> (Linn.) Less	Asteraceae	WL/BF	P
33	<i>Vernonia</i> sp. Linn.f.	Asteraceae	OF	A
34	<i>Heliotropium indicum</i> Linn.	Boraginaceae	OF/WL	A
35	<i>Cleome rutidosperma</i> DC.	Cleomaceae	OF	A
36	<i>Cleome viscosa</i> L.	Cleomaceae	OF	A
37	<i>Combretum bracteatum</i> (Laws.) Engl. & Diels	Combretaceae	OF/BF	P
38	<i>Combretum platypterum</i> (Welw.) Hutch. & Dalz.	Combretaceae	OF/BF	P
39	<i>Combretum racemosum</i> P. Beauv.	Combretaceae	OF/BF	P
40	<i>Commelina diffusa</i> Burm. f.	Commelinaceae	OF/BF	P
41	<i>Aneilema beninense</i> (P. Beauv.) Kunth	Commelinaceae	OF/CL	A/P
42	<i>Aneilema</i> sp.	Commelinaceae	OF/CL	A/P
43	<i>Aneilema umbrosum</i> (Vahl) Kunth	Commelinaceae	CL	A/P
44	<i>Aneilema umbrosum</i> subsp. <i>umbrosum</i> J. K. Morton	Commelinaceae	CL	A/P
45	<i>Aneilema umbrosum</i> subsp. <i>ovato-oblongum</i> (P. Beauv.) J. K. Morton	Commelinaceae	CL	A/P

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46	<i>Commelina benghalensis</i> var. <i>benghalensis</i> J. K. Morton	Commelinaceae	OF/CL	A/P
47	<i>Commelina benghalensis</i> var. <i>hirsuta</i> C. B. Cl.	Commelinaceae	OF/CL	A/P
48	<i>Commelina diffusa</i> subsp. <i>diffusa</i> J. K. Morton	Commelinaceae	OF/CL	A/P
49	<i>Commelina erecta</i> L. subsp. <i>erecta</i>	Commelinaceae	WL/CL	P
50	<i>Commelina erecta</i> Linn.	Commelinaceae	OF/CL	P
51	<i>Commelina forskalaei</i> Vahl	Commelinaceae	OF/CL	P
52	<i>Commelina thomasii</i> Hutch.	Commelinaceae	OF/CL	P
53	<i>Corchorus trilocularis</i> Linn.	Commelinaceae	OF	P
54	<i>Cyanotis arachnoidea</i> C. B. Cl.	Commelinaceae	OF	P
55	<i>Cyanotis lanata</i> Benth.	Commelinaceae	OF	P
56	<i>Floscopa aquatica</i> Hua	Commelinaceae	CL	A/P
57	<i>Murdannia tenuissima</i> (A. Chev.) Brenan	Commelinaceae	OF	A/P
59	<i>Palisota hirsute</i> (Thunb.) K.Schum.	Commelinaceae	WL	P
60	<i>Stanfieldiella imperforata</i> (C. B. Cl.) Brenan	Commelinaceae	CL	P
61	<i>Hewittia malabarica</i> (L.) Suresh	Convolvulaceae	OF	P
62	<i>Hewittia sublobata</i> Linn.	Convolvulaceae	OF	A
63	<i>Ipomoea aquatica</i> Forsk.	Convolvulaceae	WL	P
64	<i>Ipomoea asarifolia</i> (Desr.) Roem. & Schult.	Convolvulaceae	OF/WL	P
65	<i>Ipomoea cordatotriloba</i> Dennst.	Convolvulaceae	OF	P
66	<i>Ipomoea involucrata</i> P. Beauv.	Convolvulaceae	OF	BA
67	<i>Ipomoea mauritiana</i> Jacq.	Convolvulaceae	OF	P
68	<i>Ipomoea quamoclit</i> Linn.	Convolvulaceae	OF	A
69	<i>Lepistemon owariense</i> (P.Beauv.) Hallier f.	Convolvulaceae	OF/WL	P
70	<i>Merremia aegyptia</i> (Linn.) Urban	Convolvulaceae	OF/WL	A
71	<i>Bryophyllum pinnatum</i> (Linn.) Oken	Crassulaceae	OF	P
72	<i>Lagenaria breviflora</i> (Benth.) Roberty	Cucurbitaceae	OF	P
73	<i>Luffa aegyptiaca</i> Mill.	Cucurbitaceae	OF	A
74	<i>Momordica charantia</i> Linn.	Cucurbitaceae	OF	P
75	<i>Zehneria capillacea</i> (Schumach.) C. Jeffrey	Cucurbitaceae	OF	P
	<i>Croton</i>	Cucurbitaceae	CL	P
76	<i>Zehneria scabra</i> (L. f.) Sond. subsp. <i>scabra</i>	Cucurbitaceae	OF	A
77	<i>Bulbostylis barbata</i> (Rottb.) C.B.Cl.	Cyperaceae	OF/CL	P
	<i>Cirpus angolensi</i> C. B. Cl. var. <i>brizaeformis</i> (Hutch.) Hooper	Cyperaceae	WL	P
79	<i>Cyperus compressus</i> Linn.	Cyperaceae	OF/WL	P
80	<i>Cyperus cuspidatus</i> Kunth	Cyperaceae	OF/WL	P
81	<i>Cyperus dichroöstachyus</i> Hochst. ex A. Rich.	Cyperaceae	OF/WL	P
82	<i>Cyperus difformis</i> Linn.	Cyperaceae	OF/WL	P
83	<i>Cyperus distans</i> Linn.f.	Cyperaceae	OF/WL	P
84	<i>Cyperus esculentus</i> Linn.	Cyperaceae	OF/WL	P
85	<i>Cyperus haspan</i> Linn.	Cyperaceae	OF/WL	P
86	<i>Cyperus iria</i> Linn.	Cyperaceae	OF/WL	P
87	<i>Cyperus polystachyos</i> (Rottb.) P. Beauv. var. <i>polystachyos</i>	Cyperaceae	OF/WL	P
88	<i>Cyperus pustulatus</i> Vahl.	Cyperaceae	OF/WL	P
89	<i>Cyperus rotundus</i> Linn.	Cyperaceae	OF	P
90	<i>Cyperus sp.</i>	Cyperaceae	WL	P
91	<i>Cyperus tuberosus</i> Rottb.	Cyperaceae	OF/WL	P
92	<i>Eleocharis acutangula</i> (Roxb.) J.A. Schultes	Cyperaceae	OF/WL	P
93	<i>Fimbristylis dichotoma</i> var. <i>pluristriata</i> (C.B. Cl.) Napper	Cyperaceae	OF/WL	P
94	<i>Fimbristylis ferruginea</i> (Linn.) Vahl	Cyperaceae	WL	P
95	<i>Fimbristylis hispidula</i> (Vahl) Kunth subsp. <i>hispidula</i>	Cyperaceae	OF/WL	P
96	<i>Fimbristylis littoralis</i> Gaudet	Cyperaceae	WL	A
97	<i>Fuirena ciliaris</i> (Linn.) Roxb.	Cyperaceae	WL	A
98	<i>Fuirena umbellata</i> Rottb.	Cyperaceae	WL	P
99	<i>Hypolytrum heteromorphum</i> Nelmes	Cyperaceae	WL	A
100	<i>Hypolytrum purpurascens</i> Cherm.	Cyperaceae	WL	A
101	<i>Kyllinga brevifolia</i> Rottb.	Cyperaceae	OF/WL	P
102	<i>Kyllinga bulbosa</i> Beauv.	Cyperaceae	OF/WL	P
103	<i>Kyllinga bulbosa</i> P.Beauv.	Cyperaceae	OF/WL	P
104	<i>Kyllinga erecta</i> Schumach.	Cyperaceae	OF/WL	P
105	<i>Kyllinga erecta</i> Schumach. var. <i>erecta</i>	Cyperaceae	OF/WL	P
106	<i>Kyllinga erecta</i> Schumach. var. <i>polyphylla</i> (Kunth) Hooper	Cyperaceae	OF/WL	P
107	<i>Kyllinga erecta</i> Schumacher var. <i>erecta</i>	Cyperaceae	OF/WL	P
108	<i>Kyllinga erecta</i> var. <i>africana</i> (Kuk.) Hopper	Cyperaceae	OF/WL	P
109	<i>Kyllinga erecta</i> var. <i>polyphylla</i> (Kunth) Hooper	Cyperaceae	OF/WL	P
110	<i>Kyllinga nemoralis</i> (Forst.) Dandy ex Hutch.	Cyperaceae	OF/WL	P

111	<i>Kyllinga odorata</i> Vahl	Cyperaceae	OF/WL	P
112	<i>Kyllinga peruviana</i> Lam.	Cyperaceae	OF/WL	P
113	<i>Kyllinga pumila</i> Michx.	Cyperaceae	OF/WL	P
114	<i>Kyllinga squamulata</i> Thonn. Ex Vahl	Cyperaceae	OF/WL	P
115	<i>Kyllinga tenuifolia</i> Steud.	Cyperaceae	WL	P
116	<i>Lipocarpa chinensis</i> (Osbeck) Kern	Cyperaceae	OF/WL	P
117	<i>Mariscus alternifolius</i> Vahl	Cyperaceae	OF/WL	P
119	<i>Mariscus dubius</i> (Rottb.) C.E.C. Fischer	Cyperaceae	OF/WL	P
120	<i>Mariscus flabelliformis</i> Kunth var. <i>flabelliformis</i>	Cyperaceae	OF/WL	P
121	<i>Mariscus ligularis</i> (L.) Urban	Cyperaceae	OF/WL	P
122	<i>Mariscus longibracteatus</i> Cherm.	Cyperaceae	OF/WL	P
123	<i>Mariscus quarrosus</i> (Linn.) C.B. Cl.	Cyperaceae	OF/WL	P
124	<i>Mariscus tomaiophyllus</i> (K. Schum.) C.B. Cl.	Cyperaceae	OF/WL	P
125	<i>Pycnus macrostachyos</i> (Lam.) J.Raynal	Cyperaceae	OF/WL	P
126	<i>Rhynchospora corymbosa</i> (Linn.) Britt.	Cyperaceae	OF/WL	P
127	<i>Schoenoplectus senegalensis</i> (Hochst. Ex Steud.) Palla.	Cyperaceae	OF/WL	P
128	<i>Scleria naumanniana</i> Boeck	Cyperaceae	OF/WL	P
129	<i>Scleria verrucosa</i> Willd	Cyperaceae	OF/WL	P
130	<i>Dioscorea bulbifera</i>	Dioscoreaceae.	BF	P
131	<i>Dioscorea</i> sp.	Dioscoreaceae.	OF	P
132	<i>Acalypha fimbriata</i> Schum. & Thonn.	Euphorbiaceae	OF	A
133	<i>Alchornea cordifolia</i> (Schum & Thonn) Mull. Arg.	Euphorbiaceae	OF	P
134	<i>Alchornea laxiflora</i> (Benth.) Pax & K. Hoffm	Euphorbiaceae	OF	P
135	<i>Croton hirtus</i> L'Hérit	Euphorbiaceae	OF	A
136	<i>Croton lobatus</i> L.	Euphorbiaceae	OF	A
137	<i>Euphorbia heterophylla</i> Linn.	Euphorbiaceae	OF	A
138	<i>Euphorbia hirta</i> Linn.	Euphorbiaceae	OF	A
139	<i>Euphorbia hyssopifolia</i> Linn.f.	Euphorbiaceae	OF	A
140	<i>Euphorbia prostrata</i> Ait	Euphorbiaceae	OF	A
141	<i>Euphorbia thymifolia</i> Linn.	Euphorbiaceae	OF	A
142	<i>Phyllanthus niruri</i> var. <i>amarus</i> (Schumach. & Thonn.) Learndri	Euphorbiaceae	OF	A
143	<i>Phyllanthus</i> sp. Linn.	Euphorbiaceae	OF	A
144	<i>Phyllanthus urinaria</i> Linn.	Euphorbiaceae	OF	A
145	<i>Anthonotha macrpphylla</i> P.Beauv.	Fabaceae	OF/BF	P
146	<i>Senna alata</i> (L.)Roxb.	Fabaceae	OF	P
147	<i>Senna hirsuta</i> (Linn.) Irwin & Barneby	Fabaceae	OF	A
148	<i>Senna</i> sp.	Fabaceae	OF	A
149	<i>Dialium guineensis</i> Willd.	Fabaceae	OF/BF	P
150	<i>Aeschynomene indica</i> Linn.	Fabaceae	OF	A
151	<i>Mimosa invisa</i> var. <i>inermis</i> Adelb.	Fabaceae	OF	A
152	<i>Mimosa pigra</i> Linn.	Fabaceae	OF/WL	P
153	<i>Mimosa pudica</i> Linn.	Fabaceae	OF	P
154	<i>Schrankia leptocarpa</i> DC.	Fabaceae	OF	A
155	<i>Baphia nitida</i> Load.	Fabaceae	OF	P
156	<i>Calopogonium mucunoides</i> Desv.	Fabaceae	OF	A
157	<i>Centrosema pubescens</i> Benth.	Fabaceae	OF	P
158	<i>Crotolaria retusa</i> Linn.	Fabaceae	OF	A
159	<i>Desmodium scorpiurus</i> (Sw.) Desv.	Fabaceae	OF	P
160	<i>Desmodium triflorum</i> (Linn.) DC.	Fabaceae	OF	P
161	<i>Dolichos</i> sp.	Fabaceae	OF	A
162	<i>Indigofera</i> sp	Fabaceae	OF	A
163	<i>Indigofera spicata</i> Forsk.	Fabaceae	OF	P
164	<i>Lonchocarpus cyanescens</i> (Schum. & Thonn.) Benth.	Fabaceae	OF	P
165	<i>Millettia aboensis</i> (Hook. f.) Bak.	Fabaceae	OF	P
166	<i>Mucuna cochinchinensis</i> (Lour) A. Chev.	Fabaceae	OF	A
167	<i>Mucuna pruriens</i> (Linn.) DC. var. <i>pruriens</i>	Fabaceae	WL/BF	A
168	<i>Mucuna pruriens</i> var. <i>utilis</i> (Wall. ex Wight) Bak. ex Burck	Fabaceae	OF	A
169	<i>Pueraria phaseoloides</i> (Roxb.) Benth.	Fabaceae	OF	P
170	<i>Hydrolea pulustris</i> (Aubl.) Rausch	Hydrophyllaceae	WL	A
171	<i>Icacina senegalensis</i> A. Juss.	Icacinaceae	OF	P
172	<i>Icacina trichantha</i> Oliv.	Icacinaceae	OF	P
173	<i>Platostoma africanum</i> P. Beauv.	Lamiaceae	OF/WL	A
174	<i>Solenostemon monostachyus</i> subsp. <i>monostachyus</i> (P. Beauv.) Briq.	Lamiaceae	OF	P
175	<i>Spigelia anthelmia</i> Linn.	Loganiaceae	OF	A
176	<i>Ammannia baccifera</i> L.	Lythraceae	WL	A
177	<i>Hibiscus asper</i> Hook. f	Malvaceae	OF	A
178	<i>Malvastrum coromandelianum</i> (Linn.) Garcke	Malvaceae	OF	BA

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179	<i>Sida acuta</i> Burm.f.	Malvaceae	OF	P
180	<i>Sida cordifolia</i> Linn.	Malvaceae	OF	P
181	<i>Sida garckeana</i> Polak.	Malvaceae	OF	P
182	<i>Sida linifolia</i> Juss ex Cav.	Malvaceae	OF	BA
183	<i>Sida rhombifolia</i> Linn.	Malvaceae	OF	P
184	<i>Heterotis rotundifolia</i> (Sw.) Jac.-Fél.	Melastomataceae	OF/WL	P
185	<i>Ficus exasperata</i> Vahl.	Moraceae	OF/BF	P
186	<i>Ficus lyrata</i>	Moraceae	OF/BF	P
187	<i>Ficus morobensis</i>	Moraceae	OF/BF	P
188	<i>Ficus ovata</i>	Moraceae	OF/BF	P
189	<i>Ficus retusa</i>	Moraceae	OF/BF	P
190	<i>Ficus</i> spp.	Moraceae	OF/BF	P
191	<i>Ficus sycomorus</i> sub. sp. <i>gnaphalocarpa</i> (Mig.) C. C. Berg.	Moraceae	OF/BF	P
192	<i>Ficus triangularis</i>	Moraceae	OF/BF	P
193	<i>Ficus varirfolia</i>	Moraceae	OF/BF	P
194	<i>Boerhavia coccinea</i> Mill.	Nyctaginaceae	OF	P
195	<i>Boerhavia diffusa</i> L.	Nyctaginaceae	OF	P
196	<i>Nymphaea lotus</i> Linn.	Nymphaeaceae	WL	P
197	<i>Nymphaea maculata</i> Schum & Thonn.	Nymphaeaceae	WL	P
198	<i>Ludwigia abyssinica</i> A. Rich.	Onagraceae	WL	BA
199	<i>Ludwigia decurrens</i> Walt.	Onagraceae	WL	A
200	<i>Ludwigia hyssopifolia</i> (G.Don) Exell	Onagraceae	WL	A
201	<i>Ludwigia linifolia</i> Vahl	Onagraceae	WL	A
202	<i>Adenia gomefora</i> Forsk.	Passifloraceae	OF	A
203	<i>Passiflora foetida</i> Linn.	Passifloraceae	OF	A
204	<i>Peperomia pellucida</i> (L.) H. B. & K	Piperaceae	OF/CL	P
205	Piperaceae	Piperaceae	WL	P
206	<i>Acroceras amplexens</i> Stapf.	Poaceae	WL	A
207	<i>Acroceras zizanioides</i> Dandy	Poaceae	WL	P
208	<i>Andropogon ascinodis</i> C.B. Cl.	Poaceae	OF	A
209	<i>Andropogon</i> sp.	Poaceae	OF	A
210	<i>Andropogon tectorum</i> Schum. & Thonn.	Poaceae	OF	A
211	<i>Axonopus compressus</i> (Sw.) P. Beauv.	Poaceae	OF	P
212	<i>Bambusa vulgaris</i> Wendel. &	Poaceae	WL/CL	P
213	<i>Brachiaria comata</i> (A. Rich.) Stapf	Poaceae	OF/WL	A
214	<i>Brachiaria deflexa</i> (Shumach.) C.E.Hubbard ex Robyns	Poaceae	OF	A
215	<i>Brachiaria distachyoides</i> Stapf	Poaceae	OF/WL	A
216	<i>Brachiaria lata</i> (Shumach.) C. E. Hubbard	Poaceae	OF	A
217	<i>Brachiaria stigmatata</i> (Mez) Stapf	Poaceae	OF/WL	A
218	<i>Chloris pilosa</i> Schumach.	Poaceae	OF/WL	A
219	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	Poaceae	OF/CL	P
220	<i>Cymbopogon citratus</i> (DC.) Stapf	Poaceae	OF/CL	P
221	<i>Cynodon dactylon</i> (Linn.) Pers.	Poaceae	OF/WL	P
222	<i>Cynodon nlemfuensis</i> Vanderyst	Poaceae	OF/WL	P
223	<i>Dactyloctenium aegyptium</i> (Linn.) P.Beauv.	Poaceae	OF	A
225	<i>Digitaria adscendens</i> Henr.	Poaceae	CL	A
226	<i>Digitaria argillacea</i> (Hitche. & Chase) Fernald	Poaceae	CL	A
227	<i>Digitaria debilis</i> (Desf.) Willd.	Poaceae	CL	A
228	<i>Digitaria horizontalis</i> Willd.	Poaceae	OF	A
229	<i>Digitaria longiflora</i> (Retz.) Pers.	Poaceae	CL	A
230	<i>Echinochloa colona</i> (Linn.) Link	Poaceae	OF/WL	A
231	<i>Eleusine indica</i> (L.) Gaertn.	Poaceae	OF	A
232	<i>Eragrostis atrovirens</i> (Desf.) Trin. ex Steud.	Poaceae	OF/CL	P
233	<i>Eragrostis gangetica</i> Steud.	Poaceae	OF/CL	P
234	<i>Eragrostis</i> sp.	Poaceae	OF/CL	P
235	<i>Eragrostis tenella</i> (Linn.) P.Beauv. ex. Roem & Schult.	Poaceae	OF/CL	A
236	<i>Euclasta condylotricha</i> (Hochst. ex Steud.) Stapf	Poaceae	OF/CL	P
237	<i>Guaduella densiflora</i> Pilger	Poaceae	CL	A
238	<i>Hackelochloa granularis</i> (Linn.) O.Ktze.	Poaceae	OF/CL	A
239	<i>Hyparrhenia rufa</i> Stapf	Poaceae	CL	A
240	<i>Hyparrhenia involucreta</i> Stapf	Poaceae	CL	A
241	<i>Imperata cylindrica</i> (Linn.) Rauschel var. <i>africana</i> (Anderss) C.E. Hubbard	Poaceae	OF/BF	P
242	<i>Leersia hexandra</i> Sw.	Poaceae	WL/CL	P
243	<i>Leptochloa caerulea</i> Steud.	Poaceae	WL/CL	A
244	<i>Leptochloa filiformis</i> Beauv.	Poaceae	WL/CL	A
245	<i>Oplismenus burmannii</i> (Retz.)P.Beauv.	Poaceae	OF/CL	A
246	<i>Oryza sativa</i> Linn.	Poaceae	BF	A

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247	<i>Oxytenanthera abyssinica</i> Munro	Poaceae	CL	P
248	<i>Panicum brevifolium</i> Linn.	Poaceae	OF	A
249	<i>Panicum brevifolium</i> Linn.	Poaceae	OF/CL	A
250	<i>Panicum fluviicola</i> Steud.	Poaceae	OF/CL	A
251	<i>Panicum laxum</i> Sw.	Poaceae	OF/WL	A
252	<i>Panicum maximum</i> Jacq.	Poaceae	OF	P
253	<i>Panicum walense</i> Mez	Poaceae	CL/BF	A
254	<i>Paspalum conjugatum</i> Berg.	Poaceae	WL/BF	P
255	<i>Paspalum notatum</i> Flügge	Poaceae	OF	P
256	<i>Paspalum scrobiculatum</i> Linn.	Poaceae	OF/WL	P
257	<i>Paspalum vaginatum</i> Sw.	Poaceae	WL	A
258	<i>Pennisetum pedicellatum</i> Trin.	Poaceae	BF	A
259	<i>Pennisetum polystachion</i> (Linn.) Schlt.	Poaceae	OF	A
260	<i>Pennisetum purpureum</i> Schumach.	Poaceae	OF	P
261	<i>Pennisetum subangustum</i>	Poaceae	OF	A
262	<i>Perotis indica</i> (Linn.) O. Ktze	Poaceae	CL/BF	A
263	<i>Rhynchelytrum repens</i> (Willd.) C. E. Hubbard	Poaceae	CL/BF	A
264	<i>Rottboellia cochinchinensis</i> (Lour.) Clayton	Poaceae	OF	A
265	<i>Saccharum officinarum</i> Linn.	Poaceae	BF	A
266	<i>Sacciolepis africana</i> Hubb. & Snowden	Poaceae	WL	P
267	<i>Setaria barbata</i> (Lam.) Kunth	Poaceae	OF	A
268	<i>Setaria megaphylla</i> (Steud.) Dur. & Schinz	Poaceae	WL	P
269	<i>Setaria pumila</i> (Poir.) Roem. & Schult	Poaceae	OF	A
270	<i>Sorghum arundinaceum</i> (Desv.) Stapf	Poaceae	OF/BF	A/P
271	<i>Sorghum</i> sp.	Poaceae	OF	A
272	<i>Sporobolus pyramidalis</i> Beauv.	Poaceae	OF	P
273	<i>Sporobolus pyramidalis</i> P. Beauv.	Poaceae	OF	P
274	<i>Stenotaphrum secundatum</i> (Walt.) Kuntze	Poaceae	OF	A
276	<i>Zea mays</i> L.	Poaceae	BF	A
277	<i>Zoysia tenuifolia</i> Willd. ex. Thiele	Poaceae	OF	A/P
278	<i>Talinium triangulare</i> (Jacq.) Willd.	Portulacaceae	OF	P
279	<i>Portulaca oleracea</i> Linn.	Portulacaceae	OF	P
280	<i>Portulaca quadrifida</i> Linn.	Portulacaceae	OF	P
281	<i>Diodia sarmetosa</i> Sw.	Rubiaceae	OF	P
282	<i>Mitracapus villosus</i> (Sw.) DC.	Rubiaceae	OF	A
283	<i>Oldenlandia corymbosa</i> Linn.	Rubiaceae	OF/WL	A
284	<i>Oldenlandia herbacea</i> (Linn.) Roxb.	Rubiaceae	OF	A
285	<i>Pentodon pentandrus</i> Schum. & Thonn.) Vatke	Rubiaceae	WL	P
286	<i>Spermacoce ocyroides</i> Burm.f.	Rubiaceae	OF	A
287	<i>Paullinia pinnata</i> Linn.	Sapindaceae	OF	P
288	<i>Allophylus africanus</i> P. Beauv.	Sapindaceae	OF/BF	P
289	<i>Lindernia cratacea</i> (Linn.) F. Muelly	Scrophulariaceae	OF/WL	A
290	<i>Lindernia numularifolia</i> (D. Don) Wettst.	Scrophulariaceae	OF/WL	A
291	<i>Lindernia</i> sp.	Scrophulariaceae	OF/WL	A
292	<i>Scoparia dulcis</i> Linn.	Scrophulariaceae	OF	A
293	<i>Selaginella myosurus</i> (Sw.) Alston	Selaginellaceae	WL	A
294	<i>Datura metel</i> Linn.	Solanaceae	OF	P
295	<i>Physalis angulata</i> Linn.	Solanaceae	OF/CL	A
296	<i>Physalis micrantha</i> Linn.	Solanaceae	OF/CL	A
297	<i>Schwenckia americana</i> Linn.	Solanaceae	OF	A
298	<i>Solanum macrocarpon</i> Linn.	Solanaceae	OF	A
299	<i>Solanum nigrum</i> Linn.	Solanaceae	OF	A
300	<i>Solanum</i> sp.	Solanaceae	OF	A
301	<i>Solanum torvum</i> Swartz	Solanaceae	OF/CL	P
302	<i>Sphenoclea zeylanica</i> Gaertn.	Sphenocleaceae	WL	A
303	<i>Melochia corchorifolia</i> Linn.	Sterculiaceae	OF/WL	p
304	<i>Clappertonia ficifolia</i> (Willd.) Decne.	Tiliaceae	WL	P
305	<i>Glyphaea brevis</i> (Spreng.) Monachino	Tiliaceae	OF	P
306	<i>Grewia</i> sp.	Tiliaceae	OF	P
307	<i>Triumfetta cordifolia</i> A. Rich.	Tiliaceae	OF	P
308	<i>Triumfetta rhomboidea</i> Jacq.	Tiliaceae	OF	P
309	<i>Urena lobata</i> Linn.	Tiliaceae	OF	P
310	<i>Pouzolzia guineensis</i> Benth.	Urticaceae	OF	A
311	<i>Clerodendrum</i> sp. Linn.	Verbenaceae	OF/BF	P
312	<i>Clerodendrum volubile</i> P. Beauv.	Verbenaceae	OF	P
313	<i>Lantana camara</i> Linn.	Verbenaceae	OF	P
314	<i>Stachytarpheta cayennensis</i> (L.C. Rich) Schau.	Verbenaceae	OF	P
315	<i>Stachytarpheta jamaicensis</i> (Linn.) Vahl	Verbenaceae	OF	P
316	<i>Cissus aralioides</i> (Baker) Planch.	Vitaceae	OF	P
317	<i>Cissus cymosa</i>	Vitaceae	OF/BF	P

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318	<i>Cissus gracills</i> Guill. & Perr.	Vitaceae	OF	P
319	<i>Cissus simsiana</i>	Vitaceae	OF/BF	P
320	<i>Cissus</i> sp.	Vitaceae	OF	A
321	<i>Costus afer</i> Ker-Gawl.	Zingiberaceae	OF	A
322	<i>Costus dubbius</i> (Afzel.) K.Schum.	Zingiberaceae	WL	P

OF – Open field, A- annual, P- perennial, BA- bi-annual, CL- cultivated land, BF- bush fallow, WL- wetland

Table 2: Summary of weeds species based on families, genera, and species

S/N	FAMILY NAME	Number of		S/N	FAMILY NAME	Number of	
		Genera	Species			Genera	Species
1	Acanthaceae	3	4	24	Malvaceae	3	7
2	Amaranthaceae	4	5	25	Melastomataceae	1	2
3	Anacardiaceae	1	1	26	Moraceae	1	9
4	Apocynaceae	3	3	27	Nyctaginaceae	1	2
5	Araceae	3	3	28	Nymphaeaceae	1	2
6	Asclepiadaceae	1	1	29	Onagraceae	1	4
7	Asteraceae	12	15	30	Passifloraceae	2	2
8	Boraginaceae	1	1	31	Piperaceae	2	2
9	Cleomaceae	1	2	32	Poaceae	40	72
10	Combretaceae	1	4	33	Portulacaceae	2	3
11	Commelinaceae	8	20	34	Rubiaceae	5	6
12	Convolvulaceae	4	10	35	Sapindaceae	2	2
13	Crassulaceae	1	1	36	Scrophulariaceae	2	4
14	Cucurbitaceae	5	5	37	Selaginellaceae	1	1
15	Cyperaceae	14	53	38	Solanaceae	4	8
16	Dioscoreaceae.	1	2	39	Sphenocleaceae	1	1
17	Euphorbiaceae	7	13	40	Sterculiaceae	1	1
18	Fabaceae	16	25	41	Tiliaceae	5	6
19	Hydrophyllaceae	1	1	42	Urticaceae	1	1
20	Icacinaceae	1	2	43	Verbenaceae	3	5
21	Lamiaceae	2	2	44	Vitaceae	1	5
22	Loganiaceae	1	1	45	Zingiberaceae	1	2
23	Lythraceae	1	1				
Total						172	322

Broad leaves constituted 61.56% of the total weed species encountered while grasses and sedges constituted 21.88% and 16.56% respectively (Figure 1).

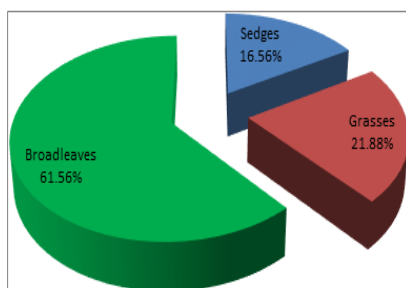


Fig 1: Percentage composition of broad leaves, grasses, and sedges in the study area

Perennials were the dominant weed species identified in the study area and comprised 54.55% of the total weed species while annuals had 40.13%, annuals/perennials 3.76% and bi-annuals had 1.57% (Figure 2). Based on habitat distribution, 133 weed species were found in the open fields only, 65 species in open fields/wetlands, 31 species in only wetland, 28 species in open fields/cultivated lands, 22 in open fields/bush fallow, 14 species in cultivated lands only, 7 species in wetlands/bush fallow and 2 species in bush fallow (Tables 1 and 3).

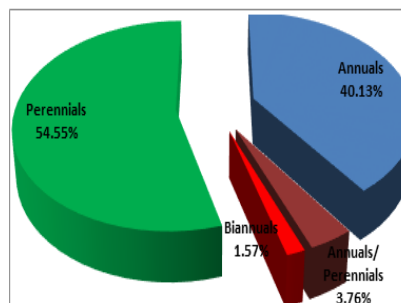


Fig 2: Percentage composition of weeds based on their life form

Table 3: Summary of distribution weeds species based on habitat

Habitat	No. of species
Open fields (OF)	133
Open fields/Wetlands (OF/WL)	65
Wetlands (WL)	31
Open fields/Cultivated lands (OF/CL)	28
Open fields/Bush fallow (OF/BF)	22
Cultivated lands (CL)	14
Wetlands/Bush fallow (WL/BF)	7
Bush fallow (BF)	5
Cultivated lands/Bush fallow (CL/BF)	2

The results from this study showed that broadleaves were the dominant weed in and round the University of Port Harcourt. However, members of the Poaceae family dominated the weed community. Other

dominant weed families encountered were Cyperaceae, Fabaceae, Asteraceae, Euphorbiaceae, Convolvulaceae, Moraceae, Solanaceae, Tiliaceae, and Malvaceae. Similar observations have been made in sugarcane and legume farms that the broadleaves were the dominant weed species, followed by grasses and sedges (Takim and Amodu, 2013; Lemerle and Murphy, 2000). Studies have also shown that the more diverse the land use system, the more diverse the weed community with less dominant and troublesome species, the more the broadleaves (Cardina et al., 1998). This, however, suggests that there are farming and bush clearing activities within the study area and is evident as most of the weed species are found in open fields, open fields/wetlands, open fields/cultivated lands and open fields/bush fallow. Furthermore, our study showed that perennials and annuals were the predominant weeds identified. In the same vein, perennial weed species have been reported to grow more on less-disturbed and more stable environments. Similarly, our study area is less-disturbed which inform the dominance of broadleaf weeds and support the findings of Clements et.al. (1996).

Conclusion: The results from this study showed Three hundred and twenty-two (322) species of weeds belonging to 172 genera and 45 families within University of Port Harcourt and its environs with the broadleaves dominating among the weeds. This report represents the first comprehensive inventory on weeds in the University of Port Harcourt and its environs.

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