



Checklist of Flora of Wadi Sarya, Tarhuna - Libya.

* Salem A. Hassan¹ and Hager G. Alahderi²

and Abdelbaset M. Asker³

¹Biology department (Botany), Faculty of Sciences, Elmergib University, AL- Khomus - Libya

² Biology department (Botany), Faculty of Sciences, Al-Zaytuna University- Tarhuna - Libya.

³ Botany department, Faculty of Sciences, Benghazi University, Benghazi -Libya.

Abstract

This work is an extensive floral inventory of Wadi Sarya, located in the Tarhuna region of northwestern Libya. A comprehensive field survey and taxonomic assessment reveal an unexpectedly rich flora with 284 species, belonging to of 197 genera and 59 families. The study shows that Dicotyledons (Magnoliopsida) account for 82.7% of the floristic composition (235 species), whereas Monocotyledons (Liliopsida) and Gymnosperms represent 16.6% and 0.70%, respectively. The high representation of the families in Wadi Sarya indicates that this wadi is a biological refugium with a high concentration of species, serving as a plant refuge in the harsh environment of the Mediterranean-Saharan transition zone. Several uncommon species in western Libya have been documented for the first time.

Keywords: Wadi Sarya, Tarhuna, Floristic Inventory, Mediterranean Flora, Taxonomic Diversity, Libya, Rare Species.

Introduction

Libya, situated along the Mediterranean coast in North Africa and bordered by Egypt, Tunisia, Algeria, Chad, Niger, and Sudan, is the fourth largest country in Africa by land area, encompassing approximately 1,759,540 km². It is geographically located between N: 26°.3351 and E: 17°.2283. It is extensive land borders stretch about 4,348 km, while its Mediterranean coastline extends over 1,900 km, flanked by maritime territorial waters reaching approximately 22.2 kilometers (African Futures & Innovation, 2025) (Fig.1).

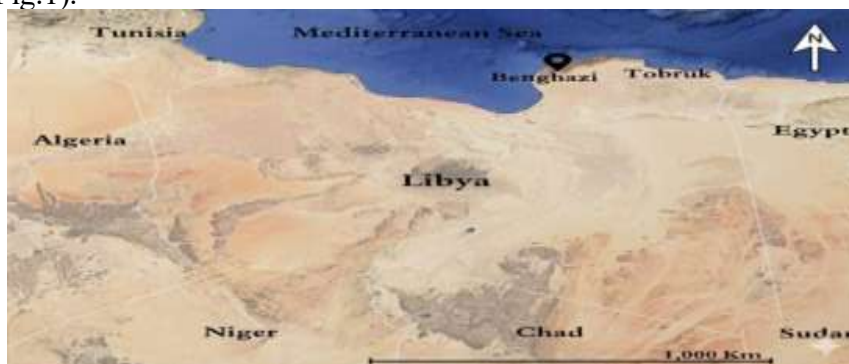


Figure 1. Libya satellite google earth map.

The meteorological assessments confirm that Libya's climate is primarily governed by the Saharan hyper-arid system, though coastal regions remain moderated by Mediterranean maritime influences. Recent studies indicate that while Saharan air masses dominate during the summer, the winter months (October–March) are increasingly characterized by high variability in cyclonic storm patterns. The narrow semi-arid transition zones—including the Al-Jifarah Plain and the Al-Jabal al-Akhdar—have become focal points for research on climate change and desertification, as the desert boundary continues to fluctuate along the Gulf of Sidra (Al-Idrissi et al., 2003; EGA, 2002; UNCCD National Report).

The climatic data for major urban centers, such as Tripoli and Benghazi, show average summer temperatures reaching the mid-30s °C, accompanied by a notable increase in the frequency of extreme "heatwave" events. Precipitation patterns remain highly localized; coastal annual averages (200–350 mm) now exhibit greater inter-annual variability than records from the late 20th century. In contrast, the Saharan interior, particularly around Sabha, remains among the most arid regions on Earth, with annual precipitation frequently falling below the long-term mean of 10 mm (Saad et al., 2011).

The distribution of Libyan flora remains naturally tied to isohyet gradients, though modern research focuses increasingly on the degradation of the Mediterranean maquis. While the Al-Jabal al-Akhdar mountains still harbor the nation's highest biodiversity, supporting key species such as *Juniperus phoenicea* and *Pistacia lentiscus*, these forest fragments are becoming increasingly isolated. In the western Nafusah Plateau, vegetation has transitioned toward a more xerophytic character; drought-resistant annuals and grasses now predominate as the steppe environment faces the dual pressures of climatic shift and anthropogenic activity (Al-Idrissi et al., 2003).

Floral investigations have recently shifted from broad taxonomic surveys toward intensive ecological assessments of these localized systems, now recognized as critical biodiversity refugia. Foundational work by Sherif (1985) in Wadi Al-Majanin established the importance of these basins as primary drainage features for the Tripoli region. Building upon this, (Al-Idrissi et al., 1996) confirmed that Wadi Al-Hira supports complex plant communities thriving within the sensitive ecotone between steppe and desert environments.

Beyond traditional wadi beds, recent studies have emphasized the importance of protected highlands and unique coastal habitats that function as biological refugia. A representative example is the Al-Shaafeen Protected Area in Msallata, where Hassan (2009) recorded 368 species, including the first national record of *Bupleurum gibraltaricum*.

The present study aims to provide a comprehensive taxonomic inventory of the flora of Wadi Sarya and document the diversity of the flora of Libya.

Materials and Methods

The Study area:

Wadi Sarya is located within the Tarhuna district of northwestern Libya (N: 32.4167° and E: 13.7833°) (Figure 1). Wadi Sarya is one of the valleys of the Tarhouna region. It occupies a rectangular water basin whose streams head northward to meet with Wadi al-Raml at Sidi Bennour. The

area of the Wadi Sarya basin is about 64 km², while the length of its basin is about 15 km. The tributaries of the valley begin to appear on the slopes of the Doghah region, Tarhuna, until they gather in the main valley south of the Friday Market area, about 1 km, and the average rainfall in the Sarya Valley basin is 265 mm/year, which has allowed the existence of diverse natural vegetation cover within the valley basin.

The study area consists of a varied expanse of low and medium hills interspersed with short valleys. Therefore, the soil in this area is predominantly mountainous, containing gravel of varying sizes. The most important soil types in the study area are shallow stony soil and alluvial valley soil (Ben Mahmoud & Al-Jandil, 1984).

The temperature in the study area is at its highest during the summer, while it drops to its lowest during the winter. The highest temperatures are recorded in July, when the mean temperature during this month reaches 42.5°C, while the lowest temperatures are recorded during January, when the average temperature in this month does not exceed 22.2°C.

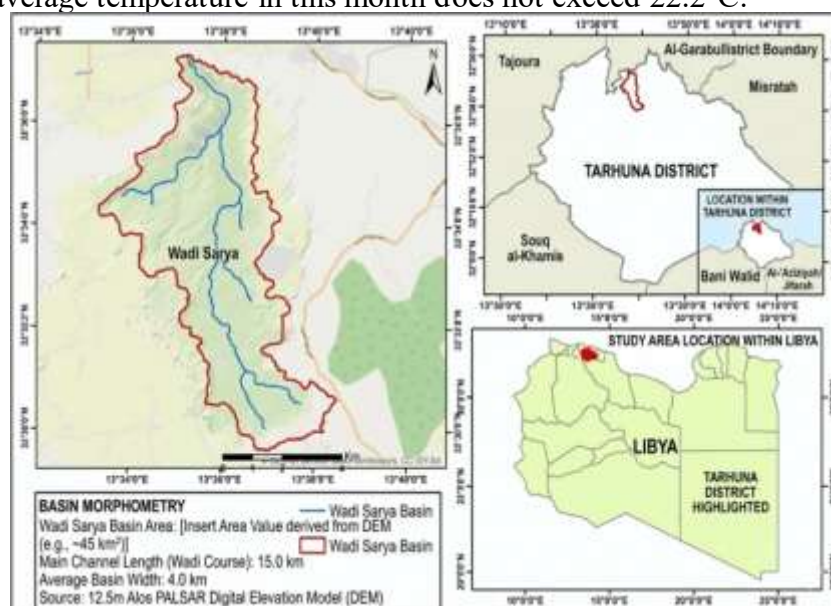


Figure 1. Regional map of Libya highlighting the geographical position of the Tarhuna Municipality

This study was carried out during the 2024–2025 growing season. Comprehensive botanical surveys were conducted over a 15-month period. The plant specimens were collected in the floral and fruit stages and processed according to standard herbarium techniques (Kottapalli S. et al., 2016). The identification of the specimens was carried out according to Ali and Jafri (1976–1977), Jafri and El-Gadi (1977–1986), and El-Gadi (1988–1989). Wherever possible, identification was confirmed by comparing with the authentically identified specimens in the herbarium. The voucher specimens were deposited at the herbarium of the Biology Department, Faculty of Science, Elmergib University.

Results and Discussion:

From Wadi Sarya, the floristic inventory revealed a total of 284 species, with the vast majority belonging to the Dicotyledonous (Magnoliopsida) group (Table 1). This dominant category comprises 235 species, 159 genera, and 50 families, representing 82.7% of the total diversity. While Monocotyledonous (Liliopsida) comprises 47 species belonging to 36

genera and seven families, it represents 16.6% of the total species. Conversely, the Gymnosperms represent only a minor proportion of the population, consisting of two species belonging to two families, which accounts for the remaining 0.70% of the total species. The collected species exhibited a clear distribution among the major plant groups, as listed in Table 1.

Table 1. showing the list of plant species collected from wadi sarya

Gymnosperms		
Family	Scientific name	Local name
Ephedraceae	<i>Ephedra altissima</i> Desf.	العنبد
Pinaceae	<i>Pinus halepensis</i> Mill.	صنوبر
Monocotyledones		
Family	Scientific name	Local name
Alliaceae	<i>Allium ampeloprasum</i> L.	كرات
	<i>Allium roseum</i> L.	قازول
	<i>Allium negrianum</i> Maire & Weiller Bull.	كرات
Amaryllidaceae	<i>Pancratium foetidum</i> Pomel.	نرجس
Arecaceae	<i>Phoenix dactylifera</i> L.	نخيل
Iridaceae	<i>Iris sisyrinchium</i> L.	سوسن
Liliaceae	<i>Androcymbium gramineum</i> (Cav.) Mc Bride.	قرشيد
	<i>Asparagus stipularis</i> Forsk.	سكوم
	<i>Asphodelus fistulosus</i> L.	لحية العتوت
	<i>Asphodelus microcarpus</i> Salzm.& Viv.	بلوز
	<i>Bellevalia sessiliflora</i> (Viv.) Kunth	بوفريه
	<i>Dipcadi serotinum</i> (L.) Medic.	قتيلة - ابومنادي
	<i>Muscari comosum</i> (L.) Mill.	قيطوط
	<i>Muscari racemosum</i> (L.) Mill.	قيطوط
	<i>Scilla peruviana</i> L.	البصيلة
	<i>Tulipa sylvestris</i> L.	-
	<i>Urginea maritima</i> (L.) Baker	فرعون
Orchidaceae	<i>Ophrys speculum</i> Link.	أوركيد
Poaceae	<i>Aegilops kotschy</i> Boiss.	شعيرة الفأر
	<i>Avena barbata</i> Pott ex Link	شوفان بري
	<i>Avena sterilis</i> L.	سبولة الغريب
	<i>Bromus diandrus</i> Roth.	بوشرنه
	<i>Bromus rigidus</i> Roth.	بوشرنه
	<i>Bromus rubens</i> L.	بوشرنه
	<i>Cynodon dactylon</i> (L.) Pers.	نجم - نجيل
	<i>Cynosurus coloratus</i> Lehm. ex Steud.	-
	<i>Catapodium maritimum</i> L.	-
	<i>Dactylis glomerata</i> L.	أديم
	<i>Dactyloctenium aegyptium</i> L.	-
	<i>Hordeum murinum</i> L.	زويون
	<i>Hordeum vulgare</i> L.	الشعير
	<i>Hordeum spontaneum</i> C. Koch.	-
	<i>Lagurus ovatus</i> L.	ذيل الارنب
	<i>Lamarckia aurea</i> (L.) Moench.	-
	<i>Lolium rigidum</i> Gaud.	بومنجر
	<i>Lolium loliaceum</i> Bory & Chaub	زويون
	<i>Lophochloa salzmannii</i> (Boiss.) & H.Scholz	زويون
	<i>Lygeum spartum</i> Loefl. ex Linn.	حلفاء مصنع

Gymnosperms		
Family	Scientific name	Local name
	<i>Parapholis incurve</i> (L.) C.E. Hubbard	
	<i>Pennisetum setaceum</i> (Forsk.) Chiov.	بوركية
	<i>Phalaris minor</i> Retz.	خافور - قنبوع
	<i>Phragmites australis</i> (Cav.) Trin. ex steud.	قصبة
	<i>Piptatherum miliaceum</i> (L.) Coss.	
	<i>Poa sinaica</i> Steud.	
	<i>Stipa capensis</i> Thunb.	بهمة
	<i>Stipa tenacissima</i> L.	حلفاء
	<i>Trachynia distachya</i> (L.) Link.	
Dicotyledones		
Family	Scientific name	Local name
Amaranthaceae	<i>Amaranthus viridis</i> L.	بوزنير
Anacardiaceae	<i>Pistacia atlantica</i> L.	البطوم
	<i>Rhus tripartita</i> (Ucria) Grande	الجداري
Apiaceae	<i>Ammi majus</i> L.	سفناري حمير
	<i>Bunium fontainesii</i> (Pers.) Maire.	-
	<i>Bupleurum gerardii</i> All.	-
	<i>Daucus capillifolius</i> Gilli.	-
	<i>Daucus jortanicus</i> Linn.	-
	<i>Daucus syrticus</i> Murb.	سفناري حمير
	<i>Ferula tingitana</i> L.	الكلخ
	<i>Torilis nodosa</i> (L.) Gaertn.	-
	<i>Torilis tenella</i> Del.	
Asclepiadaceae	<i>Caralluma europaea</i> (Guss.) N.E.Br.	دغموس
	<i>Periploca angustifolia</i> Labill.	حلاب
Asteraceae	<i>Amberboa libyca</i> (Viv.) Alavi	-
	<i>Anacyclus clavatus</i> (Desf.) Pers.	تقرفته
	<i>Anacyclus monanthos</i> (L.) Thell.	صرة الكبش
	<i>Andryala integrifolia</i> L.	-
	<i>Anthemis secundiramea</i> Biv.	الغريزة
	<i>Asteriscus pygmaeus</i> (DC.) Cosson & Durieu	مسمار وطاء
	<i>Atractylis cancellata</i> L.	-
	<i>Atractylis serrate</i> Pomel	-
	<i>Calendula arvensis</i> L.	عين البقرة
	<i>Carduncellus pinnatus</i> (Desf.) DC.	خرشوف
	<i>Carduus getulus</i> Pomel	-
	<i>Carthamus lanatus</i> L.	قرطم بري
	<i>Centaurea africana</i> Lam.	الشبرم
	<i>Centaurea alexandrina</i> Delile.	بللع
	<i>Centaurea dimorpha</i> Viv.	بللع
	<i>Centaurea glomerata</i> Vahl.	-
	<i>Chamomilla aurea</i> (Loefl.) Gay ex Cosson & Kralik	فلية
	<i>Chrysanthemum coronarium</i> L.	قحوان
	<i>Conyza canadensis</i> L.	نشاش الذبان
	<i>Crepis vesicaria</i> L.	-
	<i>Crupina crupinastrum</i> (Moris) Vis.	-
	<i>Cynara cardunculus</i> L.	شوك البيل
	<i>Echinops galalensis</i> Schweinf.	شنبة القطوس

Gymnosperms		
Family	Scientific name	Local name
	<i>Evax pygmaea</i> (L.) Beot.	-
	<i>Filago desertorum</i> Pomel.	-
	<i>Filago pyramidata</i> L.	-
	<i>Hedypnois cretica</i> (L.) Dum.-Courset.	-
	<i>Helichrysum stoechas</i> (L.) Moench.	عشبة الأرنب
	<i>Hyoseris scabra</i> L.	مرير
	<i>Hypochoeris achyrophorus</i> L.	-
	<i>Hypochoeris glabra</i> L.	-
	<i>Launaea resedifolia</i> (L.) O. Kuntze.	عضيدة
	<i>Leontodon simplex</i> (Viv.) Widder.	-
	<i>Notobasis syriaca</i> (L.) Cass.	-
	<i>Onopordum cyrenaicum</i> Maire&Weiller.	لبيد
	<i>Pallenis spinosa</i> (L.) Cass.	شوك السرة
	<i>Phagnalon rupestre</i> (L.) DC.	عشبة الأرنب ذكر
	<i>Picris asplenoides</i> L.	-
	<i>Reichardia tingitana</i> (L.) Roth.	عضيدة - المريرة
	<i>Rhagadiolus stellatus</i> (L.) Gaertner	-
	<i>Scorzonera undulate</i> Vahl.	القنيز
	<i>Senecio gallicus</i> Chiax	الزريطة
	<i>Silybum marianum</i> (L.) Gaertner	القرطم
	<i>Sonchus asper</i> (L.) Hill	تيفاف
	<i>Sonchus oleraceus</i> L.	تيفاف
	<i>Urospermum picroides</i> (L.) Scop. ex F.W. Schmidt.	-
Boraginaceae	<i>Alkanna tinctoria</i> ssp. <i>Tripolitana</i> (Bornm.)	حنة العقرب
	<i>Echium angustifolium</i> Mill.	حنة العقرب
	<i>Echium humile</i> Desf.	حنة العقرب
	<i>Echium plantaginifolium</i> L.	حنة العقرب
	<i>Elizaldia calycina</i> (Roem.&Schultes) Maire	زهرة غولة
	<i>Heliotropium europaeum</i> L.	المرام
	<i>Nonea viviani</i> DC.	-
Brassicaceae	<i>Biscutella didyma</i> L.	-
	<i>Brassica tournefortii</i> Gouan.	عسلوز
	<i>Capsella bursa-pastoris</i> (L.) Medik.	جراب الراعي
	<i>Carrichtera annua</i> (L.) DC.	بنوما
	<i>Cardaria draba</i> (L.) Desv.	-
	<i>Didesmus aegyptius</i> (L.) Desv.	لسلس
	<i>Didesmus bipinnatus</i> (Desf.) DC.	لسلس
	<i>Diplotaxis harra</i> (Forsk.) Boiss.	حارة
	<i>Diplotaxis muralis</i> (L.) DC.	جرجير
	<i>Enarthrocarpus clavatus</i> Del. ex Godr.	شلطام
	<i>Erucaria microcarpa</i> Boiss.	-
	<i>Eruca sativa</i> Mill.	جرجير بري
	<i>Hirschfeldia incana</i> L.	-
	<i>Matthiola longipetala</i> (Vent.) DC.	الشقارة
	<i>Matthiola parviflora</i> (Schousboe) R.Br.	-
	<i>Rapistrum rugosum</i> (L.) All.	خردل بري
	<i>Sinapis alba</i> L.	خردل
	<i>Sisymbrium erysimoides</i> Desf.	-

Gymnosperms		
Family	Scientific name	Local name
	<i>Sisymbrium irio</i> L.	-
	<i>Thlaspi perfoliatum</i> L.	-
Cactaceae	<i>Opuntia ficus-indica</i> (L.) Mill.	التين الشوكي
Caesalpiniaceae	<i>Ceratonia siliqua</i> L.	خروب
Caryophyllaceae	<i>Polycarpon tetraphyllum</i> (L.) L.	-
	<i>Silene behen</i> L.	أم قرين
	<i>Silene cerastioides</i> L.	أم قرين
	<i>Silene colorata</i> poiret.	أم قرين
	<i>Silene viviani</i> Steud.	-
	<i>Spergularia diandra</i> (Guss.) Heldr. & Sart.	-
Chenopodiaceae	<i>Chenopodium murale</i> L.	العفينة
	<i>Chenopodium foliosum</i> (Moench).	العفينة
Cistaceae	<i>Cistus parviflorus</i> Lam.	طريش أحمر
	<i>Cistus salvifolius</i> L.	طريش أبيض
	<i>Fumana arabica</i> (L.) Spach.	-
	<i>Fumana laevipes</i> (L.) Spach.	-
	<i>Helianthemum hirtum</i> (L.) Mill.	العود الرقيقة
	<i>Helianthemum kahiricum</i> Delile.	الليرقا
	<i>Helianthemum salicifolium</i> (L.) Miller.	زفراف
	<i>Helianthemum stipulatum</i> (Forsk.) C.Chr.	
Convolvulaceae	<i>Convolvulus althaeoides</i> L.	العليق – المديد
	<i>Convolvulus arvensis</i> L.	العليق
	<i>Convolvulus dorycnium</i> L.	خضرايا – خبطة
Crassulaceae	<i>Sedum sediforme</i> (Jacq.) Pau.	دغموس الحلفاء
	<i>Umbilicus rupestris</i> (Salisb.).	دغموس
Cucurbitaceae	<i>Bryonia cretica</i> L.	عنب الحية
Cuscutaceae	<i>Cuscuta planiflora</i> Ten.	حرير الزعر
Dipsacaceae	<i>Scabiosa arenaria</i> Forskal.	عين طشيمه
	<i>Scabiosa libyca</i> Ala.	-
Euphorbiaceae	<i>Euphorbia bivonae</i> Steud.	لبينة
	<i>Euphorbia terracina</i> L.	لبينة
	<i>Euphorbia falcate</i> L.	لبينة
	<i>Euphorbia peplus</i> L.	لبينة
	<i>Mercurialis annua</i> L.	-
	<i>Ricinus communis</i> L.	خروع
Fabaceae	<i>Anthyllis tetraphylla</i> L.	شكوة الراعي
	<i>Anthyllis vulneraria</i> L.	حشيشة الذنب
	<i>Astragalus asterias</i> Stev. ex Ledeb.	خرنبوش
	<i>Astragalus caprinus</i> L.	خرنبوش
	<i>Astragalus spinosus</i> (Forsk.).	خرنبوش
	<i>Astragalus hamosus</i> L.	كداد – خرنبوش
	<i>Astragalus sinaicus</i> Boiss.	خرنبوش – قئات
	<i>Astragalus tribuloides</i> Del.	خرنبوش
	<i>Calicotome villosa</i> (Poir.) Link.	القندول
	<i>Coronilla scorpioides</i> (L.) Koch.	اقريئة
	<i>Genista acanthoclada</i> DC.	
	<i>Genista microcephala</i> Coss. & Dur.	كسمايه – شديدة
	<i>Hedysarum spinosissimum</i> L.	-
	<i>Hippocrepis bicontorta</i> Lois.	-

Gymnosperms		
Family	Scientific name	Local name
	<i>Hippocrepis ciliate</i> Willd.	-
	<i>Hippocrepis scabra</i> DC.	-
	<i>Hymenocarpus circinatus</i> (L.) Savi.	-
	<i>Lathyrus cicera</i> L.	-
	<i>Lotus edulis</i> L.	مخبش الدجاجة
	<i>Lotus halophilus</i> Boiss.	مخبش الدجاجة
	<i>Lotus ornithopodioides</i> L.	مخبش الدجاجة
	<i>Medicago coronata</i> (L.) Bart.	-
	<i>Medicago littoralis</i> Rohde ex Lois.	نفل
	<i>Medicago minima</i> (L.) Bart.	نفل
	<i>Medicago polymorpha</i> L.	-
	<i>Melilotus indicus</i> (L.) All.	حندقوق مر
	<i>Melilotus sulcatus</i> Desf.	حندقوق مر
	<i>Ononis ornithopodioides</i> L.	-
	<i>Ononis serrata</i> Forsk.	-
	<i>Psoralea bituminosa</i> L.	-
	<i>Retama raetam</i> (Forsk.) Webb.	الرتم
	<i>Scorpiurus muricatus</i> L.	خزيمة
	<i>Trifolium campestre</i> Schreb.	-
	<i>Trifolium cherleri</i> L.	-
	<i>Trifolium scabrum</i> L.	-
	<i>Trifolium stellatum</i> L.	-
	<i>Trifolium tomentosum</i> L.	-
	<i>Vicia monantha</i> Retz.	جلبان
	<i>Vicia sativa</i> L.	جلبان
	<i>Vicia villosa</i> Roth.	جلبان
Fumariaceae	<i>Fumaria parviflora</i> Lam.	شاهترج
	<i>Fumaria macrocarpa</i> Parlatores.	-
Gentianaceae	<i>Centaurium tenuiflorum</i> (Hoffmanns & Link).	-
Geraniaceae	<i>Erodium guttatum</i> (Desf.) Willd.	خلال الغولة
	<i>Erodium glaucophyllum</i> (L.) LHerit.	خلال الغولة
	<i>Erodium hirtum</i> (Forsk.) Will.	التمير
	<i>Erodium laciniatum</i> (Cav.) Willd.	حنة الغولة
	<i>Erodium ciconium</i> (L.)	-
	<i>Geranium molle</i> L.	-
Globulariaceae	<i>Globularia alypum</i> Linn.	الزريقة
Hypecoaceae	<i>Hypecoum procumbens</i> L.	حندقاه
Illecebraceae	<i>Herniaria fontanesii</i> J. Gay	النخيلة
	<i>Herniaria cinerea</i> DC.	غفة العبد
	<i>Paronychia capitata</i> (Linn.) Lamk.	غفة العبد
Lamiaceae	<i>Ajuga iva</i> (L.) Schreber	شندقورة
	<i>Lavandula multifida</i> L.	الخزام
	<i>Marrubium vulgare</i> L.	روبية
	<i>Micromeria nervosa</i> (Desf.) Benth.	-
	<i>Rosmarinus officinalis</i> L.	اكليل
	<i>Salvia lanigera</i> Poir.	ساق الجمل
	<i>Salvia verbenaca</i> L.	ساق الناقة
	<i>Teucrium polium</i> L.	الجعدة
	<i>Thymus capitatus</i> (L.) Hoffm. & Link.	ز عتر

Gymnosperms		
Family	Scientific name	Local name
	<i>Thymus algeriensis</i> Boiss. et Reut.	الزعتر الجزائري
Linaceae	<i>Linum strictum</i> L.	الكتان
Malvaceae	<i>Malva parviflora</i> L.	خبيز
	<i>Malva sylvestris</i> L.	خبيز
Mimosaceae	<i>Acacia cyanophylla</i> Lindley.	الكاشة
Moraceae	<i>Ficus carica</i> L.	كرموس
Myrtaceae	<i>Eucalyptus cosmophylla</i> F. muell.	السرول
Oleaceae	<i>Olea europaea</i> L.	زيتون
Orobanchaceae	<i>Orobanche schultzii</i> Mutel.	-
Papaveraceae	<i>Papaver hybridum</i> L.	خنيقة
	<i>Papaver rhoeas</i> L.	بقرعون
Plantaginaceae	<i>Plantago albicans</i> L.	إينم
	<i>Plantago amplexicaulis</i> Cav.	إينم
	<i>Plantago coronopus</i> L.	رجل الغراب
	<i>Plantago ovate</i> Forskal.	دقيس
	<i>Plantago lagopus</i> L.	ودينة
Plumbaginaceae	<i>Limonium thouinii</i> Viv.	-
Polygonaceae	<i>Emex spinosus</i> (L.) Campd.	ضرس العجوز
	<i>Rumex bucephalophorus</i> L.	حميضة
	<i>Rumex tingitanus</i> L.	حميضة
	<i>Rumex vesicarius</i> L.	حميضة حمام
Primulaceae	<i>Anagallis arvensis</i> L.	عين القطوس
	<i>Anagallis monelli</i> L.	عين القطوس
Ranunculaceae	<i>Adonis microcarpa</i> DC.	عين البومة
	<i>Nigella arvensis</i> L.	-
	<i>Ranunculus asiaticus</i> L.	زغليل
Resedaceae	<i>Reseda alba</i> L.	ذيل الحولي
Rhamnaceae	<i>Rhamnus alaternus</i> L.	-
	<i>Ziziphus lotus</i> (L.) Lam.	سدر
Rosaceae	<i>Amygdalus communis</i> L.	لوز
Rubiaceae	<i>Callipeltis cucullaris</i> L.	-
	<i>Crucianella aegyptiaca</i> L.	-
	<i>Galium murale</i> (L.) All.	-
	<i>Galium tricornerutum</i> Dandy.	غاليون
	<i>Galium setaceum</i> Lam.	-
	<i>Galium verrucosum</i> Huds.	-
	<i>Sherardia arvensis</i> L.	-
	<i>Valantia hispida</i> L.	-
Rutaceae	<i>Ruta chalepensis</i> L.	الفيجل – السدب
Santalaceae	<i>Thesium humile</i> Vahl.	حب الكرش
Scrophulariaceae	<i>Kickxia acerbiania</i> (Boiss.) Tackh&Boulos.	الطرحة
	<i>Kickxia aegyptiaca</i> L.	-
	<i>Kickxia commutata</i> (Bernh. Rx Reichenb.)	-
	<i>Misopates orontium</i> (L.) Rafin.	-
	<i>Linaria simplex</i> Desf.	-
Solanaceae	<i>Linaria tarhunensis</i> Pamp.	-
	<i>Lycium europaeum</i> L.	عوسج
	<i>Nicotiana glauca</i> R.C.Graham	المصاص
	<i>Solanum nigrum</i> L.	عنب الذيب

Gymnosperms		
Family	Scientific name	Local name
Urticaceae	<i>Urtica urens</i> L.	حريق
Valerianaceae	<i>Valerianella chlorodonata</i> Cosson.	-
Zygophyllaceae	<i>Fagonia cretica</i> L.	طليحة

The taxonomic distribution of plants observed in Wadi Sarya, characterized by the dominance of Magnoliopsida (82.7%), aligns with broader floristic patterns identified across the Libyan Mediterranean coast (Ali & Jafri, 1976). The Dicotyledons' disproportionate representation over Monocotyledons is a common feature in Mediterranean climates, where diverse Dicot families have developed superior physiological adaptations to survive prolonged summer droughts (Quezel, 1985). Furthermore, the high family-to-genus ratio suggests that the study area serves as a significant biological reservoir. According to Boulos (1997), the complexity of wadi vegetation in North Africa often reflects a transition zone where Saharan and Mediterranean floral elements overlap, creating a high-diversity ecotone.

New taxa for the flora of western Libya were recorded, including: *Evax pygmaea* (L.) Beot., *Thlaspi perfoliatum* L., *Onopordum cyrenaicum* Maire & Weiller, *Genista acanthoclada* DC., *Centaurium tenuiflorum* (Hoffmanns & Link), *Kickxia commutata* (Bernh. ex Reichenb.), *Fumana laevipes* (L.) Spach., *Rhagadiolus stellatus* (L.), *Orobanche schultzii* Mutel., *Helianthemum salicifolium* (L.) Mill., *Notobasis syriaca* (L.) Cass., *Medicago coronata* (L.) Bart., *Nigella damascene* L., and *Misopates orontium* (L.). Also three endemic species were recorded: *Scabiosa libyca* Ala, *Allium negrianum* Maire & Weiller Bull., and *Muscari racemosum* (L.) Mill.

Various rare taxa were documented within the study area, including *Pancratium foetidum* Pomel, *Ophrys speculum* Link, and *Ephedra altissima* Desf. The presence of rare taxa in Wadi Sarya highlights a unique biodiversity pattern. Agreeing with Hasan (2008), these new records confirm the need for protected areas in Libyan wadis and support the Mediterranean regional assessment goals (IUCN, 2005).

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N	Auth or Name and Email and ORCID link	Study Concept ion / Idea	Data Collection or Contribution to Data Collection	Contribution to Previous Studies / Literature Review	Study Methodology	Conduct ing Analyse s (Practical Aspect)	Data Analysis	Interpretati on and Discussion of Results	Approval of Final Version
1	✓	✓	✓	✓		✓	✓	✓	✓
2	✓		✓		✓	✓	✓	✓	✓
3	✓	✓		✓	✓		✓	✓	✓

1- Salem A. Hassan

Email: sahasan@elmergib.edu.ly

2- Hager G. Alahderi

Email: Hajer.juma90@gmail.com

3- Abdelbsit M. Asker

Email: abdelbasit.asker@uob.edu.ly