



## أشكال الحياة والظيف البيولوجي في فلورا محافظة أبين

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### Life-forms and Biological Spectrum in flora of Abyan Governorate -Yemen

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#### الملخص:

تختلف تضاريس محافظة أبين بشكل ملحوظ من الناحية الجيولوجية التي تعرضت لها المنطقة ويمكن تقسيمها إلى ثلاث مناطق رئيسية: المرتفعات الشمالية، مرتفعات المتوسطة، المناطق الساحلية. التغيرات في تضاريس أبين تعطي تنوعاً نباتياً غنياً. أصبحت دراسات التركيب الزهري وتحليل الغطاء النباتي ذات أهمية متزايدة لتوفير بيانات مهمة لفهم التنوع البيولوجي وعمل النظام البيئي في هذه المناطق. الهدف الرئيسي هو تحديد التركيب الزهري للمنطقة وأشكال الحياة. للأصناف المسجلة أظهرت هذه الدراسة أن هناك 632 نوعاً تشمل 331 جنساً و 89 فصيلة في هذه المنطقة. العوائل النباتية الرئيسية التي ساهمت في تكوين الغطاء النباتي لمحافظة أبين هي الفصيلة المركبة (54 نوعاً) تليها الفصيلة النجيلية (40 نوع)، العشارية (39 نوعاً)، الفصيلة البقولية (نوعاً)، اللبئية (36 نوعاً). أظهرت الدراسة أن أشكال الحياة فوق سطحية هي الأكثر أهمية (32.6%)، والنباتات الحولية (26.11%). النباتات نصف مختفية (18.20%)، النباتات الظاهرة (16.93%)، نباتات المختفية (3.64%). النباتات الهوائية والطفيليات (1.26%) لكل منهما

الكلمات الدالة: شكل الحياة، فلورا، النباتات، التنوع البيولوجي، أبين.

#### Abstract:

The topography of Abyan province varies markedly event geology, to which the region was exposed and can be divided into three main regions: Northern highlands, Midel highlands, Coastel Areas. The changes in its topography of Abyan give rich in plant diversity. floristic composition and vegetation analysis studies were becoming increasingly important to provide important critical data for understanding biodiversity and ecosystem functioning in these areas. The main objective is todetermine the floristica composition of the area and life forms of the recorded species This study showed that there are 632 species including 331 genera and 89 families in this area. The largest represented families were Asteraceae (54 sp.) followed by Poaceae (40sp.), Asclepidiaceae (39 sp.), Fabaceae (37 sp.), Euphorbiaceae( 36 sp.), Solanaceae(21sp.), then

Chenopodiaceae (17sp.) for Acanthaceae and Lamiaceae (19sp.) for each, Malvaceae and each, Amaranthaceae, Boraginaceae, Cucurbitaceae, (16sp) each of them, Mimosaceae, Zygophyllaceae (14sp.) for each. while other families each was represented by 12 to 1 sp.. Investigation of life forms species shows that Chamaephytes are the most important (32.6%), therophytes (26.11%), hemicryptophytes (18.20%), phanerophytes (16.93%), geophytes (3.64%), epiphytes and parasites (1.26%) each

**Keywords:** Life form, flora, plants, biodiversity, Abyan.

## **.1 -Introduction:**

The geographical location of Abyan governorate between the longitude and latitude is determined between the two latitudes of 13—15N and 45 –47 E (Al-Hawshabi, 2015).

Abyan governorate is located on the southern part of Yemen the study area overlook the Gulf of Aden, (Obel et al, 2022) .

The topography of Abyan province varies markedly event geology, to which the region was exposed and can be divided into three main regions:

1. Northern highlands: The high-altitude which includes number of districts as Jaishan, Rusod at Yafaa, , which are more than 1500-2200 meters above sea level .

2. Midel highlands: The landscape is characterized by the terrain to 750- 1500 meters above sea level, which is represented the areas extending from Al-arqouq mountains north Shuqra region and the central plateau of the governorate.

3. Coastel Areas: Includes the southern parts of Abyan governorate, which is ranging from 1- 750 meters above sea level.(. Obel et al, 2012) .

floristic composition and vegetation analysis studies were becoming increasingly important to provide important critical data for understanding biodiversity and ecosystem functioning in these areas (Hamad et al, 2024). Studies like this are extremely useful for environmentalists (Khan et al., 2018).

## **2-Materials and Methods:**

This study was carried out for about five months , from January 1, 2024 till the end of May 2024. The investigation was based on several field trips to various localities in the governorate also based on published literature about the flora of Abyan Gov.(Al-Meisari et al., 2023 ; Abdul-Ghani and Hussein, 2002; Al-Gefri et al., 2024; Al-Gifri et al., 2001; Al-Gifri and Hussein, 1993 ; Al-Hawshabi, 2015 ; Al-Khulaidi , 2013; Awadh , 2006; Ba – Asher and Hussein, 2009 ; Boulos, 1988; Al – Gifri et al, 2023; Masdoos et al. 2023a; , Masdoos et al. 2023b ; Hussein. 2009).

All the plants species were classified on the basis of life forms as defined by (Raunkiaer, C. 1934) .

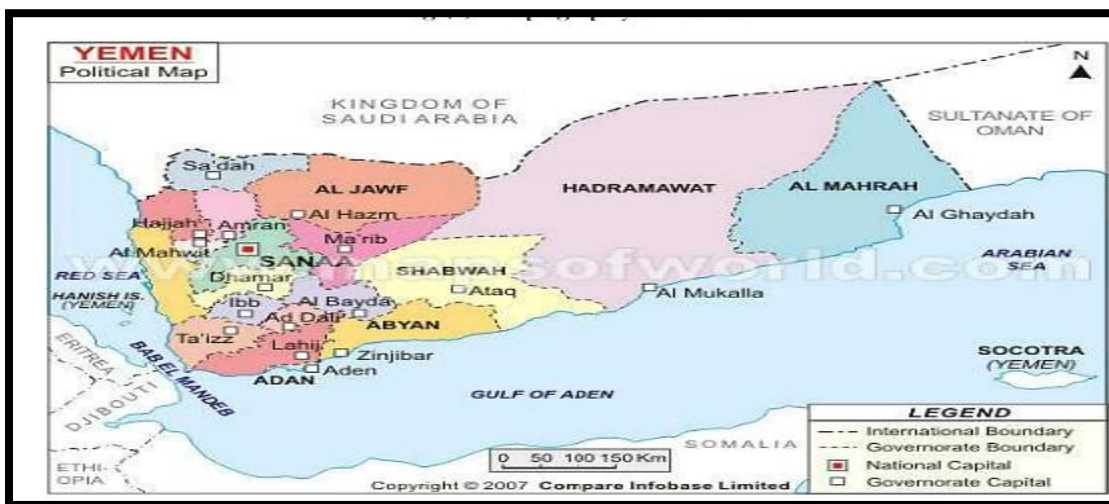


Fig. 1. Map of Abyan governorate (FAO,2013)

### 3-Results and Discussion:

In the present investigation, 632 species were reported belonging to 331 genera and 89 families in Abyan Gov.( Table 1.). The largest represented families were Asteraceae (54 sp.) followed by Poaceae (40sp.), Asclepiadiaceae (39 sp.), Fabaceae (37 sp.), Euphorbiaceae (36 sp.), Solanaceae(21sp.),then Acanthaceae and Lamiaceae (19sp.) for each ,Malvaceae and Chenopodiaceae (17sp.) for each, Amaranthaceae ,Boraginaceae, Cucurbitaceae, (16sp)eachofthem, Mimosaceae, Zygophyllaceae (14sp.)for each. while other families each was represented by 12to 1 sp.(Fig. 2.) here was a similarity in the results with(Hamad etal,2024) (Alsobeai, 2024

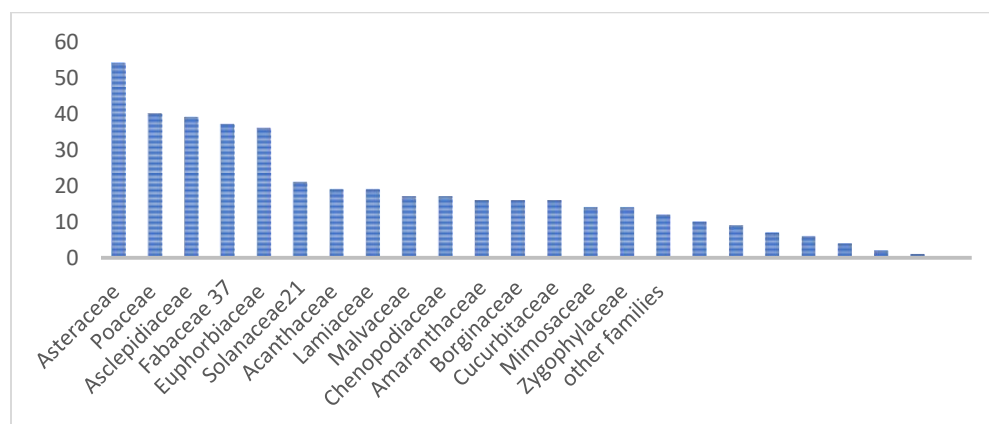


Fig2. The largest represented families of the study area,

The life form spectrum of Abyan Governorate showed that the most dominant life form is Chamaephytes with (32.60%), followed by Therophytes (26.11%) and Hemicryptophytes (18.20%), phanerophytes (16.93%), Geophytes (3.64%) then Epiphytes and Parasites (1.26%) for each of them (Table 2 and Fig . 3) here was a similarity in the results with

(Alsobeai, 2024)and(Alhood,2024)( Azmi et al.,2024) but results disagree with studies (Al Shaye et al.,2020)and (Osman et al.,2014) .

Table 1. life-forms classes of species of the flora of Abyan gov.

Life form classes	Abbreviation	No. ofspecies	Percentage
Chamaephytes	Ch	206	32.60%
Therophytes	Th	165	26.11%
Hemicryptophytes	He	115	18.20%
Phanerophytes	Ph	107	16.93%
Geophytes	G.	23	3.64%
Epiphytes	Epi	8	1.26%
Parasites	P.	8	1.26%

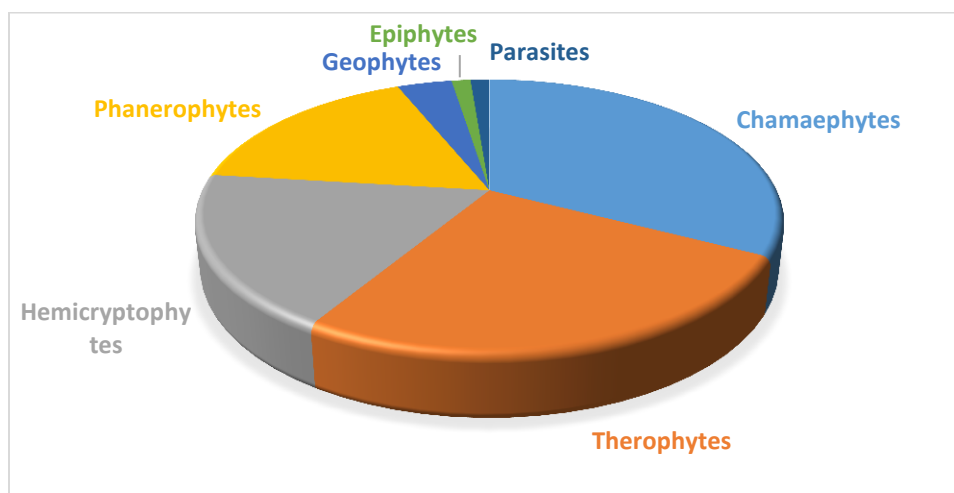


Fig. 3. Life form spectrum of plants in Abyan governorate

Table2: List of plants, life form of Abyan Governorate

Family	Scientific names	Life forms
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<b>Acanthaceae</b>	<i>Acanthus arboreus</i> Forssk	Ch
	<i>Anisotes trisulcus</i> (Forssk). Neas	Ch
	<i>Barleria acanthoides</i> Vahl.	Ch
	<i>Barleria bispinosa</i> (Forssk.)Vahl.	He
	<i>Barleria farinose</i> Delf	Ch
	<i>Barleria prionitis</i> L. <i>subsp. appressa</i> (Forssk.)	Ch
	Brummitt & J. R. I. Wood	
	<i>Barleria proxima</i> Lindau.	He
	<i>Barleria trispinosa</i> (Forssk.) Vahl.	He
	<i>Blephoria ciliaris</i> (L.) B . L . Burt	He
	<i>Blepharis edulis</i> Forssk.	He
	<i>Blepharis linariifolia</i> Pers	He
	<i>Ecbolilum viride</i> (Forssk.)Alston.	Ch
	<i>Hypoestes forskalei</i> (Vahl)Sol. ex Roem. & Schult	Ch
	<i>Justicia flava</i> (Vahl)Vah	Th
	<i>Justicia odora</i> (Forssk.) Vah	Ch
	<i>Ruellia discifolia</i> oliv	Ch
	<i>Ruellia grandiflora</i> (Forssk.) Blatter	He
	<i>Ruellia longicalyx</i> Defl.	He
	<i>Ruellia patula</i> Jacq.	He
<b>Actiniopteridaceae</b>	<i>Actiniopteris radiata</i> (Swartz) Link	G
<b>Adiantaceae</b>	<i>Adiantum incisum</i> Forssk.	G
<b>Aizoaceae</b>	<i>Aizoon canariense</i> L.	Th
	<i>Gisekia pharnaceoides</i> L.	Th
	<i>Glinus lotoides</i> L	Th
	<i>Trianthema crystallina</i> (Forssk.) Vahl	Th
	<i>Trianthema portulacastrum</i> L	Th
	<i>Trianthema triquetra</i> Wild	He
<b>Aloeaceae</b>	<i>Aloe ahmeransins</i> Favell , M.B.Mill & Al- Gifri	He
	<i>Aloe abyssicola</i> Lavr. & Balaidi	Ch
	<i>Aloe fleurentiniorum</i> Lavr anos.L.E.Newton	He
	<i>Aloe inermis</i> Forssk	He
	<i>Aloe lanata</i> T.A.McCoy & Lavranos.	He
	<i>Aloe perryi</i> Baker	He
	<i>Aloe sabaea</i> Schweinf	Ph
	<i>Aloe splendens</i> lavr.	Ch
	<i>Aloe serriyensis</i> Lavr	Ch
	<i>Aloe vacillans</i> Forssk	He
	<i>Aloe vera</i> (L.) Burm .f	He
<b>Amaranthaceae</b>	<i>Achyranthes aspera</i> L.	Ch

	<i>Aerva javanica</i> (Burn.f.) juss.	He
	<i>Aerva lanata</i> (L.) Juss	He
	<i>Alternanthera pungens</i> Kunth	Th
	<i>Amaranthus ascendens</i> Lois	Th
	<i>Amaranthus chlorostachys</i> WILLD.	Th
	<i>Amaranthus gracane</i> .L	Th
	<i>Amaranthus graecizan</i> L.	Th
	<i>Amaranthus lioides</i> L.	Th
	<i>Amaranthus sparganiocephalus</i> Thell	Th
	<i>Amaranthus spinosus</i> L.	Th
	<i>Amaranthus tricolor</i> L	Th
	<i>Amaranthus viridis</i> L.	Th
	<i>Digera muricata</i> (L.) Mart.	Th
	<i>Pupalia lappacea</i> (L.)Juss	Ch
	<i>Saltia papos</i> (Foessk.)Moq	Ph
Anacardiaceae	<i>Mangofera indica</i> L.	Ph
	<i>Rhus flexicaulis</i> Bake	Ch
	<i>Rhus villosa</i> L.	Ch
	<i>Schinus mole</i> L.	Ph
Annonaceae	<i>Annona squamosa</i> L.	Ph
Apiaceae	<i>Anethum graveolens</i> L.,	Th
	<i>Coriandrum sativum</i> L	Th
	<i>Conium maculatum</i> L	Ch
	<i>Cuminum cyminum</i> L	Th
	<i>Daucus carote</i> L	G
	<i>Foeniculum vulgrae</i> Mill.	Th
Apocynaceae	<i>Adenium obesum</i> (Forssk.) Roem. & Schult	Ph
	<i>Catharanthus roseus</i> Don	He
	<i>Nerium oleander</i> L	Ch
	<i>Thevetia peruviana</i> (Pers.)K.Schum	Ch
Arecaceae	<i>Cocos nusifera</i> L.	Ph
(Palmae)	<i>Hyphaene thebaica</i> (L.) Mart	Ph
	<i>Phoenix dactylifera</i> L.	Ph
	<i>Wissmania carinensis</i> Chiov.	Ph
Aristolochiaceae	<i>Aristolochia bracteolata</i> Lam.	Th
Asclepiadaceae	<i>Angolluma commulata</i> (A.Berger)Plowes	He
	<i>Blyttia spiralis</i> (Forssk.) D.V. Field &Wood	Ch
	<i>Calotropis procera</i> Ation.F.	Ph
	<i>Caralluma awdaliana</i> Defl.) Meve & Liede	He
	<i>Caralluma adenensis</i> (Defl.) Schum.	Ch
	<i>Curalluma anemoniflora</i> (DEFLERS) BERGEX	He
	<i>Caralluma chrysostephana</i> (defl.) Burg	He
	<i>Caralluma cicatricose</i> (Defl.) N.E.Br	He
	<i>Caralluma deflersiana</i> (Defl.) Bergor.	He

	<i>Caralluma edulis</i> (.Edgw.) Benth	He
	<i>Carluma hexogona</i> Lav	He
	<i>Caralluma penicellata</i> (Defl.)N. E. Br	Ch
	<i>Caralluma plicatiloba</i> Lav.	Ch
	<i>Caralluma quadrangula</i> (forssk. ) N. E. Brown.	He
	<i>Caralluma solenophora</i> lavranos	He
	<i>Ceropegia arabica</i> H . Huber	Ch
	<i>Ceropegia botrys</i> K. Schum	Ch
	<i>Ceropegia dolichocarpa</i> (O.Schwartz)Thullin and Al- Hawshabi	Ch
	<i>Cerapegia rupicola</i> Deflers	Ch
	<i>Ceropegia subaphylla</i> K. Schuhmann.	Ch
	<i>Ceropegia variegata</i> Del.	Ch
	<i>Desmidorchis peniceiatla</i> (Defl.) Plowes	He
	<i>Duvalia anemoniflora</i> (Delf.)R.A.Dyers & Lavr	He
	<i>Duvalia sulcata</i> N.E.Br	He
	<i>Glossoniema varians</i> (Stocks) Benth. ex Hook. f.	Ch
	<i>Gomphocarpus fruticosus</i> ( L.) W.T.Aiton	Ch
	<i>Huernia lodarensis</i> Lav	Ch
	<i>Huernia marnieriana</i> Lav.	Ch
	<i>Leptadenia arborea</i> (Forssk.) Schweinf	Ch
	<i>Leptadnia pyrotechnica</i> (Forssk.)Decne	Ph
	<i>Pentatropis nivalis</i> (Gmel.)Field&Wood	Ch
	<i>Pentatropis spiralis</i> (Forsk.)Decne	Epi
	<i>Pergularia deamia</i> ( Forssk.) Choiv.	Ch
	<i>Pergularia tomentosa</i> L	Ch
	<i>Rhytidocaulon macrolobum</i> Lavr	Ch
	<i>Odontanthera radians</i> ( Forssk.)D.V.Field	Th
	<i>Sarcostemma forskalianum</i> Schult.	Ch
	<i>Sarcostemma viminala</i> (L) K Br.	Ch
	<i>Stultitia araysiana</i> Lavr. & Bilaidi	He
Asparagaceae	<i>Asparagus africanus</i> Lam	Epi
Asteraceae	<i>Artemisia abyssinca</i> Sch.Bip. ex A.Rich	Ch
	<i>Calendula micrantha</i> TINEO et Guss	Th
	<i>Cirsium vulgare</i> (Savi)Ten	Ch
	<i>Conyza bonariensis</i> (L.)Cronquist	Th
	<i>Conyza linifolia</i> WILLD	Th
	<i>Conyza stricta</i> WILLD	Th
	<i>Eclipta prostrata</i> (L.)	He
	<i>Echinops erinaceous</i> Kit Tan	Ch
	<i>Flaveria trinervia</i> (Spreng.) Mohr.	Th
	<i>Francoeuria crispa</i> (FORSK)	Ch
	. <i>Guizotia scabra</i> (Vis.)Chiov	Th
	<i>Helichrysum pumilum</i> (Klatt.)Moes	Ch

<i>Iphionia scabra</i> DC.	Ch
<i>Kleinia anteuphorbium</i> ( L. ) Haw	Ch
<i>Kleinia odora</i> (Forssk.) A. Berger.	Ch
<i>Kleinia pendula</i> (Forssk.) DC.	Ch
<i>Kleinia semperviva</i> (Forssk.) DC.	Ch
<i>Lactuca sativa</i> L.	Th
<i>Lactuca serriola</i> L.	Th
<i>Launae almahrahensis</i> N.Kilian	Ch
<i>Launae capitata</i> ( Spreng) Dandy	Th
<i>Launae hafunensis</i> CHIOV.	G
<i>Launaea intybacea</i> (Jacq.)Beauverd	Th
<i>Launaea massauensis</i> (Fresen)Sch	Th
<i>Launaea nudicaulis</i> (L.) Hook. f.	Ch
<i>Launaea procumbens</i> (Roxb.) Ramayya & Rajgopal	Th
<i>Onopordon arabicum</i> Podl.(in Mitt. Bot. Munchen	He
<i>Onopordon sibthorpiatum</i> Boiss and Helder	He
<i>Pluchea dioscoridis</i> (L.) DC	Ch
<i>Pluchea indica</i> (L.) Less. subsp. <i>Indic</i>	Ph
<i>Pluchea ovalis</i> ( Pers ) DC	Ch
<i>Psiadia arabica</i> Jaub. Et. Spach	Ph
<i>Psiadia punctulata</i> (DC.)Vatke	Ch
<i>Pulicaria arabica</i> (L.)CASS.	He
<i>Pulicaria crispa</i> ( Forssk.) Benth	Ch
<i>Pulicaria jaubertii</i> Gamal-Eldin	Th
<i>Pulicaria orientalis</i> JAUB. et SPACH	Ch
<i>Pulicaria petiolaris</i> Jaub. & Spach	Ch
<i>Pulicaria schimperi</i> DC	Ch
<i>Pulicaria somalensis</i> O. Hoffm. subsp. <i>schweinfurthii</i>	Ch
Gamal-Eldin	
<i>Pulicaria undulata</i> (L.) C. A. Mey.	He
<i>Reichardia tingitana</i> (L.)Roth	Th
<i>Senecio odoratus</i> (FORSK.) CHULTZB IP	Th
<i>Sonchus oleraceus</i> L.	Th
<i>Sonchus tenerrimus</i> L	Th
<i>Tarchonanthus camphoratus</i> L.	Ph
<i>Urospermum picroides</i> (L.) SCHMID	Th
<i>Vernonia arabica</i> F. G. Davies	Ch
<i>Vernonia areysiana</i> Defl.	Th
<i>Vernonia cinerea</i> ( L.) Less.	Th
<i>Vernonia spatulata</i> (Forssk.) Sch-Bip ex Asch.	Ch
<i>Xanthium spinosum</i> L.	Th
<i>Xanthium strumarium</i> L.	Ch
<b>Balanitaceae</b> <i>Balanites aegyptiaca</i> (L.) Delile var. <i>Aegyptiaca</i>	Ph



Boraginaceae	<i>Alkanna orientalis</i> (L.) Boiss.	He	
	<i>Cordia ovalis</i> R.Br.ex.Dc	Ph	
	<i>Heliotropium aegyptiacum</i> Lehm.	Ch	
	<i>Heliotropium bacciferum</i> forssk.	He	
	<i>Heliotropium bottae</i> Jaub et.	He	
	<i>Heliotropium curassavicum</i> L	He	
	<i>Heliotropium eurapaeum</i> L	Ch	
	<i>Heliotropium lasiocarpum</i> Fiscer&C.A.Mey	He	
	<i>Heliotropium longiflorum</i> A. DC.) Jaub. &Spach	He	
	var. <i>longiflorum</i>		
	<i>Heliotropium pterocarpum</i> (D.C.) 98	Th	
	Steud.Hochst.ex.Bunge.		
	<i>Heliotropium ramoissimum</i> (Lehm)Sieber ex DE	He	
	<i>Heliotropium rariflorum</i> Stocks	He	
	<i>Heliotropium strigosum</i> Willd.	He	
	<i>Heliotropium supinum</i> L.	Th	
	<i>Heliotropium zeylanicum</i> (Burm) Lam	Ch	
	<i>Trichodesma africanum</i> (L.)R.Br.	Ch	
	Brassicaceae	<i>Brassica oleracea</i> L.	Th
		<i>Capsella bursa-pastoris</i> (L.) MEDIK	Th
<i>Diplotaxis acris</i> (FORSK.)B ow.		Th	
<i>Diplotaxis erucoides</i> L. DC		Th	
<i>Diplotaxis harra</i> (Forssk.)Boiss		Th	
<i>Erucastrum arabicum</i> Fisch.et Mey		He	
<i>Eruca sativa</i> Miller		Th	
<i>Farsetia longisiliqua</i> L.		Ch	
<i>Farsetia linearis</i> Dene ex Boiss		Ch	
<i>Farsetia stylosa</i> R.Br.		Ch	
<i>Raphanus sativus</i> L.		G	
<i>Schouwia purpurea</i> (Forssk.) Schweinf.		Th	
Buraceraceae		<i>Boswellia sacra</i> Flueck	Ph
	<i>Commiphora abyssinica</i> (Berg.) Engl	Ph	
	<i>Commiphora africana</i> (A.Rich.) Engl.	Ph	
	<i>Commiphora foliacea</i> Sprague	Ph	
	<i>Commiphora gileadensis</i> (L.) C.	Ph	
	<i>Commiphora kataf</i> (Forssk.) Engl.	Ph	
	<i>Commiphora kua</i> (J.F.Royle) Vollesen	Ph	
	<i>Commiphora myrrha</i> (Nees) Engl.	Ph	
	<i>Commiphora schimperi</i> (O. Berg) Engl	Ph	
Cactaceae	<i>Opuntia ficus-indica</i> (L.) Mill	Ph	
	Caesalpinaceae	<i>Caesalpinia bonduc</i> (L.)Roxb	Ch
<i>Delonix elate</i> (L.)Gamble		Ph	
<i>Parkinsonia aculeata</i> L.		Ph	
<i>Senna alexandrina</i> Mill		Ch	

	<i>Senna auriculata</i> (L.)Roxb.	Ch
	<i>Senna holosericea</i> (Fresen.)Greuter	Ch
	<i>Senna italica</i> Mill.	Ch
	<i>Senna occidentalis</i> (L.) Link	Ch
	<i>Tamarindus indica</i> L.	Ph
Capparaceae	<i>Bosacia arabica</i> Pestalozzi	Ph
	<i>Cadaba farinosa</i> Forssk	Ch
	<i>Cadaba glandulosa</i> Forssk.	Ph
	<i>Cadaba hetirotricha</i> Stocks	Ph
	<i>Cadaba rotundifolia</i> Forssk.	Ph
	<i>Capparis cartilaginea</i> Forssk.	Ch
	<i>Capparis decidua</i> (Forsk.)Edgew	Ch
	<i>Capparis orientalis</i> Duham	Ph
	<i>Capparis spinosa</i> L.	He
	<i>Dipterygium glaucum</i> Decne.	Th
	<i>Maerua crassifolia</i> Forssk.	Ph
	<i>Maerua angolemsis</i> DC.	Ph
Caricaceae	<i>Carica papaya</i> L.	Ph
Caryophyllaceae	<i>Cometes abyssinica</i> R. Br	Ch
	<i>Polycarpaea repens</i> ( Forssk.) Asch.&Schwein	He
	<i>Polycarpaea spicata</i> Wt. et Arn.	He
	<i>Sterllaria pallid</i> ( Dumort.) Pire	Th
	<i>Vaccaria hispanicu</i> (MILL.)R AUSCHERTW	He
Casuarinaceae	<i>Casuarina equisetifolia</i> L.	Ph
Celastraceae	<i>Catha edulis</i> Forssk	Ph
Chenopodiaceae	<i>Arthrochemum glaucum</i> (Del.) Ung .Sternb	He
	<i>Caroxylon imbricatum</i> (Forssk.) Moq.	He
	<i>Caroxylon spinescens</i> (Moq.) Akhani & Roalson	Ch
	<i>Chenopodium album</i> L.	Th
	<i>Chenopodium botrys</i> L	Th
	<i>Chenopodium murale</i> L	Th
	<i>Chenopodium schraderianum</i> Roem&Schultes	Th
	<i>Halothamnus bottae</i> Jaub.&Spach	Ch
	<i>Salsola imbricata</i> Forssk	Ch
	<i>Salsola forskali</i> Forssk.	Ch
	<i>Salsola spinescens</i> Moq	Ch
	<i>Salsola tetrandra</i> Forsk	Ch
	<i>Suaeda aegyptiaca</i> (Hasselq.) Zohary	Ch
	<i>Suaeda fruticose</i> Forssk .exJ.F.Gmel	Ch
	<i>Suaeda monoica</i> Forssk.	Ch
	<i>Suaeda vermiculata</i> Forssk..	Ch
	<i>Traganum nudatum</i> DEL	Ch
Cleomaceae	<i>Cleome brachycarpa</i> (Forssk.)Vahl. ex.Dc.	Ch
	<i>Cleome glaucescens</i> DC.	Ch

	<i>Cleome gynandra</i> L.	Th
	<i>Cleome noeane</i> Boiss	Th
	<i>Cleome paradoxa</i> R. Br.,	Th
	<i>Cleome scaposa</i> DC.	Th
	<i>Cleome viscosa</i> L.	He
Combretaceae	<i>Conocarpus lancifolius</i> .Engl.	Ph
	<i>Terminalia brownie</i> Fresen	Ph
	<i>Terminalia catappa</i> L	Ph
Commelinaceae	<i>Aneilema forskolii</i> Kunth.	Th
	. <i>Commelina albescens</i> Hassk	He
	<i>Commelina bengalensis</i> L	He
	<i>Commelina imberbis</i> Ehrenb. ex Hassk	He
Convolvulaceae	<i>Convolvulis arvensis</i> L	He
	<i>Convolvulis fatmensis</i> kunze	Ch
	<i>Convolvulus glomcratus</i> Choisy	He
	<i>Cressa cretica</i> L.	He
	<i>Ipomoea batatas</i> (L.) Lam	Th
	<i>Ipomoea eriocarpa</i> R. BR	Th
	<i>Ipomoea pes-caprae</i> (L.)R.BR.	Th
	<i>Seddera intermedia</i> Hochst. & Steud	Ch
Crassulaceae	<i>Kalanchoe bentii</i> Hook. f. subsp. <i>bentii</i>	Ch
Cucurbitaceae	<i>Bryonia cretica</i> L	He
	<i>Citrullus colocynthis</i> (L.) Schrad.	Th
	<i>Cirullus vulgaris</i> Schrad.	Th
	<i>Carallocarpus glomeruliflorus</i> (Defl.) Cogn.	Ch
	<i>Coccinia grandis</i> (L)voigt.	Ch
	<i>Cucumis melo</i> var <i>Agvestis</i> . (Naud.) Grebensc	Th
	<i>Cucumis prophetarum</i> L. subsp. <i>Prophetarum</i>	Th
	<i>Cucumis sativus</i> L	Th
	<i>Cucurbita maxima</i> Duchesne	Th
	<i>Cucurbita peop</i> L.	Th
	<i>Kedrostis gijef</i> ( J . f Gmel ) C .Jeffrey	Ch
	<i>Laginaria siceraria</i> (Mol.)Standl.	Th
	<i>Luffa cylindrica</i> (L.)M.J.Roem	Th
	<i>Luffa forsskalii</i> schweif.	Th
	<i>Momordica balsamina</i> L	He
	<i>Zehneria anomala</i> C. Jeffrey.	Th
Cupressaceae	<i>Cupressus sempervirens</i> L.	Ph
Cuscutaceae	<i>Cuscuta carnpestris</i> YUNCKFR	He
Cyperaceae	<i>Cyperus conglomeratus</i> Rottb.	G
	<i>Cyperus leavigatus</i> L	G

	<i>Cyperus rotundus</i> L.	G
	<i>Scirpus maritimus</i> L.	G
Cynomoraceae	<i>Cynomorium coccineum</i> L.	P
Dipsaceae	<i>Cordia myxa</i> L.	Ph
Dracaenaceae	<i>Dracaena ombet</i> Kotschy & Peyr.	Ph
	<i>Dracaena serrulata</i> Baker .	Ph
	<i>Sansevieria ehrenbergii</i> Schweinf. ex Bak	G
	<i>Sansevieria forskaoliana</i> (Schult. f.) Hepper & J. R.	G
	I. Wood	
Euphorbiaceae	<i>Acalypha fruticosa</i> (Forssk.)	Ch
	<i>Acalypha indica</i> R.	Ch
	<i>Chrozophora oblongifolia</i> (Del.).Juss	Ch
	<i>Chrozophora plicata</i> (Vahl.) A.Juss.ex.Spreng	Th
	<i>Chrozophora tincotoria</i> (L.) A.Juss.	Ch
	<i>Euphorbia arabica</i> Hochst. & Steud. ex Boiss	Th
	<i>Euphorbia ammak</i> Schweirf	Ph
	<i>Euphorbia balsamifera</i> Ait. subsp. <i>adenensis</i> (Defl.)	Ch
	Bally	
	<i>Euphorbia cactus</i> Ehrenb ex . Boiss	Ch
	<i>Euphorbia cuneata</i> Vahl subsp. <i>cuneata</i>	Ch
	<i>Euphorbia dracunculoides</i> Lam.	Th
	<i>Euphorbia fruticosa</i> Forssk	Ch
	<i>Euphorbia granulata</i> Forssk. var. <i>Granulata</i>	Ch
	<i>Euphorbia greuteri</i> N. Kilian, Kürschner & P. Hein	Ch
	<i>Euphorbia hadramautica</i> Bak	Th
	<i>Euphorbia helioscopia</i> L.	Th
	<i>Euphorbia heterophylla</i> L.	He
	<i>Euphorbia hirita</i> L.	Th
	<i>Euphorbia hypericifolia</i> L.	Th
	<i>Euphorbia indica</i> Lam.	Th
	<i>Euphorbia. inarticulata</i> Schweinf.	Ch
	<i>Euphorbia larica</i> Boiss.	Ch
	<i>Euphorbia longetuberculosa</i> Hochst	Ch
	<i>Euphorbia peplus</i> L.	Th
	<i>Euphorbia schimperi</i> Presl.	Ch
	<i>Euphorbia serpens</i> Kunth	Th
	<i>Euphorbia triaculeata</i> Forssk	Ch
	<i>Jatropha glauca</i> Vahl.	Ch
	<i>Jatropha pelargonifolia</i> Courb.	Ch
	<i>Jatropha spinosa</i> Vahl	Ch
	<i>Jatropha villosa</i> (Forsk)Mull-Arg.	
	<i>Micromera mbricatel</i> (Forssk.)Christen.	Th
	<i>Phyllanthus fraternus</i> Webter	Th
	<i>Phyllanthus maderaspatensis</i> .L.	Ch

Fabaceae	<i>Rhynchosia memnonia (Del.)Dc.</i>	He
	<i>Ricinus communis L</i>	Ph
	<i>Tragia pungens (Forssk.)</i>	He
	<i>Alhagi maurorum.Medik</i>	Ch
	<i>Alhagi graecorum Boiss.</i>	Ch
	<i>Arachis hypogaea L.</i>	Th
	<i>Cadia purpurea (Picc.) Ait.</i>	Ch
	<i>Crotalaria incana L.</i>	He
	<i>Crotalaria persica (Burm.f.)</i>	Ch
	<i>Crotalaria retusa L.</i>	Th
	<i>Crotalaria saltiana Andr.</i>	Th
	<i>Delonix elata (L.)</i>	Ph
	<i>Dolichos lablab L</i>	He
	<i>Flemingia congesta ,</i>	Ch
	<i>Indigofera articulata Gouan</i>	He
	<i>Indigofera arabica Jaub&amp; Spach</i>	He
	<i>Indigofera coerulea Roxb. var. coerulea</i>	Ch
	<i>Indigofera hochstetteri Bak</i>	Th
	<i>Indigofera oblongifolia Forssk.</i>	Th
	<i>Indigofera phillipsiae Bak.f.</i>	Th
	<i>Indigofera semitrijuga forssk</i>	He
	<i>Indigofera spiniflora Boiss.</i>	He
	<i>Indigofera spinosa Forssk.</i>	Ch
	<i>Indigofera tinctoria L</i>	Ch
	<i>Indigofera volkensis Taub.</i>	Th
	<i>Louts garcinii DC.</i>	Ch
	<i>Medicago laciniata.(L.)Mill.</i>	Th
	<i>Medicago sativa.L</i>	Th
	<i>Melialotus officinalis(l.)pall</i>	Th
	<i>Ormacarpum yemenenseGillett</i>	Ch
	<i>Rhynchosia memnonia (Del.)Dc.</i>	He
	<i>Phaseolus vulgaris L</i>	Th
	<i>Rhynchosia memnonia (Del.)Dc</i>	Epi
	<i>Rhynchosia minima (L.) DC. var. prostrata (Harv.)</i>	Epi
	<i>Meikle</i>	
	<i>Sesbania grandiflora (L.)Poir.</i>	Ph
	<i>Sesbania pachicarpa DC.</i>	Ph
	<i>Sesbania sesban (L.)Merrill</i>	Ph
	<i>Tephrosia nubica (Boiss.) Baker</i>	Ch
	<i>Tephrosia purpurea (l.)pers. subsp. apollinea (Delile)</i>	Ch
	<i>Hosni &amp; El- Karemy</i>	
<i>Vigna unguiculata (L.)Walp</i>	Th	
Geraniaacea	<i>Erodium ciconium(L.)LHer.</i>	Th
	<i>Monsonia helitropoides (Cav.)Boiss</i>	Th

	<i>Geranium ocellatum</i> jacq ex.Cam	Th
Hydnoraceae	<i>Hydnora johannis</i> Becc.	P
Lamiaceae	<i>Endostemon tenuiflorus</i> (Benth.) M. Ashby	Th
	<i>Lavandula phbescens</i> Decne.	Ch
	<i>Leucas inflata</i> Benth	Ch
	<i>Leucas alba</i> (Forssk.) Sebald	Th
	<i>Leucas artificiofolia</i> (Vahl) Sm. var. <i>Urticifolia</i>	Th
	<i>Lasiocorys arabica</i> Jaub. & Spach.).	
	<i>Marrubium vulgare</i> L.	He
	<i>Mentha longifolia</i> (L.)L.	He
	<i>Mentha piperite</i> L.	He
	<i>Nepeta deflersiana</i> Schweinf.exHedge,	Ch
	<i>Ocimum bsilicum</i> L.var. <i>purpurascens</i> Benth.	Ch
	<i>Ocimum filamentosum</i> Forssk.	Ch
	<i>Ocimum forsskaolii</i> Benth	Ch
	<i>Origanum syriacum</i> L .	Ch
	<i>Otostegia fruticosa</i> (forssk.)schweinf ex penzig	Ch
	<i>Plectranthus comosus</i> Sims	Ch
	<i>Plactranthus hadiense</i> (Forssk.)Schweinf. Ex Sprenger	Th
	<i>Salvia areysiana</i> Defl	Ch
	<i>Teucrium yemense</i> Defl.	He
Liliaceae	<i>Allium cepa</i> L.	G
	<i>Allium porrum</i> L	G
	<i>Allium sativum</i> L	G
Longaniaceae	<i>Buddleia polystachya</i> Fresen	Ph
Loranthaceae	<i>Loranthus acaciae</i> Zucc	Epi
	<i>Plicosepalus acacia</i> (Zucc.)Wiens&Polhil.	Epi
	<i>Oncocalyx doberae</i> (Schweinf.) G. R. L. Wood.	Ep
	<i>Tapinostemma acacia</i> (Zucc.)Tiegh).	Ep.
Loasaceae	<i>Kissenia arabica</i> R.Br.&Chiov	Th
Lythraceae	<i>Lawsonia inermis</i> L.	Ph
Malvaceae	<i>Abelmoschus esculentus</i> (L.)Moench	Th
	<i>Abutilon fruticosum</i> Guill. & Perr	Ch
	<i>Abutilon pannosum</i> (Forrsk.) <i>Schlechl</i>	Ch
	<i>Gossypium barbadense</i> L.	Ch
	<i>Gossypium nanking</i> Meyen	Ch
	<i>Hibiscus meidiensis</i> Ulbr	Ch
	<i>Hibiscus rosa sinensis</i> L	Ch
	<i>Hibiscus sabdariffa</i>	Ch
	<i>Hibiscus vitifolius</i> L.	Ch
	<i>Malva praviflora</i> L.	He

	<i>Malva rotundgotha</i> L	Ch
	<i>Pavonia arabica</i> Hochst. ex Boiss	Ch
	<i>Pavonia triloba</i> Guill.&Per	Ch
	<i>Senra incana</i> (Cav.) DC.	Ch
	<i>Sida alba</i> L.	Ch
	<i>Sida cardifolia</i> L	Ch
	<i>Thespesia populnea</i> (L.)Solender ex.corre	Ph
Meliaceae	<i>Azadirachta indica</i> A. Juss.	Ph
	<i>Trichilia emetica</i> (Forssk)	Ph
Mimosaceae	<i>Acacia asak</i> (Forssk.) Willd.	Ph
	<i>Acacia edgeworthii</i> T. Anders	Ph
	<i>Acacia etbaica</i> Schweinf. subsp. <i>uncinata</i> Brenan	Ph
	<i>Acacia ehrenbergiana</i> Hayne	Ph
	<i>Acacia hamulosa</i> Benth.	Ph
	<i>Acacia mellifera</i> (Vahl.) Benth.	Ph
	<i>Acacia nilotica</i> (L.) Willd. ex Delile subsp. <i>indica</i> (Benth.) Brenan	Ph
	<i>Acacia oerfota</i> (Forssk.) Schweinf	Ch
	<i>Acacia seyal</i> Del	Ph
	<i>Acacia tortilis</i> (Forssk.) Hayne Hayne subsp. <i>Tortilis</i>	Ph
	<i>Albizia lebbeck</i> (L.) Benth	Ph
	<i>Pithecellobium dulce</i> (Roxb.)Benth.	Ph
	<i>Prosopis cineraria</i> (L.) Druce	Ph
	<i>Prosopi juliflora</i> (Sw.) DC.	Ph
Molluginaceae	<i>Corbichonia decumbens</i> (Forssk.) Exel	Th
	<i>Glinus lotoides</i> L.	Ch
Moraceae	<i>Dorstenia foetida</i> (Forssk.)Schweinf. & Engl	Ch
	<i>Ficus carica</i> L.,	Ph
	<i>Ficus cordata</i> L.	Ph
	<i>Ficus populifolia</i> Vahl.	Ph
	<i>Ficus salicifolia</i> Vahl.	Ph
	<i>Ficus sycomorus</i> L.	Ph
	<i>Ficus vasta</i> (Forssk.)	Ph
Moringaceae	<i>Moringa peregrine</i> (Forssk.) Fiori	Ph
Musaceae	<i>Musa paradisiaca</i> L	G
Myrtaceae	<i>Eucalyptus camaldulensis</i> Dehnh	Ph
	<i>Eucalyptus grandis</i> (Hill)ex.Maiden	Ph
	<i>Myrtus communis</i> L.	Ph
	<i>Psidium guajava</i> L.	Ph
Nyctaginaceae	<i>Boerhavia diffusa</i> L.	Ch
	<i>Boerhavia elegans</i> Choisy	Ch
	<i>Boerhavia erecta</i> L	Th

	<i>Boerhavia repens</i> L	Ch
	<i>Bougainvillea spectabilis</i> (Willd)	Ch
	<i>Commicarpus ambiguus</i> Meikle,	Ch
	<i>Commicarpus boissieri</i> ( Heim.) Cuf	Th
	<i>Commicarpus helenae</i> (J.A.Scholtes)Meikle	Ch
	<i>Commicarpus mistus</i> Thulin	Ch
	<i>Commicarpus pedunculatus</i> (A.Rich. )Cuf	Ch
	<i>Commicarpus plumbagineus</i> ( Cav . ) Standl	Ch
Ochnaceae	<i>Ochna inermis</i> (Forssk.)Schweinf	Ph
Oleaceae	<i>Jasminum grandiflorm</i> L	Ch
	<i>Jasminum sambac</i> (L.)Ait	Ch
	<i>Olea africana</i> MILL. J.,	Ph
Orobanchaceae	<i>Cistanche phelypaea</i> (L.) Cout.	P
	<i>Cistanche rosea</i> E.G.Baker	P
	<i>Orobanche cernua</i> Loefl	P
Oxalidaceae	<i>Oxalis corniculata</i> L.	Th
Pandanaceae	<i>Panadanus odoriferous</i> (Forssk.) Chiov	Ph
Papaveraceae	<i>Argemone mexicana</i> L	Th
Pedaliaceae	<i>Sesamum indicum</i> L	He
Plantaginaceae	<i>Campylanthus pungens</i> (O.Schwart)	Ch
	<i>Plantago major</i> L.	He
	<i>Plntago lonceolata</i> L.	He
Plumbaginaceae	<i>Limonium axillare</i> (Forssk.) Ktze	He
	<i>Limonium cylindrifolium</i> (Forssk.) Verdc	He
	<i>Limonium pruinosum</i> (L.) KTZE	He
	<i>Plumbago zeylanica</i> L.	Th
Poaceae	<i>Aeluropus lagopoides</i> (L) Trin. Et. Tw	G
	<i>Aristida adscensionis</i> L.	Th
	<i>Aristida ferrilateris</i> S. M. Phillips	Th
	<i>Brachiaria leersioides</i> (Hochst.)Stapf	Th
	<i>Brachiaria reptans</i>	Th
	<i>Cenchrus ciliaris</i> L.	He
	<i>Cenchrus pennisetiformis</i> Hochst.ex Steud.	He
	<i>Cenchrus setigerus</i> vahl.	Th
	<i>Chloris barata</i> Sw.	Th
	<i>Cymbopogon schoenanthus</i> (L.) Spreng.	G
	<i>Cynodon dactylon</i> (L.) Pers.	G



	<i>Dactyloctenium aegyptiacum</i> (L.) Willd.	G
	<i>Dactyloctenium scindicum</i> Boiss.	G
	<i>Desmostachya bipinnata</i> (L.) Stapf.	He
	<i>Dichanthium annulatum</i> (Forssk.) Stapf.	Th
	<i>Dichanthium foveolatum</i> (Del.)Roberty	He
	<i>Echinochloa colona</i> (L.) Link.	Th
	<i>Echinochloa crus-galli</i> (L.)P.Beauv	Th
	<i>Eragrostis barrelieri</i> Dav.	Th
	<i>Eragrostis ciliaris</i> (L.) R. Br.	Th
	<i>Eragrostis papposa</i> (Roem. et Schult.) Steud.	Th
	<i>Halopyrum mucronatum</i> (L.)Stapf	Th
	<i>Hordeum vulgare</i> L	Th
	<i>Leptotherim senegalense</i> (Kunth)W.D.Clayton	He
	<i>Panicum turgidum</i> Forssk.	He
	<i>Paspalum dilatatum</i> Poir.	He
	<i>Pennisetum glaucam</i> (L.)R.Br	Th
	<i>Phealaris minor</i> Retz.	Th
	<i>Odysea mucronata</i> (Forssk.) Stapf.	Ch
	<i>Setaria barbata</i> (Lam.) Kunth.	G
	<i>Sorghum bicolor</i> (L.)Moench	Th
	<i>Sporobolus comsimilis</i> Fresen	He
	<i>Sporobolus spicatus</i> (Vahl)Kunth	G
	<i>Stipagrostis hirtigluma</i> (Steud. ex Trin. & Rupr.)De Winter	He
	<i>Stipagrostis paradisea</i> (Edgew.)de Winter	Th
	<i>Tetrapogon villosus</i> Desf.	G
	<i>Tragus berteronianus</i> Schult	Th
	<i>Tragus racemosus</i> (L.)all.	Th
	<i>Urochloa reptans</i> (L.) Stapf	Th
	<i>Zea mays</i> L .	Th
Polygalaceae	<i>Polygala abyssinica</i> R.Br. ex Fresen	Ch
	<i>Polygala erioptera</i> DC	Th
	<i>Polygala irregularis</i> Boiss	Ch
Polygonaceae	<i>Calligonum comosum</i> Herit.	Ph
	<i>Polygonum amphibium</i> L.	Ch
	<i>Polygonum aviculara</i> L.	Ch
	<i>Rumex nervosus</i> Vahl	Ch
	<i>Rumex vesicarius</i> L.	Ph
Polypodiaceae	<i>Adiantum capillus –veneris</i> L.	He
Portulacaceae	<i>Portulaca grandiflora</i>	Th
	<i>Portulaca oleracea</i> L. subsp. <i>oleracea</i>	Th
	<i>Portulaca qundrifida</i> L.	Th
Primulaceae	<i>Anagallis arvensis</i> L	Th
	<i>Primula verticillata</i> Forsk	He

<b>Punicaceae</b>	<i>Punica granatum</i> L.	Ph
<b>Resedaceae</b>	<i>Ochradenus baccatus</i> Del ile.	Ch
	<i>Reseda sphenocleoides</i> Defl	Ch
<b>Rhamnaceae</b>	<i>Berchemia discolor</i> ( Klotzsch) Hemsl. L	Ph
	<i>Phyllogeiton discolor</i> (Klotzsch) Herzog.	Ph
	<i>Zizaphus spina-Christi</i> (L.) Desf.	Ph
<b>Rubiaceae</b>	<i>Breonadia salicina</i> (Vahl) Hepper & J. R. I. Wood	Ph
	<i>Coffee arabica</i> L.	Ph
	<i>Pavetta longiflora</i> Vahl subsp. <i>longiflora</i>	Ph
	<i>Pentas lanceolata</i> (Forssk)Benth&Hook.	Ch
	<i>Tarenna graveolens</i> (S. Moore) Bremek. subsp. <i>arabica</i> (Cuf.) Bridson	Ph
<b>Rutaceae</b>	<i>Citrus aurantiifolia</i> (Christm.) Swingle	Ph
	<i>Citrus deliciosa</i> Ten	Ph
	<i>Citrus limon</i> (L.)Burm.f	Ph
	<i>Citrus sinensis</i> (L.)Osbeck .	Ph
	<i>Ruta chalepensis</i> L	He
<b>Salvadoraceae</b>	<i>Dobera glabra</i> (Forssk.) Poir	Ph
	<i>Salvadora persica</i> L.	Ph
<b>Sapindaceae</b>	<i>Dodonaea viscosa</i> ( L.)Jacq	Ch
	<i>Sapindus saponaria</i> L.	Ch
<b>Scrophulariaceae</b>	<i>Anticharis glandulosa</i> Asch	Th
	<i>Anticharis linearis</i> (Benth.)Hochst. ex Asch.	Th
	<i>Aptosimum pumilum</i> (Hochst.)Benth.	Th
	<i>Bacopa monniera</i> Hayata&Matsum	Th
	<i>Kickxia pseudoscoparia</i> D.A.Sutton	Th
	<i>Kickxia qaraticus</i> D.A.Sutton.	Th
	<i>Schweinfurthia pedicellata</i> (T.Anders.) Benth.et Hook	He
	<i>Scrophularia arguta</i> Sol.	Th
	<i>Striga asiatica</i> (L)Kuntze.	P
	<i>Striga angustifolia</i> (D. Don.) C. J. Saldanha	P
	<i>Striga hermonthica</i> (Del.)Benth.	P
	<i>Veronica polita</i> Fries	He
<b>Solanaceae</b>	<i>Capsicum annum</i> L.	Th
	<i>Capsicum frutescens</i> L	He
	<i>Datura innoxia</i> Mill.	Ch
	<i>Datura stramonium</i> L.	Th
	<i>Lycium shawii</i> Roem. et Schult.	Ph
	<i>Lycopersicum esculentum</i> Mill	Th
	<i>Nicotiana tabacum</i> L.	Th
	<i>Physalis minima</i> L.	Th
	<i>Physalis angulata</i> L.	Th
	<i>Solanum cordatum</i> forssk	Th

	<i>Solanum coagulans</i> forssk	Th
	<i>Solanum forsskali</i> Dunal	Ch
	<i>Solanum glabraatum</i> Dunal	Ch
	<i>Solanum incanum</i> L	Ch
	<i>Solanum melongena</i> L.	He
	<i>Solanum nigrum</i> L.	Th
	<i>Solanum spicula</i>	Ch
	<i>Solanum tuberosum</i> L	G
	<i>Solanum unguiculamm</i> A. RICH	Ch
	<i>Solanu villosum</i> . Mill	Th
	<i>Withania somnifera</i> (L.) Dunal.	Ch
<b>Sterculiaceae</b>	<i>Hermannia paniculata</i> Franch	Ch
	<i>Melhania ovta</i> Spreng	Ch
	<i>Melhania stipulosa</i> J.R.I.Wood	Ch
	<i>Sterculia africana</i> (Lour.)Fiori	Ph
<b>Tamaricaceae</b>	<i>Tamarix aphylla</i> (L.) Karst	Ph
	<i>Tamarix arabica</i> Bunge	Ph
	<i>Tamarix nilotica</i> (Ehrenb.)Bunge	Ph
<b>Tiliaceae</b>	<i>Corchorus depressus</i> (L.) Stocks	He
	<i>Corchorus olitorius</i> L.	Th
	<i>Corchorus tridens</i> L.	Th
	<i>Corchorus trilocularis</i> L.	Th
	<i>Grewia erythraeae</i> Schweinf.	Ph
	<i>Grewia velutina</i> (Forssk.)Vahl	Ph
<b>Typhaceae</b>	<i>Grewia tenax</i> (Forssk.) Fiori	Ph
	<i>Typha domingensis</i> pers	He
<b>Urticaceae</b>	<i>Forsskalea grierrsonii</i> A.Miller	Ch
	<i>Forsskalea tenacissima</i> L	Ch
<b>Verbenaceae</b>	<i>Lantana camara</i> L.	Ch
	<i>Lantana viburnoides</i> (Forssk.)Vahl	Ch
	<i>Phyla nodifora</i> (L.)greene	Ch
<b>Vitaceae</b>	<i>Cissus quadrangularis</i> L.	He
	<i>Cissus rotandifolia</i> (Forssk.)Vahl.	He
	<i>Cyphostemma ternatum</i> (Forssk.) Descoing	Ch
<b>Zygophyllaceae</b>	<i>Fagonia arabica</i> L.	He
	<i>Fagonia cretica</i> L	Ch
	<i>Fagonia hadramautica</i> Beier & Thulin	Ch
	<i>Fagonia indica</i> Burm. f. var. <i>indica</i>	Ch
	<i>Fagonia schweinfurthii</i> Hadidi	He
	<i>Peganum harmala</i> L	He
	<i>Seetzenia lanata</i> (willd)bull.	Th
	<i>Tribulus arabicus</i> H. HOSNI	He
	<i>Tribulus bimucronatus</i> Viv	He

<i>Tribulus pentandrus</i> Forssk	He
<i>Tribulus terrestris</i> L	He
<i>Tetraena simplex</i> (L.) Beier & Thulin	Th

#### 4-Conclusion

This study showed that there are 632 species including 331 genera and 89 families in this area. The predominant life form of the plants is Chamophyta.

This study is the fundamental base to light out the important sources of valuable plant species that found in the in Abyan Governorate.

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