

**Plant Biodiversity Inventory Report at Al Makhroul Valley:  
Autumn, winter and Spring 2018/2019 Seasons**

**Consultancy Service- Under the project entitled:  
“Biodiversity Conservation and Community Development in Al-Makhroul Valley in  
Bethlehem, Palestine”**

**Consultancy Location: Al Makhroul Valley - Bethlehem Governorate**

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**Prepared by:**

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### **I. Introduction:**

Pioneer Consultancy Center for sustainable development (PCC) has started preparing for studying the plant biodiversity at Al Makhrou valley since the startup of the project entitled: " *Biodiversity Conservation and Community Development in Al-Makhrou Valley in Bethlehem, Palestine* ". The PCC team has revise potential relevant literature and documents regarding the targeted site; Al Makhrou Valley (MKV), and its natural landscapes and plant biodiversity at the site.

Keeping in mind the aim of the project and the specific objective of the biodiversity inventory; specifically advancing the knowledge base regarding plant biodiversity in MKV towards better understanding and effective protection for its valuable biodiversity and its supportive habitats, PCC developed the necessary scientific set up for the inventory supported with effective action plan, timeframe, tools, field sheets, databases etc. At the end, this activity will support the development of a comprehensive assessment for plant biodiversity status including their relevant habitats and ecosystems. It will also support the project team to develop biodiversity conservation plan, the identification of sites of restoration need, building relevant capacities, change attitudes, public and stakeholders' outreach, and others. All this shall be accomplished with the vision of sustaining the ecosystem services of the valley and its value as World Heritage Site.

### **II. Methodology for Plant Biodiversity Inventory at AL Makhrou Valley**

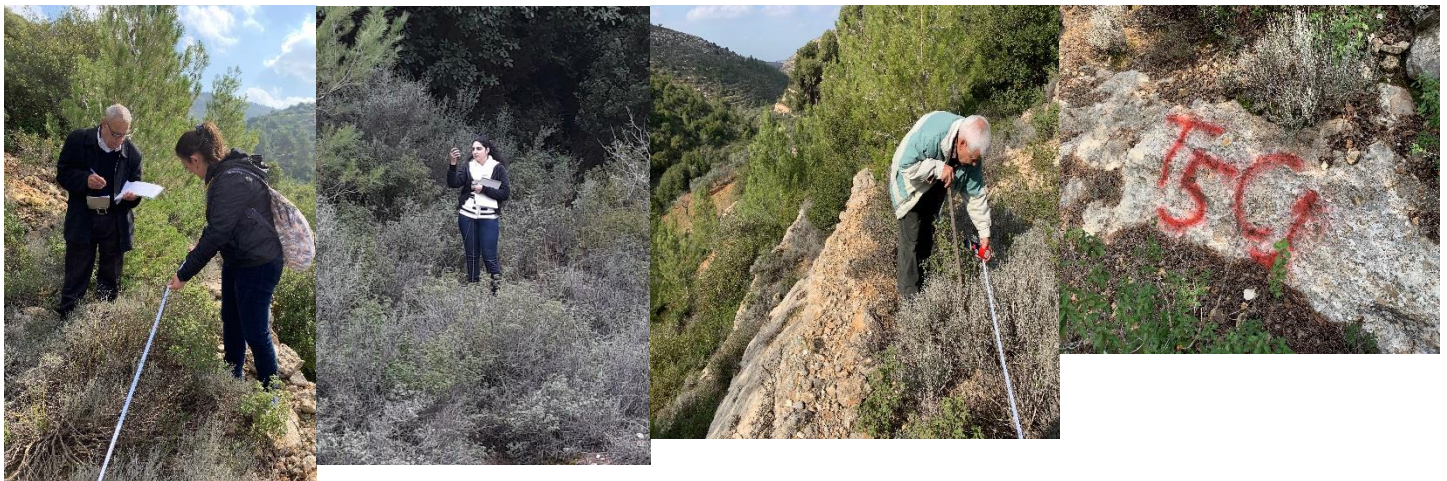
The plant biodiversity inventory for AL Makhrou Valley (MKV) is one of the major components of the biodiversity assessment, as it offers detailed information collected from the surveys on site; specifically regarding the status of the biotic and abiotic components of the targeted site based on field surveys, measurements and inspection by specialized experts using specialized methodologies in the field.

The plant biodiversity inventory of autumn and winter seasons 2018/2019 was conducted at MKV during the three months of December 2018, January and February, 2019, while spring season was covered during the months of March and April 2019. The inventory was done through implementing scientific methods and approaches for surveying plant species on site, while investigating their habitats, their supporting abiotic elements such as soil, and topography of the site, etc. The main threats and human interferences were also recorded as seen on site.

***The principal objectives of the inventory are to:***

- 1) determine the extent, structure, status and composition of plant community, habitat, or vegetation cover types;
- 2) document the presence or absence of endangered or threatened plant species according to IUCN Red List;
- 3) describe vegetation-environment relationships;
- 4) detect existing natural and man-induced environmental perturbations;
- 5) describe successional trends and patterns when available.

To fulfil the objectives of the biodiversity inventory, the inventory was done utilizing international methods for proper inventory for vegetation cover at targeted site - MKV. This component of the study is recommended by national strategies such as the National Biodiversity Strategy and Action Plan for Palestine and international guidelines for recording and assessing status of species such as the ones set by IUCN species survival commission and global species programme. This approach enhance the concept of conservation based on sound knowledge, and better valuation of the resources. The team that performed the inventory was composed of four specialized people of PCC staff as following: Mr. Adel Abu Ayyash, Mrs. Roubina Ghattas, Eng. Mohammad Abu Amrieh and Miss Marian Rishmawi. Some are specialized in plant taxonomy, others in nature conservation, agro-biodiversity and in rural development (Photos 2.1, 2.2, 2.3).



***Photos 2.1, 2.2, 2.3: PCC team conducting the plant inventory surveys at MKV***

The team has conducted effective field visits (18 visits) to the site covering Al Makhroun Valley including the natural area that circles battir village towards Husan village (named



here as MKV), while adopting the Braun and Blanquette (1964)<sup>1</sup> and line transect methodologies for plant surveys<sup>2</sup>. PCC worked on preparing for field surveys, revising the collected information from the field and verifying the plants' classification done in the field, including their status and characteristics, in addition to conducting data analysis, building relevant database and reporting. Hence, this report presents the findings of the plant biodiversity inventory works, surveys, data analysis done during autumn, winter and spring 2018/2019. In addition to the areas covered by the two methodologies described below (2.1 and 2.2), PCC team surveyed the whole MKV as described in section 2.3 and studied all plant species found in the area in general including those found growing along the paths, the valley trench, around springs, etc (not only those studied within the transects themselves or along the transect line).

### ***2.1 Braun and Blanquet methodology***

The Braun-Blanquet cover-abundance scale methodology was used to analyze vegetation cover-abundance ratings and to elucidate graphically species-environment relationships at MKV. This method is known to provide sufficiently accurate baseline data to allow environmental impact assessment and vegetation assessment studies. The Braun-Blanquet system of vegetation classification is the most widely used and uniform system of vegetation classification, enabling us to compare plant communities over a particular area, and, therefore, also presenting a basis for such items as geographical comparison of habitats, vegetation mapping of the areas, and analyze the rate, in which taxa appear to be bound to one or several communities<sup>3</sup>.

The Braun-Blanquet cover-abundance scale was used to estimate plant species importance and abundance in this study. Plant Cover was determined from estimates of vertical plant shoot-area projection as a percentage of quadrat area<sup>4</sup>. The index designating the appropriate cover-range and species classification were recorded in the field. Field species sampling was conducted in transects covering targeted site area. The surveyed area was divided into 33 transects of 70\*70 m and within transects, one to four quadrats of 25\*25 m were specified and surveyed. The quadrats were set in a way that would cover major part of the transect area. Within each quadrat, plant species were

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<sup>1</sup> Douglas A. Wikum, G. Frederick Shanholtzer (July, 1978). Application of the Braun-Blanquet cover-abundance scale for vegetation analysis in land development studies. *Environmental Management*, Volume 2, Issue 4, pp 323– 329.

<sup>2</sup> Wikum, D.A. & Shanholtzer, G.F. (1974). Application of the Braun-Blanquet cover-abundance scale for vegetation analysis in land development studies. *Environmental Management*. July 1978, Volume 2, Issue 4, pp 323–329. <https://doi.org/10.1007/BF01866672>

<sup>3</sup> <http://repository.naturalis.nl/document/572813>

<sup>4</sup> Mueller-Dombois, D. and Ellenberg, H. (1974) *Aims and Methods of Vegetation Ecology*. John Wiley and Sons, New York, 547 p.



surveyed by counting the number of each species growing in the quadrats. During plant species sampling the species type, name, structure and abundance were all measured.

During the field surveys conducted at Al Makhrou valley, the project team has estimated the vascular plant species cover that existed at the different selected transects. Each transect was selected based on set of criteria including the location of transect, the topography, the type of vegetation cover, and its habitat. The field surveyors has ensured the most comprehensive geographic coverage for the valley, coverage for the diverse habitats, coverage for the diverse plant species and others. Other terms were taking into consideration which is the accessibility of the land, the slope, and the density of the plants covering that piece of land. Accordingly and in each transect certain number of quadrats were specified to study in details regarding the type of plants the quadrat is supporting, and its estimated frequency (according to B& B methodology). In some transects only one quadrat was taken as the topography of the land did not allow the team to access all parts of the transect; mainly because those transects were of very steep slopes.

The transects were selected in a way that ensures the coverage of all types of habitats on site. Trees, shrubby and herbaceous vegetation were all studied in each transect. The habitat, soil type and elevation of each transect were specified and interpreted with the type and abundance of species surveyed. Hence, a variety of information were collected along each transect to highlight ecological relationships, the abiotic conditions of each transect and quadrat were also described focusing on the elevation and coordinates, soil type, habitat type, and slope rate.

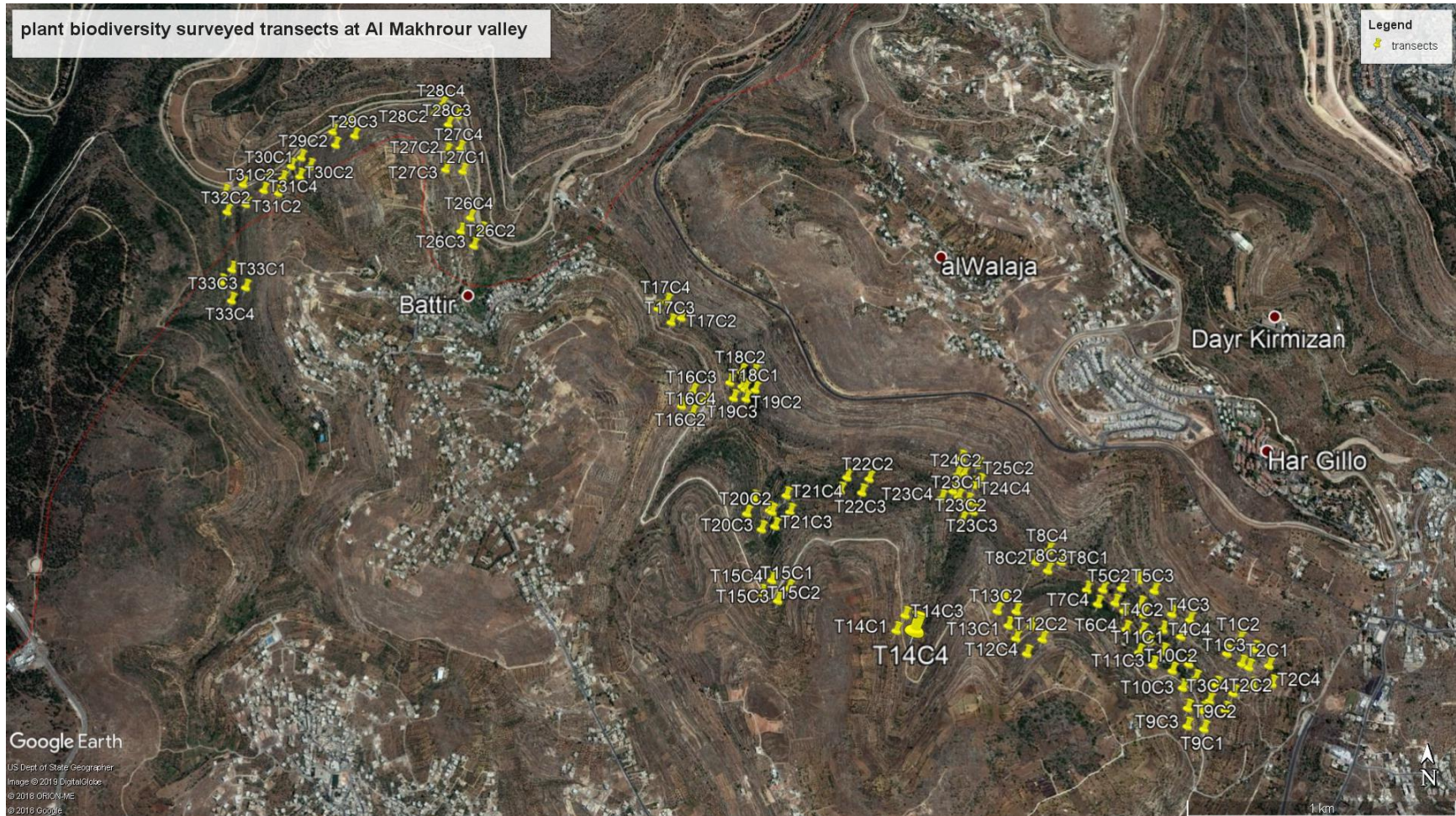
A profile diagram was used to elucidate graphically the vegetation-environment relationships. The use of cover-abundance ratings in profile diagrams allows one to visualize simultaneously species importance, community composition and structure, and vegetation-topographic relationships<sup>5</sup>. The plant profile of the transect represents plant species that occurred at each sampling quadrat.

The cover-abundance index for each species appears to the right of the species name, directly as a + (cross) rating and a (number). The meaning of those number is interpreted as in table 2.1 below.

**Table (2.1): Braun and Blanquet Scale by Range of Cover**

Braun –Blanquet scale	Range of plant cover (%)
5	75-100
4	50-75
3	25-50
2	5-25
1	<5; numerous individuals
+	<1; few individuals

<sup>5</sup> Richmond, T. De A. and D. Mueller-Dombois. 1972. Coastline ecosystems on Oahu, Hawaii. Vegetation 25: 367-400



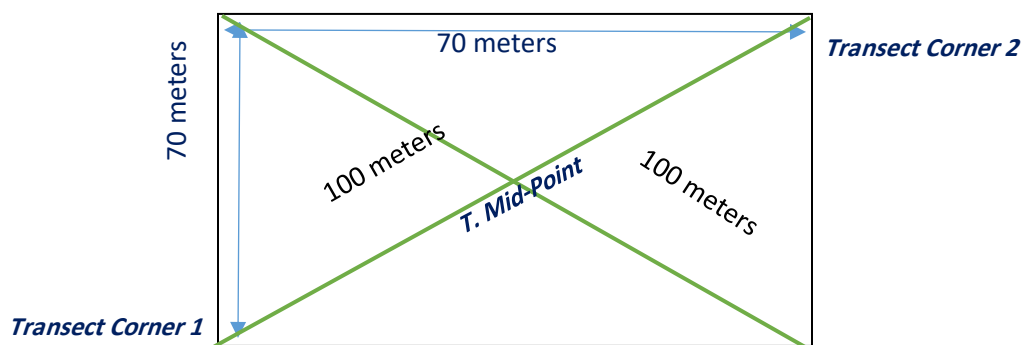
**Map 2.1: AL Makhroul valley delineating the site and all transects selected to be surveyed for their plant cover.**

## 2.2 Line Transect Methodology

Another measurement was taken through implementing the line transect methodology. Plant coverage in relation to soil and rock coverage at the study area was also estimated by measuring a line transect by counting numbers of plant species occurrence at regular or subjectively determined intervals along the line transects covering each block transect selected to be studied according to Braun and Blanquet methodology. (Block transect is the transect described in section 2.1).

Line transect measurements were taken within area of each block transect (described earlier). The line transect was taken as X lines, where each line is of 100 meters length, hence 200 meters of line transect were measured within each block transect. The line transect is delineated by using a nylon rope of 100 meters marked and numbered with cm intervals, all the way along its length. It was laid across the block transect, where the position of the line transect line was set to cross the whole block transect selected to be studied.

The starting point for the line transects was taken at the first corner of the block transect, while the end point of the line transect was the second corner of the block transect and so on. 70 meters was the space left between one line-transect and the other (see diagram 1 below). A line transect was carried out by unrolling the transect line along the gradient identified. The species touching the line were recorded and their canopy area was measured along the whole length of the line (continuous sampling was taken). Alternatively, the presence, or absence of species at each marked point is recorded (systematic sampling). When there is no plant species touching the line, the soil or rock existing in the space was recorded. At the end the data of the line transect helped PCC team to calculate the plant coverage versus the rock and soil coverage in each block transect. It also helps to identify the frequency of species growing along the line transect and the plant density of the block transect.



**Diagram 1: Shows a block transect of 70\*70 meters selected in the field and a line transect of 100 meters length set inside the block transect.**



### 2.3 The Surveyed Area at Al Makhroul Valley

The surveyed area encompasses: (1) Al Makhroul Valley that extends from Beit Jala city to the entrance of Battir village from the western side, which forms 2.62 km<sup>2</sup>, (2) the hills surrounding Battir Village from the northern and western sides of Battir and Battir village itself, which forms 2.38 km<sup>2</sup>. Hence the surveyed area covered almost 5 km<sup>2</sup>, which forms 45% of whole WHP (World Heritage Property) designated by UNESCO (see map 2.2). PCC focus was on the core area of the WHP. In this study MKV as an expression represents the two areas as following: AL Makhroul Valley and the hills behind Battir towards Husan village, where the inventory was conducted. Battir village was also surveyed but its results will be presented separately as it has a unique status; mainly affected by human interferences and hence its plant cover was studied independently (see section 3.3).



**Map 2.2: Area covered for biodiversity inventory survey done for ALMakhroul Valley and Battir village and its surrounding hills**

The area surveyed starts from Beit Jala side at coordinates 31°42'52.38"N, 35°10'26.16"E reaching up to the natural valley between Battir and Husan villages at point 31°43'18.33"N, 35° 7'54.77"E, taking three paths 1, 2 and 3 (see map 2.3). The area enjoys the different potential habitats that the valley embraces and the different plant species that it supports. The length of the three paths is 7.5 Kilometers. The highest point at the studied paths was estimated at 813 meters above sea level and the lowest point reaches to an estimate of 550 meters above sea level.



**Map 2.3: Paths used to support PCC team to conduct the surveys in a comprehensive geographic manner.**



### III. Findings of the plant biodiversity inventory surveys done at Al Makhroul Valley – covering Autumn, Winter, and Spring seasons 2018/2019

#### 3.1 Ecosystem and Habitats of Al Makhroul Valley:

Al Makhroul Valley (MKV) falls in the Mediterranean botanical and zoogeographical region<sup>6</sup> and the Mediterranean biogeographical zone<sup>7</sup>. It is also an important part of the hydrological system that replenishes the western aquifer. The mean annual temperature in this area is 15-18°C. The annual average precipitation is 250-650 mm, some of which falls as snow in some years<sup>8</sup>. The soil is diverse from light to dark brown Rendzina with some area with mixture of Terra Rossa and in some areas of Terra Rossa alone. With an elevation ranging from ca. 550 m to ca. 830m above sea level<sup>9</sup>. Al Makhroul area is well – known as the governorate's most fertile land and its traditional breadbasket. The valley is announced as Important Bird Area (IBAs)<sup>10</sup> and was designated as a Key Biodiversity Area<sup>11</sup> at national and global levels. AL Makhroul valley is in the Mediterranean Forests, Woodland and Scrub biome, one of WWF's Global 200 priority biomes for conservation<sup>12</sup>. The area is also part of Conservation International's Global Biodiversity Hotspot Mediterranean Basin<sup>13</sup>, and of a global Centre of Plant Diversity<sup>14</sup>, two additional designations of global conservation importance.

The World Heritage Site also encompasses series of agricultural valleys extending along Al Makhroul Valley towards the west of Beit Jala, then towards the village of Husan, encircling the village of Battir, and extending to the neighboring village of Al Walaja to the northeast. The valley enjoys a strategic location and the availability of springs that attracted people to settle in the area and adapts its steep landscape into arable land, through developing complex irrigation system for the water supply that has led to the creation of dry walls terraces, agricultural watchtowers (manatir) locally known as palaces (qusoor), and olive presses. All were the basis for a strong presence of agriculture of olives

<sup>6</sup> Zohary, M., (1973). Geobotanical Foundations of the Middle East. Stuttgart: B. Fischer Verlag. 739 pp

<sup>7</sup> Soto-Berelev, M., Fall, P.L. & Falconer, S.E (2012). A revised map of plant geographical regions of the Southern Levant. Proceedings of the Geospatial Science Research Symposium GSR2. Melbourne.

<sup>8</sup> Meteorological Data 2009-2018. Meteorological Department, Ramallah, Palestine.

<sup>9</sup> Measurements taken in the field, verification will be done using GIS application.

<sup>10</sup> <http://datazone.birdlife.org/country/palestinian-authority-territories> and <http://datazone.birdlife.org/site/results?cty=240&fam=0&gen=0>

<sup>11</sup> <http://www.keybiodiversityareas.org/site/results?reg=8&cty=240&snm=>

<sup>12</sup> Olson, D. M. and Dinerstein, E. (2002). The Global 200: Priority ecoregions for global conservation. *Annals of the Missouri Botanical Garden* 89(2): 199-224.

<sup>13</sup> Conservation International (2013). Global Biodiversity Hotspots: Mediterranean Basin. Downloaded from [http://www.conservation.org/where/priority\\_areas/hotspots/europe\\_central\\_asia/Mediterranean-Basin/Pages/default.aspx](http://www.conservation.org/where/priority_areas/hotspots/europe_central_asia/Mediterranean-Basin/Pages/default.aspx)

<sup>14</sup> WWF and IUCN (1994). Centres of Plant Diversity: a Guide and Strategy for their Conservation. Volume 1: Europe, Africa, South West Asia and the Middle East. Gland, Switzerland and Cambridge, UK: WWF and IUCN.



and vegetables and others. The traditional system of irrigated terraces is an outstanding example of technological expertise, which constitutes an integral part of the cultural landscape<sup>15</sup>.

The landscapes at Al Makhrou Valley mainly the series of hills' formations, terraces (natural and man-made) and the valley that flows between the hills of each side, and the related human interventions have created the abundance of diverse habitats along the valley including the abundant agricultural lands (fallow lands), the olive groves that their owners still take care of, the batha – garrigue associations with fairly new succession of wild plant cover, the maquis Mediterranean forest with developed succession of vegetation cover, in addition to the planted areas with mainly pine and cypress trees. (See Table 3.1, Annex 3.1 and Photos 3.1, 3.2, 3.3).



**Photos 3.1, 3.2, 3.3: Landscapes of AL Makhrou Valley**

**Table 3.1: Ecosystem field sheet**

<b>1. The studied site Name</b>	Al Makhrou Valley
<b>2. The valley Eco-region</b>	Mediterranean Region (Mountainous Zone Environment) Central Highlands Range of the West Bank Region Series of hills and a valley that flows from Beit Jala city enclaving Battir villages towards Husan village
<b>3. The valley plant territory geo-element</b>	Mediterranean plant geo-element
<b>4. The valley typology</b>	A mix between; natural maquis forest and a man-made coniferous forest It is a Mediterranean landscape composed of different interacting vegetation patches. Pine and oak ecosystems form contiguous patches within this landscape, in pure stands, or as mixed pine–oak ecosystems. AL Makhrou landscape typically

<sup>15</sup> MoTA (Ministry of Tourism and Antiquities), 2013. Palestine, Land of Olives and Vines Cultural Landscape of Southern Jerusalem, Battir. World Heritage Site Nomination Document. Palestinian Ministry of Tourism and Antiquities. Department of Antiquities and Cultural Heritage Palestine.



	<p>form a patch mosaic where different vegetation types are intermingled in complex patterns created by the variation in physical, biological, and anthropogenic landscape conditions. Further, the mosaics are a heterogeneous combination of both “natural” and man-made patches interleaved with one another in complex patterns that result from different edaphic conditions, topography, exposure to wind and sun, fire and other disturbances, and land-use histories.</p>
<b>5. The valley density</b>	40-93% plant density
<b>6. The valley ecosystem habitats</b>	<ul style="list-style-type: none"> <li>-Maquis forest –Sclerophyllous - Broad Leaved - Oak Forest and Maquis, <i>Quercus calliprinos</i> woodland on limestone, with <i>Quercus calliprinos</i> dominant species</li> <li>-Man-made Coniferous forest with <i>Pinus halepensis</i> dominant species</li> <li>-Garrigue/Batha forest – shrublands and grasslands</li> <li>-Agricultural land – Olive Groves</li> <li>-Fallow land –abundant land</li> <li>-The valley (5-8ms width)– elongated lowland between the hills</li> </ul>
<b>7. The Valley’s soil</b>	<p>Rendzina and White rendzina especially on the northern series of hills (oriented towards the south), in some areas with patches of Terra Rossa Terra Rossa pure in patches.</p> <p>The Rendzina series comes along with typical Terra Rossa, and under identical climatic conditions. The parent rocks of this series are soft calcareous formations of the Upper Cretaceous and Eocene, including chalks, soft limestones, marls and nari. The humiferous topsoil, which is formed in the advanced stages above the gray subsoil, is a common feature of the entire series. The light – colored Rendzina (White Rendzina) is a variety of this group that is derived chiefly from soft Senonian chalk, nari, and Cenomanian marls. This type of soil occur most commonly in the central highlands/mountain range of the West Bank region, where MKV is located and supports the growth of <i>Pinus halepensis</i>- and its plant associations. Terra Rossa is a fertile soil, on the whole. It contains fairly high proportion of silt and clay. It supports most of the native trees and shrubs, as well as many cultivated trees. It was found mainly as patches along the agriculture terraces (Zohary, M. 1962).</p>
<b>8. The Valley’s water resources</b>	<ul style="list-style-type: none"> <li>- Number of springs distributed along the valley such as Kabryano spring, Al A’mdan Spring, E’in El Hawieh, and others (to be collected from literature and surveys).</li> <li>-Water collection systems as natural and man-made rainwater harvesting systems (including cisterns and surface stone cistern)</li> </ul>
<b>9. The valley Surrounding environment</b>	<ul style="list-style-type: none"> <li>-Number of Qanateer or Castles (observed: 27 of them)</li> <li>-Cisterns (observed: 4)</li> </ul>



	<p>-Grottos (observed: 2)</p> <p>-Surrounding the valley a buffer area of agricultural lands and terraces, pieces of lands invested for eco-tourism activities such as restaurants, camping areas, etc)</p> <p>-It is surrounded with Palestinian localities such as Battir, Al Walaja, Husan villages and Beit Jala city; the largest Palestinian localities in the Western Bethlehem Area.</p> <p>-It is also surrounded by Israeli settlements such as Har Gilo from northern side and pass road 60 and Betar Illit and Hadar Betar settlements from southern western side which forms part of Gutsh Etzion settlement's bloc.</p> <p>-From an environmental and water perspective, the area west of Bethlehem including Al Makhrouf valley and the surrounding area is considered a high water production zone in relation to the lower part of the water aquifer.</p>
<b>10. Conservation programs and authority</b>	<p>-No conservation actions are taken on the ground although it is a WHS, however a management plan was set by MoTA in a participatory approach with relevant stakeholders for the site for protecting the cultural aspect and developing the site. But there is no conservation plan specific for the biodiversity of the site.</p> <p>-Both Battir village council and Beit Jala municipality are the main authorities that the area is demarcated under their jurisdiction according to the Palestinian Local Government classification. Private ownership is prevailing at site.</p> <p>-The area is located in Geopolitical area "C"; under Israel civil and security control, makes up to 61% of West Bank. No development is allowed unless a permit is taken from Israeli side.</p>
<b>11. The valley threats</b>	<p>There are several reasons for the deterioration of the valley, in general, performing pressure on the vegetation cover in this area, in particular, the following:</p> <p>(1)population growth and pressure, where new construction activities and restoration activities were noticed, (2) human interference where new soil is brought to the valley for the newly built terraces, in addition to replacing natural areas with agricultural lands, (3) the small fires (especially during olives' harvesting season), (4) stopping farming practices in certain areas along MKV, hence there are few segetal plants, (5) garbage and litter disposal, (6) ruderal plants are widespread along sides of the paths, (7) grazing activities were found in the valley as we found remainings of the livestock's manure and others.</p>
<b>12. The valley photos</b>	More than 100 photos
<b>13. Succession</b>	Different levels of successions in different landscape patches. In general plant succession is most prominent on the series of mountains that face the north, as the slopes of those





	<p>mountains are deeply steep, hence they face less human interference (no land uses), they have more humus, enjoys higher humidity and hence more dense vegetation cover. Some phenomenae were noticed during the field surveys regarding the presence or absence of some plant species, where the reason behind their occurrence status is not clear; as following:</p> <p>Wild thyme - <i>Majorana syriaca</i> (<i>Origanum syriacum</i>) was found in low numbers, low frequency and small populations.</p> <p>Carob tree - <i>Ceratonia siliqua</i> was found in low numbers, low frequency and specific locations</p> <p>Greek Sage - <i>Salvia fruticosa</i> was found in low numbers and very low frequency.</p> <p>Lentisk - <i>Pistacia lentiscus</i> was found growing in the valley from Beit Jala side, on a land of high elevation if compared to the land elevation suitable for the growth of this plant. Usually the Lentisk shrubs prefer lower elevations (than the place it was found growing in) and warmer climates. However, the area where the shrub was found growing in abundantly is almost 800 meters above sea level but still the Lentisk grows there!</p> <p>Officinal Storax - <i>Styrax officinalis</i> was found in few places mainly in (T 9 and T10).</p> <p><i>Phragmites australis</i>, <i>Arundo donax</i> was not found at all although there are some places along the valley where water is collected and springs are found!</p> <p><i>Cyperus rotundus</i> and <i>Juncus acutus</i> were also not found while it was expected to find them in the valley especially near springs, and humid areas.</p>
<p><b>14. notes</b></p>	<p>- <i>Quercus calliprinos</i> forest of high nature conservation value in the Mediterranean region. Sclerophyllous oak forests are an important ecosystem type of the natural vegetation in the Mediterranean region. As a part of the mosaic-like landscape, old-growth oak forests, in particular, provide a wide range of ecosystem functions and services.</p> <p>The site supports different micro-environments that support the growth of diverse plant species of different life forms and distribution at the site</p>
<p><b>15. General plant cover observed during the exploration visit to the Valley's ecosystem</b></p>	<p><i>Plant species that were identified during the exploration visit are listed in Annex 3.1- Plant species identified at Al Makbrour Valley till date of the report.</i></p>

During the field surveys and while studying the targeted transects along the valley, the habitats of the valley were identified. The Valley encompasses diverse habitats that supports diverse flora, fauna and avi-fauna species. The habitats of the valley are highly affected with the different human interventions at the valley. As it is clear that the valley

used to be cultivated and, in some areas, cultivation is still practiced by locals; mainly those inhabiting the Palestinian localities in proximity; but mainly Battir village and Beit Jala city. The man-made terraces, the olives' cultivations, the cisterns and the 'Manateer' (watchtowers for crops' harvest storage) are main human elements distributed all over the valley. However, a major part of the valley is not cultivated anymore, number of places are totally abundant and neglected and hence the major part of the valley is a mixture feature of both natural and man-made components (see Tables 3.4).

**Of the main habitats that were surveyed are the following:**

1. Natural Oak forest: Sclerophyllous Broad Leaved Oak Forest and Maquis. This habitat is dominated with *Quercus calliprinos* Oak tree that supports the growth of diverse and dense batha/garrigue plant associations of mainly *Sarcopoterium spinosum*, *Cistus spp.*, *Calicotome villosa*, and *Coridothymus capitatus*. This habitat supports the growth of diverse wild Mediterranean trees such as *Rhamnus lycioides*, *Crataegus aronia*, *Pistacia Palaestina*, and the reseeded of *Pinus halepensis*, and *Pinus pinea*, in addition to diverse shrub and herbaceous species such as *Teucrium divaricatum*, *Teucrium capitatum*, *Fumana arabica*, *Andropogon distachyos* and many others.
2. Mixed natural oak and olive groves: This habitat is dominated with both oak and olive trees. The habitat support the growth of number of trees such as *Arbutus andrachne*, *Pistacia Palaestina*, *Styrax officinalis* and number of shrubs and herbaceous species such as *Pistacia lentiscus*, *Phlomis viscosa*, *Calicotome villosa*, *Cyclamen persicum*, *Smilax aspera*, and many others.
3. Man-made planted coniferous woodland: This habitat is dominant with *Pinus halepensis* cultivated tree and its reseeded plants. This habitat does not support diverse plants but mainly scattered herbaceous species especially at the sides of the habitat where new habitats starts to emerge.
4. Batha and Garrigue habitat: This habitat support the growth of shrub/subshrubs and herbaceous species. Of the main species are *Phlomis viscoa*, *Cistus spp.*, *sarcopoterium spinosum*, *coridothymus capitatus*, *Calicotome villosa*, *Bellis sylvestris*, *Teucrium creticum*, and many others.
5. Fallow lands and olive groves: This habitat is mainly located at the flat lowland valley, where there are wide spread olive groves either cultivated or still taken care of by its owners as those groves are plowed lands or groves that are cultivated and left alone for one or two seasons only, or groves that were cultivated but neglected and only visited for harvesting and here the fallow land appear under or on the sides of the olive grove land. The plant associations in this habitat are *Asparagus aphyllus*, *Andropogon distachyos*, *Calicotome villosa*, *Carlina spp.*,

- Arum Palaestinum*, *Malva parviflora* and many *graminae spp.* and *papilionaceae spp.* (to be classified in spring season).
6. Mixed oak and Pine forest supporting batha association, which supports diverse types of plants such as *Pistacia palaestina*, *Rhamnus Lycoides*, *Crataegus aronia*, *Teucrium capitatum*, *Thymus spicata*, *Thymbra spicata*, *Leontodon tuberosus*, and others.
  7. The trench of the lowland valley (the deepest point in the valley): This trench is 5-8 meters in width and it supports the growth of all plant forms including trees, shrubs and herbaceous species. Of main plants are *Pistacia palaestina*, *Quercus calliprinos*, *Sarcopoterium spinosum*, *Calicotome villosa*, *cistus spp.*, *Salvia indica*, *Daucus carota*, *Phagnalon rupestre*, *Dittrichia viscosa* and many others (see photos 3.4 – 3.9) and Table 3.4.



**Photos 3.4, 3.5, 3.6: Diverse habitats at AL Makhroul Valley; examples - Coniferous man-made woodland, batha-garrigue association, the valley trench respectively.**



**Photos 3.7, 3.8, 3.9: continued – habitats at Al Makhroul Valley; examples – olive groves, mixed oak forest and olive groves, mixed oak and pine forest and batha association respectively.**



It was also noticed that there are many micro-environments that support the growth of specific plant species within the different habitats. This is mainly obvious on terraces (natural and man-made), near the paths, near water collections and on Heaps of small rocks. For example, of the lithophyte species that grow abundantly in the valley are *Cyclamen persicum*, *Umbilicus intermedius*, *Arisarum vulgare*, *Chiladenus iphionoides* (*varthemia*), *Ajuga chamaepitys*, *Eremostachys laciniata* and others which are mainly geophytes. Near the paths and water collection sites there were diverse plants growing such as *Sinapis arvensis*, *Malva parviflora*, *Foeniculum vulgare*, *Nasturtium officinale*, *Verbascum sinuatum*, *Ferula communis* and many others. And there are number of climbing plant species including *Smilax aspera*, *Clematis cirrhosa*, *Clematis flammula*, *Ionicera etrusca*, (see photos 3.10-3.13, Tables 3.5)



*Eremostachys laciniata* - صوفية



*Smilax aspera* - عليق



*Arum Palaestinum* - لوف  
الفلستيني



*Umbilicus intermedius* -  
مخلدة

**Photos 3.10, 3.11, 3.12, 3.13: Lithophytes and climbers at Al Makhrou Valley**

## 3.2 The Results of the Plant Cover Inventory (Vascular Plants):

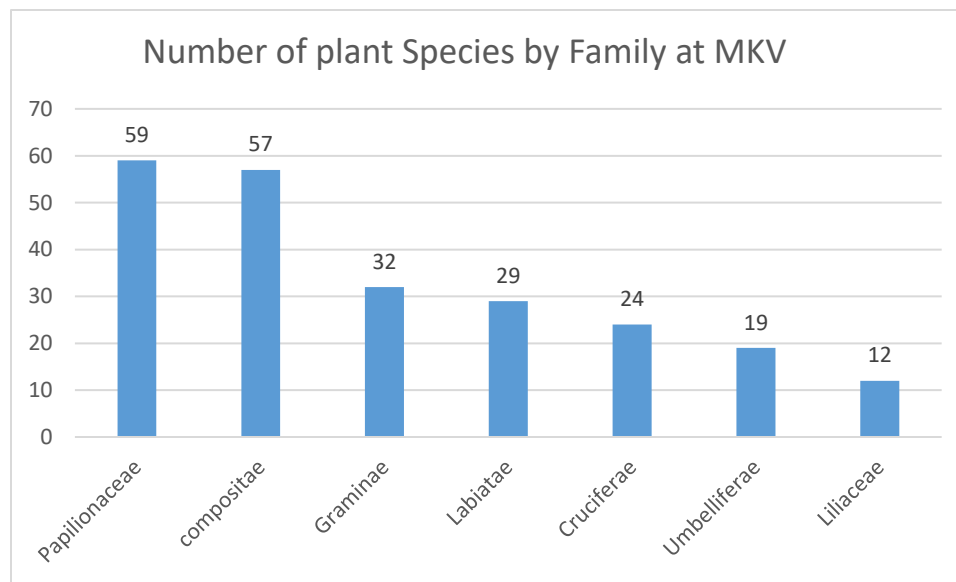
### 3.2.1 Introduction

A total of 417 vascular plant species were recorded of the flora survey at MKV (AL Mkahour Valley and hills behind Battir towards Husan village) during the report period. This number includes also the species that grow in Battir village itself except ten species that were found in Battir village alone (see Annex 3.3). This number of plant species forms almost 20% of total plant species growing in the West Bank region and Gaza Strip (which is estimated at 2076 plant species<sup>16</sup>). The area clearly hosts high number of vascular

<sup>16</sup> Ghattas R., 2008. Plant Biodiversity in the Palestinian Territory. *This Week in Palestine*. 118, 22-26. And ARIJ 2015. Status Of Environment In Opt 2015 (But Actually Published In 2016) <http://www.arij.org/latest-news/779-the-status-of-env-2015-2016.html>

plants; as the results of the diverse habitats, which forms a supporting environment for the growth of diverse plant species. The valley supports the growth of 63 plant families; most dominantly are Compositae, Papilionaceae, Labiatae, Graminae and Cruciferaceae (see Figure 3.1).

The total number of tree species surveyed at the valley is 17 trees, while the valley encompasses 47 shrubs and sub-shrubs, 2 aquatic plants, and 351 herbaceous plant species.



**Figure 3.1: Number of plant species by family surveyed at Al Makhroul Valley**

Of the dominant tree species growing at MKV are Oak trees *Quercus calliprinos*, Aleppo Pine trees *Pinus halepensis*, and Olive trees *Olea europea*. Other tree species were identified in the area including Pistachio trees *Pistacia palaestina*, Strawberry trees *Arbutus andrachne*, Carob trees *Ceratonia siliqua*, Stone Pine trees *Pinus pinea*, Cypress trees *Cupressus sempervirens*, Hawthorn Azarole trees *Crataegus aronia*, snowbell bush trees *Styrax officinalis*, Syrian Pear *Pyrus Syriaca*, Sumaq tree *Rhus coriaria* and others. Three main dominant trees were found growing at the valley; Pine, Olive and Oak trees. The pine trees are mainly cultivated trees (some reseeding is taking place) of an estimated age that ranges between 20 and 80 years old, while the olive trees which are also cultivated (some reseeding is taking place) of an estimated age that ranges between 2 to 100 years old. The oak trees which are all wild natural trees were found of an estimated age between 5 to 200 years (reseeding is taking place). The old oak were mainly found on the eastern hills of Al Makhroul valley from Beit Jala side, mainly on the northern side of T2. The old pine trees were mainly found beneath T11 and opposite T4, near Abu Saliba house. It is worth noting that two plants of *Pinus Pinea* were found opposite T7, were their age was estimated to be between 70-80 years.



Regarding the main shrub species growing at MKV are Rock rose *Cistus creticus*, *Cistus salvifolius*, Headed Thyme *coridothymus capitatus*, Spiny Broom *Calicotome villosa*, Prickly Burnet *sarcopoterium spinosum*, Hedge Germander *Teurcium divaricatum*, Cat Thyme Germander *Teucrium capitatum*, Shrubby Jerusalem Sage *Phlomis viscosa*, Mediterranean thyme *Thymbra spicata* and others. Of the three most dominant shrubs found growing at MKV are Rock rose, Prickly burnet, Spiny broom and Headed thyme.

Regarding the main herbaceous species are Persian Cyclamen *Cyclamen persicum*, Arabian Cistus *Fumana arabica*, Rough Binweed *Smilax aspera*, Spanish Carline Thistle *Carlina Hispanica*, Early virgin's-bower *Clematis Cirrhosa* and many others (Photos 3.9-3.14). The whole list of vascular plant species found during surveys at Al Makhrou Valley including the natural area circulating Battir Village is documented in Annex 3.1.



*Quercus calliprinos* - بلوط



*Pinus halepensis* - صنوبر الشائع



*Arbutus andrachne* - قيقب او القطلب

**Photos 3.9, 3.10, 3.11: Dominant trees at Al Makhrou valley during autumn and winter 018/2019**





*Bellis sylvestris* – حنونة البور  
*Gagea commutate* – زهرة نجمة بيت لحم  
*Cyclamen Persicum* – عصا الراعي او زعموط  
*Leontodon tuberosus* (Thrinicia tuberosa) – كتيمة



*Trifolium clypeatum*- برسيم ترسي ابيض  
*Calicotome villosa* - قندول  
*Cistus salviifolius* – لبيد ابيض  
*Clematis cirrhosa* – حبل المسك

**Photos 3.12, 3.13, 3.14: Dominant perennial/annuals and shrubs at Al Makhroul Valley during autumn and winter 2018/2019**

The valley and Battir village supports that growth of large number of rare species that are distributed along the valley. It was found 34 rare and very rare plant species where 14 are very rare species at local level (forming 3.6% of total number of plant species growing on site) and 45 LC species, and 1 NT (Near Threstened) species at global level according to IUCN Red list. The rare species are mainly found among 8 families of which are orchidaceae, polygonaceae, solanaceae, verbenaceae, and violaceae. It was also found that the valley supports the growth of 26 endemic species; mostly endemic to Palestine and Syria, which are all of high conservation value. Five of them are rare/very rare species and three species are endemic only to Palestine such as *Nonea philistaea*, *Onopordum carduiforme* and *Reseda alopecuros*. Hence they are of high conservation value as they are also threatened species (See Table 3.2, Photo 3.15 and Annex 3.1).

It is worth noting that during the surveys PCC team noticed number of species that are recorded as common or frequently found species however they are rare in the study area. Rare species in the study area forms 34 plant species (see Annex 3.1).

The wild relatives that are growing at MKV are also of high conservation value such as wild relatives of wheat (*Ageilop spp.*), lettuce (*Lactuca spp.*), pear (*Pyrus syriaca*), green Pistacio (*Pistacia palaestina (terebinthus)*), barley (*Hordeum spontaneum*), fennel (*Foeniculum vulgare*), thyme (*Majorana syriaca*), cauliflower (*Brassica nigra*), fenugreek (*Trigonella foenum-graecum*), peas (*Pisum sativum*), vetch (*Vicia sativa*) and others.





**Crocus heymalis** -  
زعفران

**Colchicum hierosolymitanum** -  
الودع المقدس

**Moraea sisyrinchium** -  
سوسن الخنازير

**Vagaria parviflora**  
رجل الحمامة البيضاء-

**Orchis galilaea**  
سحلب الجليل -

**Photo 3.15, 3.16, 3.17: Selected Rare Species at study area MKV**

**Table 3.2: Endemic species found at MKV and their abundance**

Family	Species name	Endemism	Abundance at local level	Abundance (IUCN Red List)	Occurrence
Amaryllidaceae	<i>Vagaria parviflora</i> ( <i>Pancreatium parviflora</i> )	ES	F	LC	Path after T20 (along the stairs)
Araceae	<i>Biarum angustatum</i>	ET	F (LD)	-	T12
Boraginaceae	<i>Alkanna strigosa</i>	ET	C	-	T22
	<i>Echium judaeum</i>	ES	CC	-	T12, T15, T16, T27
	<i>Nonea philistaea</i>	EP	C(LD)	-	Path behind Battir Village towards T26
Campanulaceae	<i>Campanula hierosolymitana</i>	EL	C(LD)	-	Path Below T14
	<i>Campanula stellaris</i>	EL	C(LD)	-	Path Below T14
Colchicaceae	<i>Colchium hierosolymitanum</i>	ET	R	-	Path towards T17 on left side of the path there are high rocks with micro-environments for lithophyte plants
Compositae	<i>Anthemis bornmuelleri</i> ( <i>Anthemis galilaea</i> )	ES	CC	-	On the way down hill from Beit Jala side
	<i>Calendula palaestina</i>	EL	C(LD)	-	In agricultural Lands of Battir Village above rail way

	<i>Centaurea cyanoides</i>	ES	C(LD)	-	Path between T26 and T27
	<i>Onopordum carduiforme</i> ( <i>Onopordum telavivense</i> )	EP	RP	-	T26
Iridaceae	<i>Crocus byemalis</i>	ES	C	LC	T29, T30, on the path towards T17 on the rock side of the path
Labiatae	<i>Salvia hierosolymitana</i>	ES	C (LD)	-	T32
	<i>Salvia judaica</i>	ES	C	-	Path between T28 and T29
	<i>Salvia pinnata</i>	ET	C (LD)	-	Path between T28 and T29
Liliaceae	<i>Bellevalia eigii</i>	EE	F	-	T4 and T8
	<i>Bellevalia flexuosa</i>	ES	CC	-	T2, T8 and on path above T19
Papilionaceae	<i>Trifolium eriosphaerum</i>	ES	C	-	T12, T13, T14
	<i>Trifolium erubescens</i>	EL	C(LD)	-	path before T26
	<i>Trifolium scutatum</i>	ET	R	-	T32
	<i>Trigonella berythea</i>	ET	F	-	On path towards T22
Resedaceae	<i>Reseda alopecuros</i>	EP	R	-	After T20 towards Battir village
Scrophulariaceae	<i>Scrophularia hierochuntina</i>	ES	RP	-	T26
	<i>Scrophularia rubicaulis</i>	ES	F	-	On the way towards T26
Umbelliferae	<i>Chaetosciadium trichospermum</i>	ES	CC	-	T8 and T9

- Ad1 (abundance at local level, according to Checklist and Ecological Database<sup>17</sup>): CC=Very common species, C=Common species, F=Frequent species, R=somewhat rare species, NR= Not Registered in the study area before but found during surveys, (LD)= species with limited distribution
- Abd2 (abundance at global level, according to IUCN RED List<sup>18</sup>): LC= Least Concern, VU= Vulnerable - decreasing
- End= Endemism, EP=Endemic to Palestine, ET=Endemic to Palestine and Turkey, EL=Endemic to Palestine and Lebanon, ES=Endemic to Palestine and Syria

<sup>17</sup> Ori F., Uzi P., David H., Avi S. (1999). Checklist and Ecological Data-Base of the Flora of Israel and its Surroundings. Hebrew University, Jerusalem.

<sup>18</sup> <http://www.iucnredlist.org/search>

### 3.2.2 Results of the Braun and Blanquet (B&B) Survey done at Al Makhrou Valley

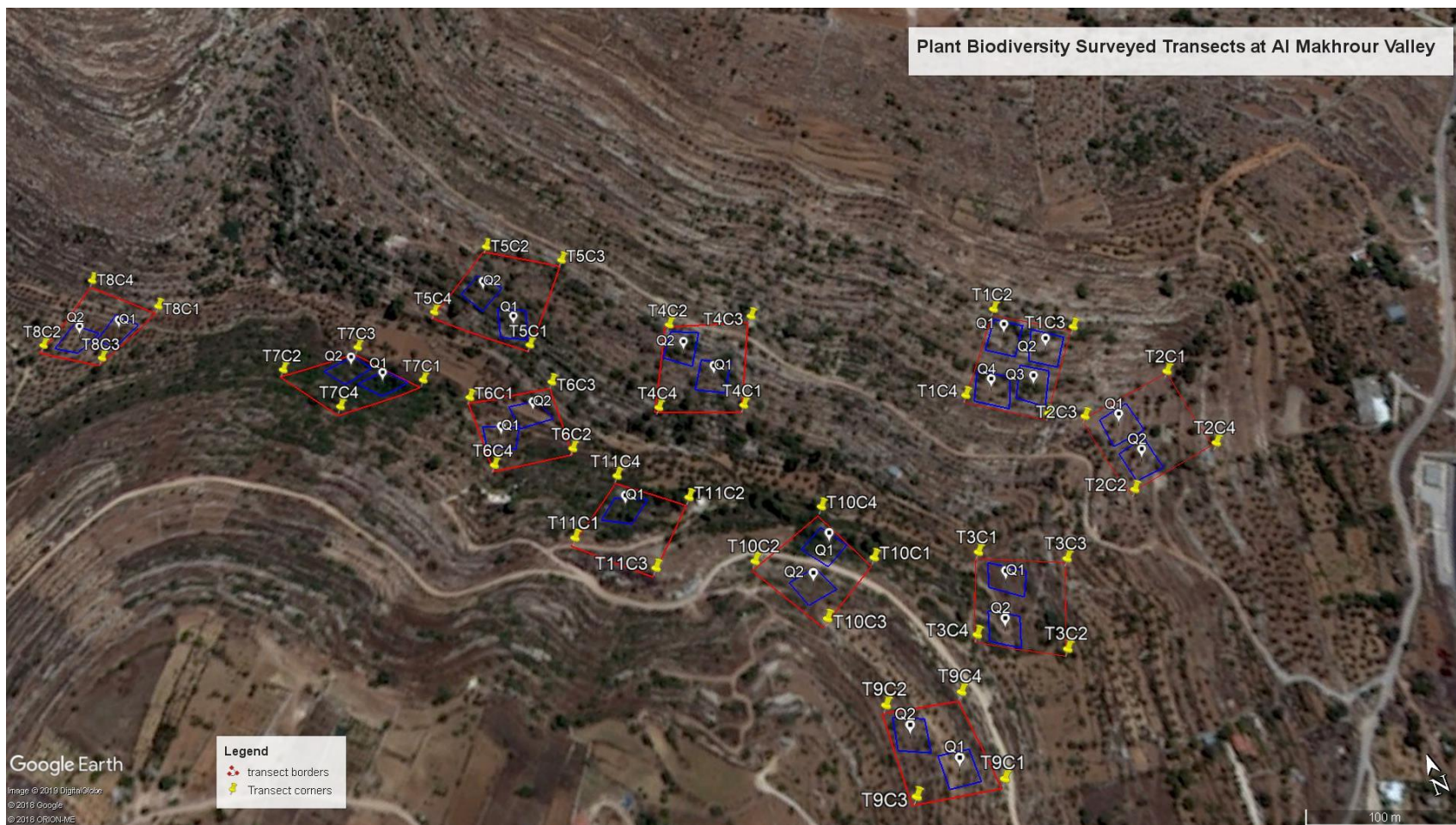
Investigating the results of the studied 33 transects, it appears that transects number T10, T26, T12 and T28 are the most diverse in plants transects; followed by T9, T11, T22 and T29 as they are mainly mixed habitats of natural oak forest and olive groves habitats (almost all mature succession of natural habitats) that encompass high humidity, high humus matter and fertile healthy soils, appropriate rock formations and distribution, elevation and solar radiation that affect positively the survival and reproduction of living organisms. T10 and T26 supports the growth of almost 66 and 65 different plant species, while T12 and T28 supports the growth of almost 61 plant species respectively and so on. This data reflects what was studied and surveys during the report period (see Table 3.3).

*Table 3.3: Total number of plant species growing at each studied transect during the report period*

Transect no.	Number of plants species	Transect no.	Number of Plant species
T1	28	T17	47
T2	42	T18	10
T3	34	T19	28
T4	36	T20	39
T5	28	T21	24
T6	42	T22	56
T7	29	T23	33
T8	34	T24	21
T9	59	T25	14
T10	66	T26	65
T11	56	T27	36
T12	61	T28	61
T13	39	T29	55
T14	35	T30	49
T15	52	T31	32
T16	30	T32	37
T33	31		

The following section shows detailed maps for the distribution of studied transects and their quadrats and table 3.4. below presents the estimated cover according to Braun and Blanquet scale at the different surveyed transects. (See Table 3.4). Coordinates of studied transects are summarized in Annex 3.2. For details regarding each plant species and its distribution over the different studied transect see Annex 3.3.





**Map 3.1: Presents the distribution and geo-location of the studied transects T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, and T11 and their quadrats at MKV- (Beit Jala city from eastern side).**

**Table 3.4: List of species and their estimated cover by surveyed transects along the Al-Makhrouf Valley.**

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
Soil type	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
Habitat	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
Plant cover	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
Elevations above sea level	793m	789m	790m	776m	781	771	736m	740m
Slope	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
Species	<b>Braun and Blanquet scale</b>							
<i>Adonis microcarpa</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Allium neapolitanum</i>	-	+( <b>&lt;1%</b> )	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Anacamptis papilionacea</i> ( <i>Orchis papilionacea</i> )	-	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Andropogon distachyos</i>	<b>2(10%)</b>	<b>2(10%)</b>	<b>2(10%)</b>	<b>2(10%)</b>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anagallis arvensis</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Anemone coronaria</i>	+( <b>&lt;1%</b> )	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Anthemis pseudocotula</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Arum Palaestinum</i>	-	-	-	-	1(5%)	+(<1%)	-	-
<i>Asparagus aphyllus</i>	+(<1%)	1(5%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Asphodeline lutea</i>	-	+(<1%)	-	-	+(<1%)	-	-	-
<i>Bellis sylvestris</i>	+(<1%)	-	-	+(<1%)	-	+(<1%)	+(<1%)	-
<i>Bellevalia flexuosa</i>	-	-	-	-	-	+(<1%)	-	-
<i>Calicotome villosa</i>	+(<1%)	+(<1%)	2(5%)	+(<1%)	+(<1%)	-	+(<1%)	2(10%)
<i>Calendula arvensis</i>	-	-	-	-	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Carlina hispanica</i>	+(<1%)	1(5%)	-	+(<1%)	-	-	-	-



Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Carlina curretum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-	-	-	-
<i>Chiliadenus iphionoides</i>	-	-	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Cistus salvifolius</i>	<b>2(15%)</b>	<b>2(10%)</b>	<b>3(25%)</b>	<b>3(27%)</b>	-	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	<b>2(15%)</b>
<i>Coridothymus capitatus</i>	<b>2(10%)</b>	<b>3(25%)</b>	<b>3(25%)</b>	-	-	-	-	-
<i>Crataegus aronia</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Cyclamen persicum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	<b>1(5%)</b>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	<b>1(5%)</b>	+( <b>&lt;1%</b> )
<i>Daucus carota</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Dittrichia viscosa</i>	-	-	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Echinops polyceras</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	-

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest (startup of succession) with bath and Garrigue association	maquis forest (startup of succession) with bath and Garrigue association	maquis forest (startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Erodium ciconium</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Eryngium cretium</i>	-	-	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Helianthemum ventosum</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-	-	-	-	-
<i>Hordeum bulbosum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Hordeum spontaneum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Fumana Arabica</i>	+( <b>&lt;1%</b> )	1( <b>5%</b> )	-	1( <b>5%</b> )	-	-	-	-
<i>Geranium robertianum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Malva parviflora</i>	-	-	-	-	1( <b>5%</b> )	-	-	-
<i>Medicago monspeliaca</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Thymbra spicata</i>	1(5%)	+(<1%)	2(10%)	+(<1%)	-	+(<1%)	-	+(<1%)
<i>Notobasis syriaca</i>	-	-	-	-	2(10%)	-	-	-
<i>Olea europaea</i>	+(<1%)	-	-	+(<1%)	+(<1%)	4(70%)	+(<1%)	-
<i>Phagnalon rupestre</i>	+(<1%)	+(<1%)	-	-	-	-	-	-
<i>Pinus halepensis</i>	+(<1%)	-	-	+(<1%)	1(5%)	-	-	-
<i>Pistacia lentiscus</i>	-	-	-	+(<1%)	-	-	-	-
<i>Pistacia palaestina</i>	-	-	-	-	-	2(20%)	+(<1%)	+(<1%)
<i>Phalaris aquatica (tuberosa)</i>	-	-	-	-	-	-	+(<1%)	+(<1%)
<i>Plantago afra</i>	-	-	-	-	-	+(<1%)	-	+(<1%)



Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Poa bulbosa</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Podonosma orientalis</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Picnomon acarna</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Quercus calliprinos</i>	<b>2(10%)</b>	<b>2(10%)</b>	<b>2(10%)</b>	<b>2(10%)</b>	<b>3(35%)</b>	<b>1(5%)</b>	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>
<i>Rhamnus lycioides</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Rubia tenuifolia</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Sarcopoterium spinosum</i>	<b>3(30%)</b>	<b>1(5%)</b>	+( <b>&lt;1%</b> )	<b>3(30%)</b>	<b>2(25%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>3(&lt;50%)</b>
<i>Scandix verna (iberica)</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Securigera securidaca</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Sedum sedifforme</i>	-	-	+(<1%)	-	-	-	-	-
<i>Silybum marianum</i>	-	-	-	-	-	-	+(<1%)	-
<i>Smilax aspera</i>	-	-	-	-	+(<1%)	-	+(<1%)	+(<1%)
<i>Sonchus oleraceus</i>	-	-	-	-	-	+(<1%)	+(<1%)	-
<i>Teucrium capitatum</i>	-	-	-	-	1(5%)	+(<1%)	-	-
<i>Teucrium creticum</i>	+(<1%)	-	-	1(5%)	-	-	-	-
<i>Teucrium divaricatum</i>	1(5%)	2(10%)	+(<1%)	-	2(5%)	-	+(<1%)	-
<i>Tetragonolobus palaestinus</i>	+(<1%)	-	+(<1%)	-	+(<1%)	-	-	+(<1%)
<i>Trigonella arabica</i>	+(<1%)	-	-	+(<1%)	-	-	-	-

Transect	Transect 1 (T1) Northern hill from Beit Jala side – path 1				Transect 2 (T2) Beit Jala side –path 1		Transect 3 (T3) Lowland Valley between series of hills (northern, southern and eastern hills) from Beit Jala side – path 1	
	Q1	Q2	Q3	Q4	Q1	Q2	Q1	Q2
<b>Soil type</b>	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Rendzina soil with accumulation of Humus	Alluvial soil, lots of humus and remaining of compost	Alluvial soil	Rendzina soil	Rendzina soil
<b>Habitat</b>	maquis oak forest (startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	maquis forest(startup of succession) with bath and Garrigue association	Maquis oak forest, fallow land and olive groves	Olive groves and fallow land, lots of humus	Bath and garrigue association, fallow land and olive groves	Bath and garrigue association, fallow land and olives groves
<b>Plant cover</b>	65% plant cover	60% plant cover	60% plant cover	65% plant cover	70% plant cover	75% plant cover	80% plant cover	80% plant cover
<b>Elevations above sea level</b>	793m	789m	790m	776m	781	771	736m	740m
<b>Slope</b>	moderate steep	moderate steep	moderate steep	moderate steep	Steep	steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>							
<i>Umbilicus intermedius</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Urtica urens</i>	-	-	+( <b>&lt;1%</b> )	-	<b>2(15%)</b>	+( <b>&lt;1%</b> )	-	-
<i>Vicia Palaestina</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Verbena supina</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-	-



Transect	Transect 4 (T4) – continuous series of Northern hill – path 1			Transect 5 (T5)- continuous series of Northern hill towards Battir – path 1		Transect 6 (T6) – valley of olive groves and fallow land – the valley below the northern hills of T5 – path 1	
	Q1	Q2	Q3	Q1	Q2	Q1	Q2
<b>Soil type</b>	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown rendzina	Brown rendzina
<b>Habitat</b>	maquis forest –startup succession since 25years	maquis forest – startup succession since 25years	maquis forest–startup succession since 25years	maquis forest–startup succession since 25years	maquis forest– startup succession since 25years	Fallow land and olive groves– lots of segetal species	The trench of the valley
<b>Plant cover</b>	80% plant cover	80% plant cover	80% plant cover	80% plant cover	80% plant cover	40% plant cover	80% plant cover
<b>Elevations above sea level</b>	753m	760m	748m	733m	737m	712 m	710
<b>Slope</b>	Moderate steep	Moderate steep	Moderate steep	Very Steep	Very steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>						
<i>Allium orientale</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Anacamptis papilionacea</i>	-	-	-	+( $<1\%$ )	-	-	-
<i>Andropogon distachyos</i>	+( $<1\%$ )	-	-	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-
<i>Anemone coronaria</i>	+( $<1\%$ )	-	-	-	+( $<1\%$ )	-	-
<i>Arbutus andrachne</i>	-	-	-	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Asparagus aphyllus</i>	+( $<1\%$ )	1( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )	-	+( $<1\%$ )
<i>Asphodelus ramosus (microcarpus)</i>	+( $<1\%$ )	-	-	+( $<1\%$ )	-	-	-
<i>Asphodeline lutea</i>	-	+( $<1\%$ )	-	-	-	-	-
<i>Bellis sylvestris</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Bromus tectorum</i>	+( $<1\%$ )	-	+( $<1\%$ )	-	+( $<1\%$ )	-	-
<i>Calicotome villosa</i>	1(5%)	1(5%)	1(5%)	2(15%)	1(5%)	-	1(5%)
<i>Calendula arvensis</i>	-	-	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Carlina curretum</i>	-	-	+( $<1\%$ )	-	-	-	-

Transect	Transect 4 (T4) – continuous series of Northern hill – path 1			Transect 5 (T5)- continuous series of Northern hill towards Battir – path 1		Transect 6 (T6) – valley of olive groves and fallow land – the valley below the northern hills of T5 – path 1	
	Q1	Q2	Q3	Q1	Q2	Q1	Q2
<b>Soil type</b>	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown rendzina	Brown rendzina
<b>Habitat</b>	maquis forest –startup succession since 25years	maquis forest – startup succession since 25years	maquis forest–startup succession since 25years	maquis forest–startup succession since 25years	maquis forest– startup succession since 25years	Fallow land and olive groves– lots of segetal species	The trench of the valley
<b>Plant cover</b>	80% plant cover	80% plant cover	80% plant cover	80% plant cover	80% plant cover	40% plant cover	80% plant cover
<b>Elevations above sea level</b>	753m	760m	748m	733m	737m	712 m	710
<b>Slope</b>	Moderate steep	Moderate steep	Moderate steep	Very Steep	Very steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>						
<i>Carthamus tenuis</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Ceratonia siliqua</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Cistus salvifolius</i>	3(25%)	3(25%)	3(25%)	3(25%)	3(30%)	1(5%)	1(5%)
<i>Chiliadenus iphionoides</i>	-	-	-	+( $1<\%$ )	-	-	-
<i>Coridothymus capitatus</i>	3(25%)	3(25%)	3(30%)	3(25%)	3(30%)	-	1(5%)
<i>Cyclamen persicum</i>	1(5%)	2(10%)	1(5%)	+( $<1\%$ )	-	+( $<1\%$ )	+( $<1\%$ )
<i>Cupressus sempervirens</i>	-	-	-	-	+( $<1\%$ )	-	-
<i>Daucus carota</i>	-	-	-	-	-	-	+( $1<\%$ )
<i>Erodium gruinum</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Ephedra aphylla</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Erucaria hispanica</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Eryngium cretium</i>	-	-	+( $<1\%$ )	-	-	-	-
<i>Fumana arabica</i>	1(5%)	2(7%)	1(5%)	1(5%)	+( $<1\%$ )	-	-
<i>Galium murale</i>	-	-	-	-	-	-	+( $<1\%$ )

Transect	Transect 4 (T4) – continuous series of Northern hill – path 1			Transect 5 (T5)- continuous series of Northern hill towards Battir – path 1		Transect 6 (T6) – valley of olive groves and fallow land – the valley below the northern hills of T5 – path 1	
	Q1	Q2	Q3	Q1	Q2	Q1	Q2
<b>Soil type</b>	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown rendzina	Brown rendzina
<b>Habitat</b>	maquis forest –startup succession since 25years	maquis forest – startup succession since 25years	maquis forest–startup succession since 25years	maquis forest–startup succession since 25years	maquis forest– startup succession since 25years	Fallow land and olive groves– lots of segetal species	The trench of the valley
<b>Plant cover</b>	80% plant cover	80% plant cover	80% plant cover	80% plant cover	80% plant cover	40% plant cover	80% plant cover
<b>Elevations above sea level</b>	753m	760m	748m	733m	737m	712 m	710
<b>Slope</b>	Moderate steep	Moderate steep	Moderate steep	Very Steep	Very steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>						
<i>Helichrysum sanguineum</i>	+( $<1\%$ )						
<i>Helminthotheca echioides</i>	-	-	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Hirschfeldia incana</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Hordeum bulbosum</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Hordeum glaucum</i>	-	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-	-	-
<i>Lamium amplexicaule</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Lobularia arabica</i>	+( $<1\%$ )	-	-	-	-	-	-
<i>Muscari neglectum (pulchellum)</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Olea europaea</i>	-	+( $<1\%$ )	-	-	-	5(80%)	-
<i>Paronychia argentea</i>	+( $<1\%$ )	-	+( $<1\%$ )	-	+( $<1\%$ )	-	-
<i>Phagnalon rupestres</i>	+( $<1\%$ )	1(5%)	+( $<1\%$ )	-	+( $<1\%$ )	-	+( $<1\%$ )
<i>Phalaris aquatica (tuberosa)</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Phlomis viscosa</i>	-	-	-	-	-	-	1(5%)
<i>Picnoman acarna</i>	-	-	-	-	-	+( $<1\%$ )	-

Transect	Transect 4 (T4) – continuous series of Northern hill – path 1			Transect 5 (T5)- continuous series of Northern hill towards Battir – path 1		Transect 6 (T6) – valley of olive groves and fallow land – the valley below the northern hills of T5 – path 1	
	Q1	Q2	Q3	Q1	Q2	Q1	Q2
<b>Soil type</b>	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown rendzina	Brown rendzina
<b>Habitat</b>	maquis forest –startup succession since 25years	maquis forest – startup succession since 25years	maquis forest–startup succession since 25years	maquis forest–startup succession since 25years	maquis forest– startup succession since 25years	Fallow land and olive groves– lots of segetal species	The trench of the valley
<b>Plant cover</b>	80% plant cover	80% plant cover	80% plant cover	80% plant cover	80% plant cover	40% plant cover	80% plant cover
<b>Elevations above sea level</b>	753m	760m	748m	733m	737m	712 m	710
<b>Slope</b>	Moderate steep	Moderate steep	Moderate steep	Very Steep	Very steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>						
<i>Pinus halepensis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	<b>1(5%)</b>
<i>Pinus pinea</i>	-	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Pistacia lentiscus</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-	-	-	-
<i>Pistacia palaestina</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )
<i>Podonosma orientalis</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Prasium majus</i>	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-	-
<i>Pulicaria arabica</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Quercus calliprinos</i>	<b>2(10%)</b>	<b>1(5%)</b>	<b>2(10%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	-	<b>1(5%)</b>
<i>Rhamnus lycioides</i>	-	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Rubia tenuifolia</i>	-	-	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Sarcopoterium spinosum</i>	-	-	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	<b>2(10%)</b>
<i>Salvia dominica</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Salvia indica</i>	-	-	-	-	-	-	+( <b>&lt;1%</b> )



Transect	Transect 4 (T4) – continuous series of Northern hill – path 1			Transect 5 (T5)- continuous series of Northern hill towards Battir – path 1		Transect 6 (T6) – valley of olive groves and fallow land – the valley below the northern hills of T5 – path 1	
	Q1	Q2	Q3	Q1	Q2	Q1	Q2
<b>Soil type</b>	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown and light rendzina	Brown rendzina	Brown rendzina
<b>Habitat</b>	maquis forest –startup succession since 25years	maquis forest – startup succession since 25years	maquis forest–startup succession since 25years	maquis forest–startup succession since 25years	maquis forest– startup succession since 25years	Fallow land and olive groves– lots of segetal species	The trench of the valley
<b>Plant cover</b>	80% plant cover	80% plant cover	80% plant cover	80% plant cover	80% plant cover	40% plant cover	80% plant cover
<b>Elevations above sea level</b>	753m	760m	748m	733m	737m	712 m	710
<b>Slope</b>	Moderate steep	Moderate steep	Moderate steep	Very Steep	Very steep	flat	flat
<b>Species</b>	<b>Braun and Blanquet scale</b>						
<i>Senecio leucanthemifolius subsp vernalis</i>	-	-	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Silene aegyptiaca</i>	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Silybum marianum</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Smilax aspera</i>	-	-	-	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )
<i>Sisymbrium irio</i>	-	-	-	-	-	+( $<1\%$ )	-
<i>Securigera securidaca</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Thrinacia tuberosa (Leontodon tuberosus)</i>	+( $<1\%$ )	-	-	-	-	-	-
<i>Teucrium capitatum (polium)</i>	+( $<1\%$ )	1(5%)	+( $<1\%$ )	-	-	-	-
<i>Teucrium creticum</i>	-	-	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )	+( $<1\%$ )
<i>Teucrium divaricatum</i>	1(5%)	1(5%)	2(7%)	3(20%)	1(5%)	-	-
<i>Thymbra spicata</i>	1(5%)	+( $<1\%$ )	-	-	-	-	-
<i>Urtica urens</i>	-	-	-	-	-	-	+( $<1\%$ )
<i>Viola occulta</i>	+( $<1\%$ )	-	-	-	-	-	-

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhroun restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Allium orientale</i>	-	-	+(<1%)	-	-	-
<i>Amaranthus blitoides</i>	-	-	+(<1%)	+(<1%)	+(<1%)	-
<i>Anchusa aegyptiaca</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Andropogon distachyos</i>	-	+(<1%)	+(<1%)	+(<1%)	+(<1%)	1(<5%)
<i>Anthemis bebronica</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Arbutus andrachne</i>	2(7%)	2(7%)	-	-	-	-
<i>Anemone coronaria</i>	+(<1%)	+(<1%)	-	-	+(<1%)	-
<i>Andrachne telephioides</i>	-	-	-	+(<1%)	-	-
<i>Arisarum vulgare</i>	-	-	-	-	+(<1%)	2(5%)
<i>Arum Palaestinum</i>	-	-	-	-	+(<1%)	-
<i>Asparagus aphyllus</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	2(7%)

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhroure restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Asphodelus ramosus (microcarpus)</i>	-	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Asphodeline lutea</i>	-	-	-	-	-	+( $<1\%$ )
<i>Avena barbata</i>	-	-	-	-	+( $<1\%$ )	-
<i>Bellevalia flexuosa</i>	-	-	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Bellis sylvestris</i>	+( $<1\%$ )	+( $<1\%$ )	-	-	+( $<1\%$ )	1( $<5\%$ )
<i>Biscutella didyma</i>	-	-	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Brachypodium distachyon</i>	-	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Calicotome villosa</i>	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )	2( $10\%$ )	2( $5\%$ )
<i>Carlina hispanica</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )
<i>Carlina curetum</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )
<i>Capparis spinosa</i>	-	-	-	-	-	-
<i>Chaetosciadium trichospermum</i>	-	-	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhroure restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Cistus salvifolius</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	<b>1(5%)</b>	<b>1(5%)</b>	<b>3(25%)</b>	<b>2(7%)</b>
<i>Clematis cirrhosa</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Colchicum hierosolymitanum</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Coridothymus capitatus</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Crataegus aronia</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Crepis palaestina</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Cyclamen persicum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	<b>2(20%)</b>	<b>2(15%)</b>
<i>Daucus carota</i>	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Dittrichia viscosa</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Erodium gruinum</i>	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Erodium ciconium</i>	-	-	-	-	+( <b>&lt;1%</b> )	-



Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhroure restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Ephedra aphylla</i>	-	+(<1%)	-	-	-	-
<i>Helminthotheca echioides</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Helianthemum ventosum</i>	-	-	-	+(<1%)	+(<1%)	-
<i>Helichrysum sanguineum</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Herniaria glabra</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Hippocrepis unisiliquosa</i>	-	-	-	-	+(<1%)	-
<i>Fumana arabica</i>	+(<1%)	-	-	-	3(20%)	1(<5%)
<i>Fumana thymifolia</i>	-	-	-	-	1(5%)	-
<i>Lonicera etrusca</i>	+(<1%)	-	-	-	-	-
<i>Malva parviflora</i>	-	-	+(<1%)	-	+(<1%)	+(<1%)
<i>Olea europaea</i>	-	-	4(75%)	4(75%)	1(5%)	1(<5%)

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhrour restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Onobrychis caput-galli</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Ononis ornithopodioides</i>	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Osyris alba</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Oxalis pes-caprae</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Phagnalon rupestre</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Phlomis viscosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Pisum sativum</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Pinus halepensis</i>	1( <b>&lt;5%</b> )	1( <b>5%</b> )	-	-	+( <b>&lt;1%</b> )	-
<i>Pistacia lentiscus</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	-
<i>Pistacia palaestina</i>	1( <b>5%</b> )	1( <b>5%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	2( <b>7%</b> )
<i>Poa bulbosa</i>	-	-	-	+( <b>&lt;1%</b> )	-	-

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhroure restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Pulicaria arabica</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Quercus calliprinos</i>	5(75%)	5(75%)	+(<1%)	1(<5%)	2(5%)	2(7%)
<i>Ranunculus asiaticus</i>	-	-	-	-	+(<1%)	-
<i>Ridolfia segetum</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Reseda alba</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Rhamnus lycioides</i>	1(<5%)	+(<1%)	-	-	+(<1%)	1(<5%)
<i>Rubia tenuifolia</i>	-	+(<1%)	-	-	+(<1%)	+(<1%)
<i>Sarcopoterium spinosum</i>	+(<1%)	+(<1%)	+(<1%)	1(<5%)	1(5%)	1(5%)
<i>Senecio leucanthemifolius subsp. vernalis</i>	-	-	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Silybum marianum</i>	-	-	-	-	+(<1%)	+(<1%)



Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhrour restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Sinapis arvensis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Sisymbrium irio</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Sonchus oleraceus</i>	-	-	-	-	-	-
<i>Styrax officinalis</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Taraxacum cyprium</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Teucrium capitatum (polium)</i>	-	-	-	-	1( <b>&lt;5%</b> )	1( <b>&lt;5%</b> )
<i>Teucrium creticum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	-
<i>Teucrium divaricatum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	1( <b>&lt;5%</b> )	-
<i>Thrinicia tuberosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )
<i>Thymbra spicata</i>	-	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )

Transect	Transect7 (T7) – Southern hill in front of the northern hill of T5 –path 1		Transect 8 (T8) – Olive groves and fallow land towards Battir after T6 – path 1		Transect 9 (T9) – Southern Hill below AL Makhrour restaurant from Beit Jala side –path 2	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25 cm) –deep soil	Mixed soil (Dark brown Rendzina & Terra Rossa) with lots of humus (10-25cm) – deep soil	Rendzina soil	Rendzina soil	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Maquis oak forest (mature plant cover succession. The land was cultivated before 50-80 years)	Maquis oak forest (mature plant cover succession)	Olive groves and fallow land	Olive groves and fallow land	Mixed habitat of oak forest, bath association and olive groves	Mixed habitat of oak forest and olive groves
<b>Plant cover</b>	90% plants	90% plants	60% plants	60% plants	70% plants	70% plants
<b>Elevations above sea level</b>	709m	718m	712m	708m	769m	770m
<b>Slope</b>	Very steep	Very steep	Flat	Flat	Steep to shallow slope	Steep to shallow slope
<b>Species</b>						
<i>Tolpis virgata</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Trifolium purpureum</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Umbilicus intermedius</i>	-	-	-	-	1( <b>&lt;5%</b> )	1( <b>&lt;5%</b> )

Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Amaranthus blitoides</i>	-	+( $<1\%$ )	-
<i>Anchusa hybrida</i>	-	-	2(5%)
<i>Anchusa strigosa</i>	-	-	+( $<1\%$ )
<i>Anemone coronaria</i>	-	+( $<1\%$ )	+( $<1\%$ )
<i>Andropogon distachyos</i>	+( $<1\%$ )	1( $<5\%$ )	1( $<5\%$ )
<i>Arisarum vulgare</i>	-	2(5%)	-
<i>Arum palaestinum</i>	-	+( $<1\%$ )	-
<i>Asparagus aphyllus</i>	+( $<1\%$ )	2(5%)	+( $<1\%$ )
<i>Asphodelus ramosus (microcarpus)</i>	-	+( $<1\%$ )	-
<i>Asphodeline lutea</i>	-	+( $<1\%$ )	-
<i>Astragalus asterias (Astragalus cruciatus)</i>	+( $<1\%$ )	-	-
<i>Atractylis cancellata</i>	-	+( $<1\%$ )	+( $<1\%$ )
<i>Bellis sylvestris</i>	+( $<1\%$ )	+( $<5\%$ )	+( $<1\%$ )
<i>Briza maxima</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )
<i>Calicotome villosa</i>	1( $<5\%$ )	2(5%)	1( $<5\%$ )

Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Carlina hispanica</i>	+(<1%)	+(<1%)	+(<1%)
<i>Carlina curetum</i>	+(<1%)	+(<1%)	+(<1%)
<i>Capparis spinosa</i>	-	-	+(<1%)
<i>Catapodium rigidum</i>	+(<1%)	-	-
<i>Ceratonia siliqua</i>	-	-	+(<1%)
<i>Centaurea hyalolepis</i>	-	-	+(<1%)
<i>Chiliadenus iphionoides (varthemia)</i>	+(<1%)	+(<1%)	-
<i>Cistus creticum (incans)</i>	1(<5%)	2(7%)	1(5%)
<i>Cistus salvifolius</i>	1(<5%)	1(<5%)	+(<1%)
<i>Clematis cirrhosa</i>	1(<5%)	-	+(<1%)
<i>Coridothymus capitatus</i>	+(<1%)	-	1(<5%)
<i>Crataegus aronia</i>	+(<1%)	-	-
<i>Crithopsis delileana</i>	-	+(<1%)	-
<i>Cupressus sempervirens</i>	-	-	+(<1%)



Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Cyclamen persicum</i>	+(<1%)	2(15%)	1(<5%)
<i>Dittrichia viscosa</i>	+(<1%)	+(<1%)	2(5%)
<i>Ephedra aphylla</i>	+(<1%)	-	+(<1%)
<i>Erodium gruinum</i>	-	+(<1%)	-
<i>Erodium ciconium</i>	-	+(<1%)	+(<1%)
<i>Filago pyramidata</i>	+(<1%)	-	-
<i>Foeniculum vulgare</i>	+(<1%)	+(<1%)	-
<i>Fumana arabica</i>	+(<1%)	1(5%)	+(<1%)
<i>Fumana thymifolia</i>	+(<1%)	-	+(<1%)
<i>Galium murale</i>	-	-	+(<1%)
<i>Geropogon hybridus</i>	+(<1%)	-	-
<i>Helichrysum sanguineum</i>	+(<1%)	-	+(<1%)
<i>Hirschfeldia incana</i>	+(<1%)	-	-
<i>Lamium amplexicaule</i>	+(<1%)	+(<1%)	-
<i>Lonicera etrusca</i>	-	-	2(5%)

Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	-	-	1(<5%)
<i>Malva parviflora</i>	-	+(<1%)	+(<1%)
<i>Medicago polymorpha</i>	-	+(<1%)	-
<i>Nasturtium officinale</i>	+(<1%)	+(<1%)	-
<i>Olea europaea</i>	1(<5%)	2(5%)	+(<1%)
<i>Onobrychis caput-galli</i>	-	-	+(<1%)
<i>Ononis sicula</i>	-	-	+(<1%)
<i>Oxalis pes-caprae</i>	-	-	+(<1%)
<i>Phagnalon rupestre</i>	-	-	+(<1%)
<i>Pbalaris paradoxa</i>	-	-	+(<1%)
<i>Phlomis viscosa</i>	-	-	+(<1%)
<i>Picris altissima</i>	-	+(<1%)	-
<i>Pinus halepensis</i>	1(<5%)	-	1(<5%)

Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Pinus Pinea</i>	-	-	+( <b>&lt;1%</b> )
<i>Pistacia palaestina</i>	+( <b>&lt;1%</b> )	2( <b>7%</b> )	1( <b>5%</b> )
<i>Poa bulbosa</i>	-	-	+( <b>&lt;1%</b> )
<i>Polygonum argyrocoleum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Quercus calliprinos</i>	2 ( <b>25%</b> )	2( <b>25%</b> )	2( <b>5%</b> )
<i>Ranunculus asiaticus</i>	-	+( <b>&lt;1%</b> )	-
<i>Reseda alba</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Rhamnus lycioides</i>	1( <b>&lt;5%</b> )	1( <b>&lt;5%</b> )	-
<i>Rhus coriaria</i>	+( <b>&lt;1%</b> )	-	-
<i>Rubia tenuifolia</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Sarcopoterium spinosum</i>	-	1( <b>5%</b> )	1( <b>&lt;5%</b> )
<i>Scorpiurus muricatus</i>	+( <b>&lt;1%</b> )	-	-
<i>Scorzonera papposa</i>	-	-	+( <b>&lt;1%</b> )

Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark Rendzina
<b>Habitat</b>	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
<b>Plant cover</b>	80% plants	70% plants	85% plants
<b>Elevations above sea level</b>	764m	769m	759m
<b>Slope</b>	Very steep	Steep	Very steep
<b>Species</b>	<b>Braun and Blanquet scale</b>		
<i>Senecio leucanthemifolius</i> subsp. <i>vernalis</i>	-	-	+( <b>&lt;1%</b> )
<i>Silene aegyptiaca</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Silybum marianum</i>	-	+( <b>&lt;1%</b> )	-
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Sonchus oleraceus</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Styrax officinalis</i>	+( <b>&lt;1%</b> )	-	-
<i>Taraxacum cyprium</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Teucrium divaricatum</i>	-	-	+( <b>&lt;1%</b> )
<i>Teucrium capitatum (polium)</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Teucrium creticum</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Thrinicia tuberosa</i>	-	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )
<i>Thymbra spicata</i>	-	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )
<i>Tolpis virgata</i>	-	+( <b>&lt;1%</b> )	-
<i>Trifolium argutum</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )



Transect	Transect 10 (T10) – slope of southern hill below the path after T9 – path 2		Transect 11 (T11) – At Abu Saliba house and stairs- below the path after T10 – path 2
	Q1	Q2	Q1
Soil type	Dark Rendzina	Dark Rendzina	Dark Rendzina
Habitat	Mixed habitat of natural oak forest and Pine coniferous man- made forest	Mixed habitat of oak forest and olive groves	Natural Oak forest
Plant cover	80% plants	70% plants	85% plants
Elevations above sea level	764m	769m	759m
Slope	Very steep	Steep	Very steep
Species	<b>Braun and Blanquet scale</b>		
<i>Umbilicus intermedius</i>	-	1(<5%)	+(<1%)
<i>Urtica pilulifera</i>	+(<1%)	+(<1%)	-
<i>Verbascum sinuatum</i>	-	-	+(<1%)



**Map 3.2: Presents the distribution and geo-location of the studied transects T12, T13, T14, T15, T20, T22, T23, T24 and T25 and their quadrats at MKV- (Middle of the Valley).**

Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Adonis microcarpa</i>	-	+(<1%)	-	-	-
<i>Amaranthus blitoides</i>	+(<1%)	-	-	-	-
<i>Anchusa strigosa</i>	-	-	-	-	+(<1%)
<i>Anemone coronaria</i>	+(<1%)	+(<1%)	+(<1%)	-	+(<1%)
<i>Andropogon distachyos</i>	+(<1%)	+(<1%)	+(<1%)	-	+(<1%)
<i>Anthemis hebronica</i>	+(<1%)	+(<1%)	-	+(<1%)	-
<i>Arum Palaestinum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Asparagus aphyllus</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Asteriscus aquaticus</i>	+(<1%)	-	-	-	-
<i>Astragalus pelecinus</i> ( <i>Biserrula pelecinus</i> )	+(<1%)	+(<1%)	-	+(<1%)	+(<1%)
<i>Atractylis cancellata</i>	-	-	+(<1%)	+(<1%)	+(<1%)
<i>Bellis sylvestris</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Biarum angustatum</i>	+(<1%)	-	-	-	-

Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Brachypodium distachyon</i>	-	-	-	+( $<1\%$ )	+( $<1\%$ )
<i>Calicotome villosa</i>	1( $<5\%$ )	1( $<5\%$ )	2(5%)	1(5%)	1( $<5\%$ )
<i>Carlina hispanica</i>	-	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )
<i>Carlina curetum</i>	-	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Chiladenus iphionoides</i>	+( $<1\%$ )	+( $<1\%$ )	-	+( $<1\%$ )	+( $<1\%$ )
<i>Clematis cirrhosa</i>	+( $<1\%$ )	-	-	-	-
<i>Cistus creticus</i>	2(12%)	2(12%)	2(5%)	-	1(5%)
<i>Cistus salvifolius</i>	2(12%)	2(12%)	2(5%)		
<i>Colchicum hierosolymitanum</i>	+( $<1\%$ )	+( $<1\%$ )	-	-	-
<i>Coridothymus capitatus</i>	1( $<5\%$ )	2( $<5\%$ )	-	-	1( $<5\%$ )
<i>Cyclamen persicum</i>	+( $<1\%$ )	+( $<1\%$ )	1( $<5\%$ )	+( $<1\%$ )	-
<i>Daucus carota</i>	-	-	+( $<1\%$ )	-	-
<i>Dittrichia viscosa</i>	-	-	+( $<1\%$ )	-	-
<i>Echium judaeum</i>	+( $<1\%$ )	-	-	-	-
<i>Eminium spiculatum</i>	-	-	+( $<1\%$ )	-	-



Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Erodium gruinum</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Erodium ciconium</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	-	-
<i>Ephedra aphylla</i>	-	-	-	+( $<1\%$ )	-
<i>Logfia gallica</i> ( <i>Filago gallica</i> )	+( $<1\%$ )	-	-	-	-
<i>Fumana arabica</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )
<i>Fumana thymifolia</i>	+( $<1\%$ )	-	-	+( $<1\%$ )	-
<i>Gagea commutata</i>	+( $<1\%$ )	+( $<1\%$ )	-	-	-
<i>Helichrysum sanguineum</i>	+( $<1\%$ )	-	+( $<1\%$ )	1( $<5\%$ )	+( $<1\%$ )
<i>Hirschfeldia incana</i>	-	-	+( $<1\%$ )	-	-
<i>Lactuca tuberosa</i>	-	-	+( $<1\%$ )	( $<1\%$ )	-
<i>Malva parviflora</i>	+( $<1\%$ )	+( $<1\%$ )	1( $5\%$ )	-	-
<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	+( $<1\%$ )	+( $<1\%$ )	-	-	-
<i>Mentha longifolia</i>	-	-	-	+( $<1\%$ )	-
<i>Micromeria nervosa</i>	+( $<1\%$ )	-	-	-	-

Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Neslia apiculata</i>	+( <b>&lt;1%</b> )	-	-	-	-
<i>Olea europaea</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	<b>2(15%)</b>	-	<b>3(25%)</b>
<i>Onobrychis caput-galli</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Phagnalon rupestre</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Phlomis viscosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Pinus halepensis</i>	<b>2(10%)</b>	<b>2(10%)</b>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>
<i>Pistacia palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Poa bulbosa</i>	<b>1(&lt;5%)</b>	-	-	-	-
<i>Quercus calliprinos</i>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	<b>2(&lt;5%)</b>	<b>1(5%)</b>	<b>1(&lt;5%)</b>
<i>Ranunculus asiaticus</i>	+( <b>&lt;1%</b> )	-	-	-	-
<i>Reseda alba</i>	+( <b>&lt;1%</b> )	-	-	-	-
<i>Rostraria smyrnacea</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>(Lophochloa berythea)</i>					
<i>Rubia tenuifolia</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )
<i>Sarcopoterium spinosum</i>	<b>2(15%)</b>	<b>2(20%)</b>	<b>3(30%)</b>	<b>3(40%)</b>	<b>2(25%)</b>

Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Salvia dominica</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Salvia Palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Securigera securidaca</i>	-	-	+( <b>&lt;1%</b> )	-	-
<i>Senecio leucantbemifolius subsp. vernalis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Silene aegyptiaca</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Silybum marianum</i>	-	-	<b>2(5%)</b>	-	-
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Stipa capensis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Styrax officinalis</i>	-	-	+( <b>&lt;1%</b> )	-	-
<i>Thrinia tuberosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )
<i>Thymbra spicata</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Teucrium capitatum (polium)</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Teucrium creticum</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Teucrium divaricatum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-

Transect	Transect 12 (T12) – South East hill in middle of the Valley – path 2		Transect 13 (T13) – Slope below the path - opposite T12 – path 2	Transect 14 (T14) – North West Hill- above the owl nest - Middle of the Valley – section below path and section above path - path 2	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	White light and Dark Rendzina	White light and Dark Rendzina	White light Rendzina	Light Rendzina	Brown Rendzina
<b>Habitat</b>	Batha Association (in succession) with scattered Pine forest	Batha Association (in succession) with scattered Pine forest	Mixture of Olive groves, fallow land, and batha association	Batha association with a section of heap association	Olive groves and batha association
<b>Plant cover</b>	70% plants	60% plants	80% plants	70% plants	70% plants
<b>Elevations above sea level</b>	802m	805m	775m	792m	789m
<b>Slope</b>	Shallow slope	Shallow slope	Fore-slope (under path)	Shallow Slope (under path)	Steep (above path)
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Trifolium eriosphaerum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Trifolium pilulare</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Trifolium tomentosum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Umbilicus intermedius</i>	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-
<i>Urospermum picroides</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-

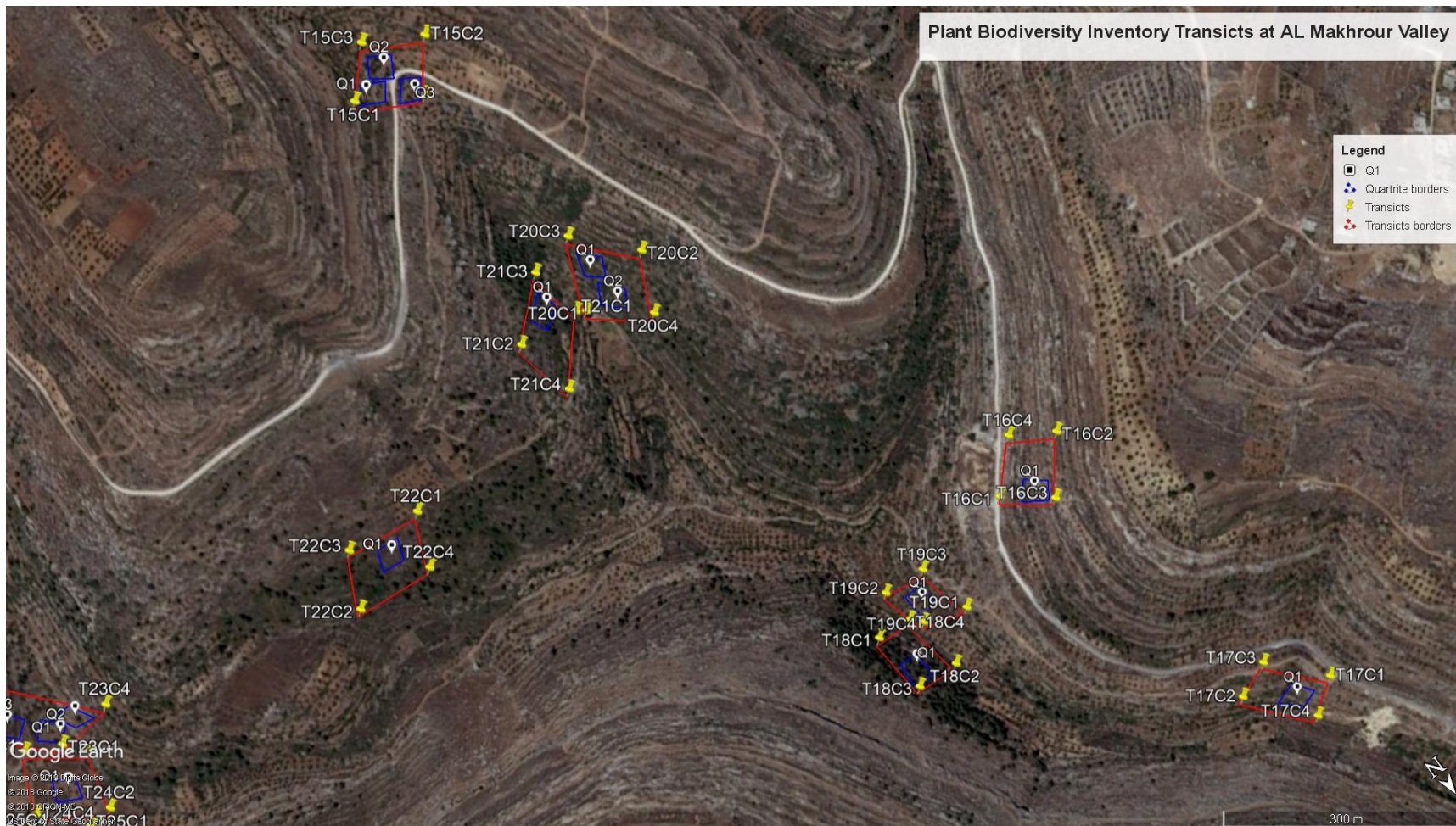


Transect	Transect 15 (T15) – Mountain south east- Curved area – above path 2 and Q3 below path 2 opposite Q1 and Q2 towards E'in A'mdan from southern side			Transect 16 (T16) –above path 2- eastern mountain
	Q1	Q2	Q3	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed Oak maquis forest and olive groves	Mixed Oak maquis forest and olive groves	Olive Groves and fallow land	Batha association
<b>Plant cover</b>	80% plants	83% plants	75% plants	52% plants
<b>Elevations above sea level</b>	791m	792m	650m	680m
<b>Slope</b>	Steep slope	Flat part on mid of the hill	Shallow slope – below the path	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>			
<i>Allium neapolitanum</i>	-	+(<1%)	-	-
<i>Amaranthus blitoides</i>	-	-	-	+(<1%)
<i>Andropogon distachyos</i>	-	-	+(<1%)	2(5%)
<i>Arbutus andrachne</i>	+(<1%)	1(<5%)	-	-
<i>Arum Palaestinum</i>	-	+(<1%)	+(<1%)	+(<1%)
<i>Asparagus aphyllus</i>	+(<1%)	+(<1%)	+(<1%)	-
<i>Asphodeline lutea</i>	-	-	+(<1%)	+(<1%)
<i>Asphodelus ramosus (microcarpus)</i>	-	-	+(<1%)	+(<1%)
<i>Astragalus asterias</i>	+(<1%)	+(<1%)	-	-
<i>(Astragalus cruciatus)</i>				
<i>Avena barbata</i>	+(<1%)	+(<1%)	+(<1%)	-
<i>Brachypodium distachyon</i>	-	-	-	+(<1%)
<i>Calicotome villosa</i>	2(5%)	2(5%)	+(<1%)	-
<i>Calendula arvensis</i>	+(<1%)	+(<1%)	+(<1%)	-
<i>Carlina hispanica or Carlina curetum</i>	-	+(<1%)	-	+(<1%)
<i>Catapodium rigidum</i>	+(<1%)	+(<1%)	-	+(<1%)

Transect	Transect 15 (T15) – Mountain south east- Curved area – above path 2 and Q3 below path 2 opposite Q1 and Q2 towards E'in A'mdan from southern side			Transect 16 (T16) –above path 2- eastern mountain
	Q1	Q2	Q3	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed Oak maquis forest and olive groves	Mixed Oak maquis forest and olive groves	Olive Groves and fallow land	Batha association
<b>Plant cover</b>	80% plants	83% plants	75% plants	52% plants
<b>Elevations above sea level</b>	791m	792m	650m	680m
<b>Slope</b>	Steep slope	Flat part on mid of the hill	Shallow slope – below the path	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>			
<i>Cerastium glomeratum (viscosum)</i>	+(<1%)	+(<1%)	-	-
<i>Chiliadenus iphionoides</i>	+(<1%)	-	+(<1%)	2(10%)
<i>Cistus creticus (incans)</i>	1(5%)	1(<5%)	1(<5%)	1(5%)
<i>Cistus salviifolius</i>	1(5%)	1(<5%)	1(<5%)	+(<5%)
<i>Coridothymus capitatus</i>	1(<5%)	+(<1%)	-	2(10%)
<i>Crithopsis delileana</i>	-	-	+(<1%)	+(<1%)
<i>Crepis palaestina</i>	+(<1%)	+(<1%)	-	-
<i>Cyclamen persicum</i>	+(<1%)	1(<5%)	-	-
<i>Dittrichia viscosa</i>	-	-	+(<1%)	+(<1%)
<i>Echium judaeum</i>	-	+(<1%)	-	+(<1%)
<i>Filago pyramidata</i>	-	-	+(<1%)	+(<1%)
<i>Ephedra aphylla</i>	+(<1%)	+(<1%)	-	-
<i>Fumana thymifolia</i>	+(<1%)	+(<1%)	-	+(<1%)
<i>Fumana arabica</i>	+(<1%)	+(<1%)	-	+(<1%)
<i>Galium murale</i>	-	+(<1%)	-	1(<5%)
<i>Geropogon hybridus</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Hippocrepis unisiliquosa</i>	-	-	+(<1%)	-
<i>Lactuca tuberosa</i>	+(<1%)	+(<1%)	-	-

Transect	Transect 15 (T15) – Mountain south east- Curved area – above path 2 and Q3 below path 2 opposite Q1 and Q2 towards E'in A'mdan from southern side			Transect 16 (T16) –above path 2- eastern mountain
	Q1	Q2	Q3	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed Oak maquis forest and olive groves	Mixed Oak maquis forest and olive groves	Olive Groves and fallow land	Batha association
<b>Plant cover</b>	80% plants	83% plants	75% plants	52% plants
<b>Elevations above sea level</b>	791m	792m	650m	680m
<b>Slope</b>	Steep slope	Flat part on mid of the hill	Shallow slope – below the path	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>			
<i>Lonicera etrusca</i>	-	+(<1%)	-	-
<i>Mentha longifolia</i>	1(<5%)	1(<5%)	-	-
<i>Olea europaea</i>	2(10%)	2(15%)	4(55%)	-
<i>Ononis ornithopodioides</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Phagnalon rupestre</i>	-	+(<1%)	+(<1%)	-
<i>Pinus halepensis</i>	1(<5%)	+(<1%)	-	1(5%)
<i>Pistacia lentiscus</i>	1(5%)	1(5%)	-	-
<i>Pistacia palaestina</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Polygonum argyrocoleum</i>	-	+(<1%)	-	-
<i>Quercus calliprinos</i>	3(25%)	3(35%)	1(<5%)	1(5%)
<i>Ranunculus asiaticus</i>	-	-	-	+(<1%)
<i>Rubia tenuifolia</i>	+(<1%)	+(<1%)	+(<1%)	-
<i>Sarcopoterium spinosum</i>	1(<5%)	1(<5%)	2(5%)	2(10%)
<i>Securigera securidaca</i>	-	+(<1%)	-	-
<i>Silene aegyptiaca</i>	-	+(<1%)	+(<1%)	-
<i>Silybum marianum</i>	-	-	-	+(<1%)
<i>Sinapis arvensis</i>	-	+(<1%)	+(<1%)	-

Transect	Transect 15 (T15) – Mountain south east- Curved area – above path 2 and Q3 below path 2 opposite Q1 and Q2 towards E'in A'mdan from southern side			Transect 16 (T16) –above path 2- eastern mountain
	Q1	Q2	Q3	Q1
<b>Soil type</b>	Dark Rendzina	Dark Rendzina	Dark and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed Oak maquis forest and olive groves	Mixed Oak maquis forest and olive groves	Olive Groves and fallow land	Batha association
<b>Plant cover</b>	80% plants	83% plants	75% plants	52% plants
<b>Elevations above sea level</b>	791m	792m	650m	680m
<b>Slope</b>	Steep slope	Flat part on mid of the hill	Shallow slope – below the path	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>			
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )	-
<i>Styrax officinalis</i>	+( <b>&lt;1%</b> )	-	-	-
<i>Teucrium capitatum (polium)</i>	-	-	-	1( <b>&lt;5%</b> )
<i>Teucrium creticum</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Teucrium divaricatum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Thymbra spicata</i>	1( <b>5%</b> )	1( <b>&lt;5%</b> )	-	+( <b>&lt;1%</b> )
<i>Umbilicus intermedius</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-







**Maps 3.2 and 3.3: Presents the distribution and geo-location of the studied transects T15, T16, T17, T18, T19, T20, T21, T22, T23, T24 and T25 and their quadrats at MKV- (Middle of the Valley).**

Transect	Transect 17 (T17) Slope below path 1, exactly under the main stairs that takes to path 1 from Battir side	Transect 18 (T18) – Northern mountain opposite T19 from Battir Side – below path 1 – near the valley	Transect 19 (T19) – southern mountain opposite T18 from Battir side – below path 1
	Q1	Q1	Q1
Soil type	Light Rendzina soil	Rendzina soil	Light Rendzina soil
Habitat	Mixed Olive groves/fallow land, oak forest and terraces supporting batha association	Coniferous man-made forest (Pine trees of an aged between 22-25 years old)	Olive groves and fallow land supported with terraces
Plant cover	70% plants	75% plants	68% plants
Elevations above sea level	640 m	652m	650m
Slope	Very steep	Steep	Steep
Species	<b>Braun and Blanquet scale</b>		
<i>Adonis microcarpa</i>	+( <b>&lt;1%</b> )	-	-
<i>Amygdalus communis</i>	-	-	+( <b>&lt;1%</b> )
<i>Amaranthus blitoides</i>	+( <b>&lt;1%</b> )	-	-
<i>Andropogon distachyos</i>	+( <b>&lt;1%</b> )	-	-
<i>Anemone coronaria</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Arisarum vulgare</i>	-	-	+( <b>&lt;1%</b> )
<i>Arum Palaestinum</i>	<b>1</b> ( <b>&lt;5%</b> )	-	+( <b>&lt;1%</b> )
<i>Asphodeline lutea</i>	<b>1</b> ( <b>&lt;5%</b> )	-	+( <b>&lt;1%</b> )
<i>Asphodelus ramosus (microcarpus)</i>	-	-	+( <b>&lt;1%</b> )
<i>Ballota saxatilis</i>	-	-	+( <b>&lt;1%</b> )
<i>Calendula arvensis</i>	+( <b>&lt;1%</b> )	-	-

Transect	Transect 17 (T17) Slope below path 1, exactly under the main stairs that takes to path 1 from Battir side	Transect 18 (T18) – Northern mountain opposite T19 from Battir Side – below path 1 – near the valley	Transect 19 (T19) – southern mountain opposite T18 from Battir side – below path 1
	Q1	Q1	Q1
Soil type	Light Rendzina soil	Rendzina soil	Light Rendzina soil
Habitat	Mixed Olive groves/fallow land, oak forest and terraces supporting batha association	Coniferous man-made forest (Pine trees of an aged between 22-25 years old)	Olive groves and fallow land supported with terraces
Plant cover	70% plants	75% plants	68% plants
Elevations above sea level	640 m	652m	650m
Slope	Very steep	Steep	Steep
Species	<b>Braun and Blanquet scale</b>		
<i>Carlina hispanica</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Carlina cretina</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Carthamus tenuis</i>	+( <b>&lt;1%</b> )	-	-
<i>Chiliadenus iphionoides</i>	+( <b>&lt;1%</b> )	-	-
<i>Cistus salvifolius</i>	<b>1(5%)</b>	<b>2(7%)</b>	-
<i>Cistus creticus</i>	-	<b>1(&lt;5%)</b>	-
<i>Clematis cirrhosa</i>	+( <b>&lt;1%</b> )	-	-
<i>Colchicum hierosolymitanum</i>	+( <b>&lt;1%</b> )	-	-
<i>Coridothymus capitatus</i>	<b>1(&lt;5%)</b>	<b>1(5%)</b>	-
<i>Crataegus aronia</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Crepis sancta</i>	<b>1(&lt;5%)</b>	-	+( <b>&lt;5%</b> )

Transect	Transect 17 (T17) Slope below path 1, exactly under the main stairs that takes to path 1 from Battir side	Transect 18 (T18) – Northern mountain opposite T19 from Battir Side – below path 1 – near the valley	Transect 19 (T19) – southern mountain opposite T18 from Battir side – below path 1
	Q1	Q1	Q1
Soil type	Light Rendzina soil	Rendzina soil	Light Rendzina soil
Habitat	Mixed Olive groves/fallow land, oak forest and terraces supporting batha association	Coniferous man-made forest (Pine trees of an aged between 22-25 years old)	Olive groves and fallow land supported with terraces
Plant cover	70% plants	75% plants	68% plants
Elevations above sea level	640 m	652m	650m
Slope	Very steep	Steep	Steep
Species	<b>Braun and Blanquet scale</b>		
<i>Cyclamen persicum</i>	+( $<1\%$ )	+( $<1\%$ )	+( $<1\%$ )
<i>Erodium gruinum</i>	+( $<1\%$ )	-	+( $<1\%$ )
<i>Erodium ciconium</i>	+( $<1\%$ )	-	-
<i>Euphorbia hierosolymitana</i>	+( $<1\%$ )	-	-
<i>Gagea commutata</i>	+( $<1\%$ )	-	+( $<1\%$ )
<i>Helicbrysum sanguineum</i>	+( $<1\%$ )	-	+( $<1\%$ )
<i>Hirschfeldia incana</i>	+( $<1\%$ )	-	+( $<1\%$ )
<i>Moraea sisyrinchium</i>	+( $<1\%$ )	-	-
<i>Lonicera etrusca</i>	1( $<5\%$ )	-	-
<i>Notobasis syriaca</i>	+( $<1\%$ )	-	-
<i>Olea europaea</i>	3( $25\%$ )	-	3( $45\%$ )

Transect	Transect 17 (T17) Slope below path 1, exactly under the main stairs that takes to path 1 from Battir side	Transect 18 (T18) – Northern mountain opposite T19 from Battir Side – below path 1 – near the valley	Transect 19 (T19) – southern mountain opposite T18 from Battir side – below path 1
	Q1	Q1	Q1
Soil type	Light Rendzina soil	Rendzina soil	Light Rendzina soil
Habitat	Mixed Olive groves/fallow land, oak forest and terraces supporting batha association	Coniferous man-made forest (Pine trees of an aged between 22-25 years old)	Olive groves and fallow land supported with terraces
Plant cover	70% plants	75% plants	68% plants
Elevations above sea level	640 m	652m	650m
Slope	Very steep	Steep	Steep
Species	<b>Braun and Blanquet scale</b>		
<i>Phagnalon rupestre</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Pinus halepensis</i>	<b>1(&lt;5%)</b>	<b>3(40%)</b>	<b>1(&lt;5%)</b>
<i>Pistacia Palaestina</i>	<b>1(5%)</b>	-	<b>1(5%)</b>
<i>Poa bulbosa</i>	+( <b>&lt;1%</b> )	-	-
<i>Podonosma orientalis</i>	+( <b>&lt;1%</b> )	-	-
<i>Prasium majus</i>	+( <b>&lt;1%</b> )	-	-
<i>Quercus calliprinos</i>	<b>3(30%)</b>	<b>1(5%)</b>	<b>1(5%)</b>
<i>Ranunculus asiaticus</i>	+( <b>&lt;1%</b> )	-	-
<i>Rhamnus lycioides (Rhamnus palaestinus)</i>	+( <b>&lt;1%</b> )	-	-
<i>Rubia tennifolia</i>	+( <b>&lt;1%</b> )	-	-
<i>Sarcopoterium spinosum</i>	<b>1(5%)</b>	<b>2(10%)</b>	<b>1(&lt;5%)</b>
<i>Securigera securidaca</i>	+( <b>&lt;1%</b> )	-	-



Transect	Transect 17 (T17) Slope below path 1, exactly under the main stairs that takes to path 1 from Battir side	Transect 18 (T18) – Northern mountain opposite T19 from Battir Side – below path 1 – near the valley	Transect 19 (T19) – southern mountain opposite T18 from Battir side – below path 1
	Q1	Q1	Q1
Soil type	Light Rendzina soil	Rendzina soil	Light Rendzina soil
Habitat	Mixed Olive groves/fallow land, oak forest and terraces supporting batha association	Coniferous man-made forest (Pine trees of an aged between 22-25 years old)	Olive groves and fallow land supported with terraces
Plant cover	70% plants	75% plants	68% plants
Elevations above sea level	640 m	652m	650m
Slope	Very steep	Steep	Steep
Species	<b>Braun and Blanquet scale</b>		
<i>Silene aegyptiaca</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Sinapis arvensis</i>	<b>1</b> ( <b>&lt;5%</b> )	-	+( <b>&lt;1%</b> )
<i>Solanum nigrum</i>	+( <b>&lt;1%</b> )	-	-
<i>Teucrium capitatum</i>	-	-	+( <b>&lt;1%</b> )
<i>Tetragonolobus palaestinus</i>	-	-	+( <b>&lt;1%</b> )
<i>Trifolium chypeatum</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Trifolium purpureum</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Thymbra spicata</i>	+( <b>&lt;1%</b> )	-	-
<i>Vicia sativa</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Amygdalus communis</i>	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Amaranthus blitoides</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Andropogon distachyos</i>	-	-	-	+( <b>&lt;1%</b> )	<b>1(5%)</b>	+( <b>&lt;1%</b> )
<i>Anemone coronaria</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )
<i>Anchusa hybrida</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Anemone coronaria</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anthemis pseudocotula</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Alcea acaulis</i>	-	-	-	-	+( <b>&lt;1%</b> )	-

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Alkanna strigosa</i>	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Anacamptis papilionacea</i> ( <i>Orchis papilionacea</i> )	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Arenaria leptoclados</i>	-	-	1( <b>&lt;5%</b> )	-	-	-
<i>Arbutus andrachne</i>	2( <b>25%</b> )	2( <b>25%</b> )	-	2( <b>5%</b> )	-	-
<i>Arum Palaestinum</i>	1( <b>&lt;5%</b> )	1( <b>&lt;5%</b> )	1( <b>5%</b> )	-	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )
<i>Asparagus aphyllus</i>	-	-	-	-	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )
<i>Asphodeline lutea</i>	-	-	-	-	1( <b>&lt;5%</b> )	-
<i>Asteriscus aquaticus</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Pallenis spinosa</i> ( <i>Asteriscus spinosus</i> )	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
<b>Soil type</b>	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
<b>Habitat</b>	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
<b>Plant cover</b>	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
<b>Elevations above sea level</b>	695m	693m	690m	701m	659m	657m
<b>Slope</b>	Steep	Very steep	Flat	Steep	Steep	Flat
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Calendula arvensis</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Calicotome villosa</i>	<b>1(5%)</b>	<b>1(&lt;5%)</b>	-	<b>2(14%)</b>	<b>1(5%)</b>	-
<i>Carlina hispanica</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Carlina curetum</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Centaurea byalolepis</i>	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-
<i>Chiliadenus iphionoides</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Cistus salvifolius</i>	<b>1(&lt;5%)</b>	<b>1(&lt;5%)</b>	-	<b>2(7%)</b>	<b>2(10%)</b>	<b>1(5%)</b>
<i>Cistus creticus (incanus)</i>	<b>1(&lt;5%)</b>	<b>1(&lt;5%)</b>	-	<b>2(7%)</b>	-	-
<i>Coridothymus capitatus</i>	<b>1(&lt;5%)</b>	<b>2(10%)</b>	-	<b>2(7%)</b>	<b>2(7%)</b>	<b>1(&lt;5%)</b>

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
<b>Soil type</b>	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
<b>Habitat</b>	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
<b>Plant cover</b>	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
<b>Elevations above sea level</b>	695m	693m	690m	701m	659m	657m
<b>Slope</b>	Steep	Very steep	Flat	Steep	Steep	Flat
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Glebionis coronarium (Chrysanthemum coronarium)</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Cupressus sempervirens</i>	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Cyclamen persicum</i>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	<b>2(5%)</b>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Daucus carota</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Dittrichia viscosa (Inula viscosa)</i>	-	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Erodium gruinum</i>	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Eryngium creticum</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Ficus carica</i>	-	-	-	-	-	+( <b>&lt;1%</b> )



Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Fumana Arabica</i>	<b>1(5%)</b>	-	-	<b>+(&lt;1%)</b>	-	-
<i>Gagea commutata</i>	-	-	-	-	-	<b>+(&lt;1%)</b>
<i>Hordeum bulbosum</i>	-	-	-	-	<b>2(7%)</b>	<b>+(&lt;1%)</b>
<i>Helichrysum sanguineum</i>	-	-	-	<b>+(&lt;1%)</b>	<b>+(&lt;1%)</b>	-
<i>Hirschfeldia incana</i>	-	-	<b>+(&lt;1%)</b>	-	-	-
<i>Moraea sisyrinchium</i>	-	-	-	-	<b>1(&lt;5%)</b>	<b>+(&lt;1%)</b>
<i>Lamium amplexicaule</i>	-	-	-	-	-	<b>+(&lt;1%)</b>
<i>Lonicera etrusca</i>	-	<b>+(&lt;1%)</b>	-	-	-	-
<i>Malva parviflora</i>	-	-	-	-	-	<b>+(&lt;1%)</b>

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
<b>Soil type</b>	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
<b>Habitat</b>	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
<b>Plant cover</b>	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
<b>Elevations above sea level</b>	695m	693m	690m	701m	659m	657m
<b>Slope</b>	Steep	Very steep	Flat	Steep	Steep	Flat
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Micromeria nervosa</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Notobasis syriaca</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Olea europaea</i>	<b>1(5%)</b>	<b>2(5%)</b>	-	<b>1(5%)</b>	<b>1(&lt;5%)</b>	<b>3(37%)</b>
<i>Onobrychis caput-galli</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Phagnalon rupestre</i>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	-
<i>Phlomis viscosa</i>	-	-	+( <b>&lt;1%</b> )	-	<b>1(5%)</b>	-
<i>Pinus halepensis</i>	<b>2(10%)</b>	-	-	<b>1(&lt;5%)</b>	-	+( <b>&lt;1%</b> )
<i>Pistacia Palaestina</i>	<b>2(15%)</b>	<b>2(5%)</b>	<b>1(5%)</b>	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Poa bulbosa</i>	-	-	+(<1%)	-	+(<1%)	-
<i>Podonosma orientalis</i>	-	-	-	-	+(<1%)	-
<i>Prasium majus</i>	+(<1%)	+(<1%)	1(5%)	-	-	-
<i>Pyrus communis</i>	-	-	+(<1%)	-	-	-
<i>Quercus calliprinos</i>	3(45%)	2(20%)	1(5%)	2(12%)	1(<5%)	1(<5%)
<i>Rhamnus lycioides</i> ( <i>Rhamnus palaestinus</i> )	-	-	-	-	+(<1%)	-
<i>Rubia tenuifolia</i>	1(<5%)	-	+(<1%)	+(<1%)	+(<1%)	-
<i>Rumex dentatus</i>	-	-	-	-	+(<1%)	-
<i>Sarcopoterium spinosum</i>	-	2(15%)	+(<1%)	2(7%)	3(35%)	1(<5%)

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Senecio vernalis</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )
<i>Silene aegyptiaca</i>	-	-	-	-	-	+( <b>&lt;1%</b> )
<i>Sinapis arvensis</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Spartium junceum</i>	-	-	+( <b>&lt;1%</b> )	-	-	-
<i>Teucrium capitatum</i>	+( <b>&lt;1%</b> )	-	-	-	+( <b>&lt;1%</b> )	-
<i>Teucrium divaricatum</i>	-	-	-	-	+( <b>&lt;1%</b> )	-
<i>Trifolium clypeatum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Trifolium purpureum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 20 (T20) - south western mountain – above E'in A'mdan spring- a divergent path from path 1 towards E'in A'mdan			Transect 21 (T21) –north eastern mountain – above E'in A'mdan spring –a divergent path from path 1 towards E'in A'mdan	Transect 22 (T22) AL Koulia Stone is in the middle of the two quadrats of this transect- on path 1 –Middle of the valley	
	Q1	Q2	Q3	Q1	Q1	Q2
Soil type	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina	Rendzina
Habitat	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Mixed Oak and Pine forest supporting batha association – succession more than 25 years	Batha association	Mixed Oak and Pine forest supporting batha association - Succession more than 25 years	Batha - Garrigue association	Olive groves and fallow land
Plant cover	75% plants	77% plants	57% plants	69% plants	73% plants	65% plants
Elevations above sea level	695m	693m	690m	701m	659m	657m
Slope	Steep	Very steep	Flat	Steep	Steep	Flat
Species	<b>Braun and Blanquet scale</b>					
<i>Thrinicia tuberosa</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Umbilicus intermedius</i>	-	-	<b>1(5%)</b>	-	+( <b>&lt;1%</b> )	-

Transect	Transect 23 (T23) – Middle of the valley at the sha’ab one – path 1			Transect 24 (T24) Middle of the valley at the sha’ab one – path 1	Transect 25 (T25)- Middle of the valley opposite sha’ab one – path 1
	Q1	Q2	Q3	Q1	Q1
<b>Soil type</b>	Brown Rendzina	Light Rendzina	Light Rendzina	Brown and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed habitat of oak forest and olive groves and fallow land with wide terraces	Mixed Oak and Pine forest	Mixed Pine and Oak forest	Olive groves and fallow land	Mixed Oak and Pine forest supporting batha association with many terraces
<b>Plant cover</b>	65% plants	67% plants	70% plants	62% plants	60% plants
<b>Elevations above sea level</b>	689m	692m	693m	680m	675m
<b>Slope</b>	Flat	Steep	Very Steep	Flat	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Amygdalus communis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Ancbusa undulata (hybrid)</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Andropogon distachyos</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anemone coronaria</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Arum Palaestinum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Asparagus aphyllus</i>	-	-	-	1( <b>&lt;5%</b> )	-
<i>Asphodelus ramosus (microcarpus)</i>	-	-	-	-	1( <b>&lt;5%</b> )
<i>Calicotome villosa</i>	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )	1( <b>5%</b> )	1( <b>&lt;5%</b> )	-
<i>Carlina hispanica</i>	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	-
<i>Carthamus tenuis</i>	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	-
<i>Chiliadenus iphionoides</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-



Transect	Transect 23 (T23) – Middle of the valley at the sha'ab one – path 1			Transect 24 (T24) Middle of the valley at the sha'ab one – path 1	Transect 25 (T25)- Middle of the valley opposite sha'ab one – path 1
	Q1	Q2	Q3	Q1	Q1
Soil type	Brown Rendzina	Light Rendzina	Light Rendzina	Brown and light Rendzina	Light Rendzina
Habitat	Mixed habitat of oak forest and olive groves and fallow land with wide terraces	Mixed Oak and Pine forest	Mixed Pine and Oak forest	Olive groves and fallow land	Mixed Oak and Pine forest supporting batha association with many terraces
Plant cover	65% plants	67% plants	70% plants	62% plants	60% plants
Elevations above sea level	689m	692m	693m	680m	675m
Slope	Flat	Steep	Very Steep	Flat	Very Steep
Species	<b>Braun and Blanquet scale</b>				
<i>Cistus salvifolius</i>	1(<5%)	1(5%)	1(<5%)	1(<5%)	1(<5%)
<i>Cistus creticus</i>	1(<5%)	1(5%)	1(<5%)	1(<5%)	1(<5%)
<i>Coridothymus capitatus</i>	+(<1%)	+(<1%)	+(<1%)	-	1(5%)
<i>Crataegus aronia</i>	-	+(<1%)	-	-	-
<i>Cyclamen persicum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Daucus carota</i>	+(<1%)	-	-	-	-
<i>Euphorbia helioscopia</i>	+(<1%)	-	-	-	-
<i>Fumana arabica</i>	-	-	-	-	1(<5%)
<i>Gagea commutata</i>	+(<1%)	+(<1%)	+(<1%)	-	-
<i>Helichrysum sanguineum</i>	+(<1%)	-	-	+(<1%)	-
<i>Olea europaea</i>	1(5%)	-	-	3(35%)	-

Transect	Transect 23 (T23) – Middle of the valley at the sha’ab one – path 1			Transect 24 (T24) Middle of the valley at the sha’ab one – path 1	Transect 25 (T25)- Middle of the valley opposite sha’ab one – path 1
	Q1	Q2	Q3	Q1	Q1
<b>Soil type</b>	Brown Rendzina	Light Rendzina	Light Rendzina	Brown and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed habitat of oak forest and olive groves and fallow land with wide terraces	Mixed Oak and Pine forest	Mixed Pine and Oak forest	Olive groves and fallow land	Mixed Oak and Pine forest supporting batha association with many terraces
<b>Plant cover</b>	65% plants	67% plants	70% plants	62% plants	60% plants
<b>Elevations above sea level</b>	689m	692m	693m	680m	675m
<b>Slope</b>	Flat	Steep	Very Steep	Flat	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Ononis natrix</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Phagnalon rupestre</i>	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Pinus halepensis</i>	1( <b>&lt;5%</b> )	2( <b>15%</b> )	2( <b>25%</b> )	+( <b>&lt;1%</b> )	2( <b>7%</b> )
<i>Pistacia Palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	1( <b>&lt;5%</b> )	+( <b>&lt;1%</b> )	-
<i>Podonosma orientalis</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Quercus calliprinos</i>	2( <b>15%</b> )	2( <b>20%</b> )	2( <b>20%</b> )	1( <b>&lt;5%</b> )	2( <b>22%</b> )
<i>Rhamnus lycioides</i> ( <i>Rhamnus palaestinus</i> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Sarcopoterium spinosum</i>	1( <b>5%</b> )	1( <b>5%</b> )	2( <b>5%</b> )	2( <b>7%</b> )	2( <b>20%</b> )
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Senecio vernalis</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Silene aegyptiaca</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Sinapis arvensis</i>	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-

Transect	Transect 23 (T23) – Middle of the valley at the sha'ab one – path 1			Transect 24 (T24) Middle of the valley at the sha'ab one – path 1	Transect 25 (T25)- Middle of the valley opposite sha'ab one – path 1
	Q1	Q2	Q3	Q1	Q1
<b>Soil type</b>	Brown Rendzina	Light Rendzina	Light Rendzina	Brown and light Rendzina	Light Rendzina
<b>Habitat</b>	Mixed habitat of oak forest and olive groves and fallow land with wide terraces	Mixed Oak and Pine forest	Mixed Pine and Oak forest	Olive groves and fallow land	Mixed Oak and Pine forest supporting batha association with many terraces
<b>Plant cover</b>	65% plants	67% plants	70% plants	62% plants	60% plants
<b>Elevations above sea level</b>	689m	692m	693m	680m	675m
<b>Slope</b>	Flat	Steep	Very Steep	Flat	Very Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Teucrium capitatum</i>	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	-	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>
<i>Teucrium divaricatum</i>	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Thrinicia tuberosa</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )		
<i>Thymbra spicata</i>	-	<b>1(&lt;5%)</b>	-	-	-
<i>Verbascum sinuatum</i>	-	+( <b>&lt;1%</b> )	-	-	-



**Maps 3.4:** Presents the distribution and geo-location of the studied transects T26, T27, T28, T29, T30, T31, T32, and T33 and their quadrats at MKV- (West Battir Village).

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Adonis microcarpa</i>	-	-	+( <b>&lt;1%</b> )	-	-
<i>Allium neapolitanum</i>	-	-	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Amaranthus blitoides</i>	+( <b>&lt;1%</b> )	-	-	-	-
<i>Amygdalus communis</i>	1( <b>&lt;5%</b> )	-	+( <b>&lt;1%</b> )	-	-
<i>Anagallis arvensis</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Anchusa aegyptiaca</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Anchusa strigosa</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Andrachne telephioides</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Andropogon distachyos</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anemone coronaria</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Anthemisis pseudocotula</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Arenaria leptoclados</i>	-	1(<5%)	-	-	-
<i>Arisarum vulgare</i>	-	-	-	+(<1%)	+(<1%)
<i>Arum Palaestinum</i>	-	-	-	+(<1%)	+(<1%)
<i>Asparagus aphyllus</i>	1(5%)	-	1(<5%)	+(<1%)	-
<i>Asphodeline lutea</i>	1(<5%)	+(<1%)	+(<1%)	-	-
<i>Asphodelus ramosus (microcarpus)</i>	-	-	+(<1%)	+(<1%)	-
<i>Asteriscus aquaticus</i>	-	-	-	-	-
<i>Astragalus hamosus</i>	-	-	+(<1%)	-	-
<i>Avena sterilis</i>	-	-	-	+(<1%)	+(<1%)
<i>Ballota saxatilis</i>	-	-	+(<1%)	-	-



Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Bellis sylvestris</i>	-	1(<5%)	+(<1%)	+(<1%)	-
<i>Briza maxima</i>	+(<1%)	+(<1%)	-	-	-
<i>Calicotome villosa</i>	-	-	-	1(<5%)	-
<i>Campanula rapunculus</i>	-	-	-	+(<1%)	+(<1%)
<i>Capparis spinosa</i>	-	+(<1%)	-	-	-
<i>Carlina hispanica</i>	-	-	-	+(<1%)	+(<1%)
<i>Carlina curretum</i>	-	-	-	+(<1%)	+(<1%)
<i>Carthamus tenuis</i>	-	+(<1%)	-	-	-
<i>Ceterach officinarum</i>	-	-	-	-	+(<1%)
<i>Chiliadenus iphionoides</i>	-	1(<5%)	+(<1%)	+(<1%)	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Cistus salvifolius</i>	-	1(5%)	+(<1%)	1(<5%)	1(5%)
<i>Cistus creticus (incanus)</i>	-	+(<1%)	+(<1%)	+(<1%)	1(<5%)
<i>Clematis Cirrhosa</i>	+(<1%)	-	-	-	-
<i>Colchicum hierosolymitanum</i>	-	+(<1%)	-	-	+(<1%)
<i>Coridothymus capitatus</i>	-	1(5%)	1(<5%)	+(<1%)	-
<i>Crataegus aronia</i>	-	+(<1%)	-	-	-
<i>Crucianella macrostachya</i>	-	-	+(<1%)	-	-
<i>Cupressus sempervirens</i>	+(<1%)	-	-	-	-
<i>Cyclamen persicum</i>	2(15%)	2(15%)	1(<5%)	+(<1%)	+(<1%)
<i>Cynoglossum creticum</i>	-	-	+(<1%)	-	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Daucus carota</i>	-	-	-	+(<1%)	-
<i>Dianthus strictus</i>	-	-	-	+(<1%)	+(<1%)
<i>Echium judaeum</i>	-	-	(<1%)	-	-
<i>Erodium ciconium</i>	+(<1%)	+(<1%)	-	+(<1%)	-
<i>Erodium gruinum</i>	-	+(<1%)	-	-	-
<i>Erodium malacoides</i>	+(<1%)	-	-	+(<1%)	-
<i>Euphorbia hierosolymitana</i>	-	-	-	+(<1%)	-
<i>Ferula communis</i>	-	-	-	+(<1%)	+(<1%)
<i>Ficus carica</i>	+(<1%)	-	-	-	-
<i>Fumana arabica</i>	+(<1%)	+(<1%)	-	-	+(<1%)
<i>Gagea commutate</i>	+(<1%)	+(<1%)	+(<1%)	-	+(<1%)

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Gladiolus italicus</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Helichrysum sanguineum</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Hordeum spontaneum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Lactuca tuberosa</i>	-	-	-	-	+( <b>&lt;1%</b> )
<i>Lamium amplexicaule</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Lathyrus aphaca</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Lonicera etrusca</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Lotus peregrinus</i>	-	-	+( <b>&lt;1%</b> )	-	-
<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	-	+( <b>&lt;1%</b> )	-	-	-
<i>Malva parviflora</i>	<b>1(&lt;5%)</b>	-	-	-	-
<i>Medicago orbicularis</i>	-	-	+( <b>&lt;1%</b> )	-	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Medicago polymorpha</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Micromeria nervosa</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )
<i>Nonea obtusifolia</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Olea europaea</i>	<b>3(25%)</b>	<b>3(25%)</b>	<b>2(25%)</b>	<b>2(20%)</b>	<b>2(25%)</b>
<i>Onobrychis caput-galli</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-
<i>Ononis natrix</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Ononis viscosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Onopordum carduiforme</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Ophrys israelitica (Ophrys fleischmannii)</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Papaver umbonatum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Paronychia argentea</i>	-	-	-	+( <b>&lt;1%</b> )	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Phagnalon rupestre</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Phalaris aquatica (tuberosa)</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Phlomis viscosa</i>	-	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	-	-
<i>Pinus halepensis</i>	+( <b>&lt;1%</b> )	<b>1(&lt;5%)</b>	-	<b>2(7%)</b>	<b>2(5%)</b>
<i>Piptatherum blancheanum</i>	-	-	+( <b>&lt;1%</b> )	-	-
<i>Pistacia lentiscus</i>	-	+( <b>&lt;1%</b> )	-	<b>2(5%)</b>	<b>1(5%)</b>
<i>Pistacia Palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Podonosma orientalis</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Prasium majus</i>	+( <b>&lt;1%</b> )	-	-	-	+( <b>&lt;1%</b> )
<i>Quercus calliprinos</i>	+( <b>&lt;1%</b> )	<b>1(5%)</b>	<b>1(&lt;5%)</b>	<b>2(10%)</b>	<b>2(10%)</b>
<i>Rhamnus lycioides</i>	-	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )



Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Rostraria smyrnacea</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )		+( <b>&lt;1%</b> )	
<i>Rubia tenuifolia</i>	+( <b>&lt;1%</b> )	-	-	-	+( <b>&lt;1%</b> )
<i>Scorzonera papposa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Scrophularia hierochuntina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Securigera securidaca</i>	-	-	-	-	+( <b>&lt;1%</b> )
<i>Smilax aspera</i>	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Silene aegyptiaca</i>	-	-	-	+( <b>&lt;1%</b> )	-
<i>Silybum marianum</i>	+( <b>&lt;1%</b> )	-	-	-	-
<i>Sinapis arvensis</i>	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Solanum nigrum</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Sonchus oleraceus</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Taraxacum cyprium</i>	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Teucrium capitatum</i>	-	+(<1%)	+(<1%)	-	-
<i>Teucrium divaricatum</i>	-	-	1(<5%)	+(<1%)	+(<1%)
<i>Thrinicia Tuberosa</i>	-	+(<1%)	-	-	-
<i>Thymbra spicata</i>	-	-	+(<1%)	-	-
<i>Tolpis virgata</i>	-	-	-	-	+(<1%)
<i>Torilis leptophylla</i>	-	-	+(<1%)	-	-
<i>Trigonella arabica</i>	-	-	-	+(<1%)	+(<1%)
<i>Trigonella foenum-graecum</i>	-	-	-	+(<1%)	-
<i>Trifolium clypeatum</i>	+(<1%)	+(<1%)	-	-	-
<i>Trifolium pūlulare</i>	+(<1%)	+(<1%)	-	-	-
<i>Trifolium purpureum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	-

Transect	Transect 26 (T26) – Eastern side of path 3		Transect 27 (T27)- Eastern side of path 3	Transect 28 (T28) –Eastern side of path 3	
	Q1	Q2	Q1	Q1	Q2
<b>Soil type</b>	Terra Rossa	Mixed Terra Rossa and Rendzina (more humidity)	Mixed Terra Rossa and Rendzina	Terra Rossa	Terra Rossa
<b>Habitat</b>	Olive groves supporting batha association with terraces	Olive groves supporting batha association with terraces	Olive groves supporting Garrigue- batha association with terraces	Mixed Olive groves, Oak and Pine trees supporting batha association (Pine cultivation 40-50years)	Olive groves supported with Oak and Pine trees
<b>Plant cover</b>	60% plants	65%	82%	80% plants	69% plants
<b>Elevations above sea level</b>	584m	597m	601m	584m	593m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>				
<i>Urtica urens</i>	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-
<i>Verbascum sinuatum</i>	-	+( <b>&lt;1%</b> )	-	-	-
<i>Vicia palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	+( <b>&lt;1%</b> )	-

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Allium neapolitanum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Amaranthus blitoides</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Anacamptis papilionacea</i> ( <i>Orchis papilionacea</i> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Anacamptis pyramidalis</i> ( <i>Orchid pyramidalis</i> )	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Andrachne telephioides</i>	-	-	-	+( <b>&lt;1%</b> )	-	-
<i>Andropogon distachyos</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anemone coronaria</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anthemis pseudocotula</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-	-
<i>Arenaria leptoclados</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Arum Palaestinum</i>	-	+( <b>&lt;1%</b> )	-	-	-	-
<i>Asphodeline lutea</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Aspodelus ramosus (microcarpus)</i>	-	+(<1%)	+(<1%)	-	-	-
<i>Bellis sylvestris</i>	+(<1%)	-	-	+(<1%)	+(<1%)	+(<1%)
<i>Biscutella didyma</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Calendula arvensis</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Calicotome villosa</i>	1(5%)	1(<5%)	1(<5%)	1(5%)	1(<5%)	1(<5%)
<i>Carlina hispanica</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	-	-
<i>Carlina curetum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	-	-
<i>Crataegus aronia</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Carthamus tenuis</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Centaurea hyalolepis</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Cerantonia siliqua</i>	-	+(<1%)	+(<1%)	-	-	-

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Chiladenus iphionoides</i>	+( <b>&lt;1%</b> )	+( <b>&lt;5</b> )	+( <b>&lt;5</b> )	+( <b>&lt;1%</b> )	-	-
<i>Cistus salvifolius</i>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>2(7%)</b>	<b>2(7%)</b>
<i>Cistus creticus</i>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>	<b>1(5%)</b>
<i>Colchicum hierosolymitanum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Coridothymus capitatus</i>	<b>1(5%)</b>	-	-	<b>1(5%)</b>	<b>1(&lt;5%)</b>	<b>1(&lt;5%)</b>
<i>Crataegus aronia</i>	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	-	-	-
<i>Crocus hyemalis</i>	+( <b>&lt;1%</b> )	-	-	+( <b>&lt;1%</b> )	-	-
<i>Cyclamen persicum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Erodium gruinum</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Erodium acaule</i>	-	-	-	-	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )



Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Eryngium creticum</i>	-	+(<1%)	+(<1%)	-	+(<1%)	+(<1%)
<i>Fumana arabica</i>	+(<1%)	-	-	+(<1%)	-	-
<i>Gagea commutata</i>	-	+(<1%)	+(<1%)	-	+(<1%)	+(<1%)
<i>Helichrysum sanguineum</i>	+(<1%)	-	-	-	+(<1%)	+(<1%)
<i>Lonicera etrusca</i>	-	-	+(<1%)	-	-	-
<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	+(<1%)	-	-	+(<1%)	+(<1%)	+(<1%)
<i>Micromeria nervosa</i>	+(<1%)	-	-	+(<1%)	-	-
<i>Olea europaea</i>	-	+(<1%)	+(<1%)	-	1(5%)	1(5%)
<i>Osyris alba</i>	-	-	-	+(<1%)	-	-
<i>Phagnalon rupestre</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Phlomis viscosa</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Pinus halepensis</i>	2(15%)	2(15%)	2(15%)	2(15%)	2(7%)	2(7%)
<i>Pistacia lentiscus</i>	1(5%)	+(<1%)	+(<1%)	1(5%)	-	-
<i>Pistacia Palaestina</i>	-	+(<1%)	+(<1%)	-	+(<1%)	+(<1%)
<i>Pisum elatius</i>	+(<1%)	+(<1%)	+(<1%)	-	-	-
<i>Prasium majus</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Quercus calliprinos</i>	2(10%)	2(15%)	2(15%)	2(10%)	2(5%)	2(7%)
<i>Rhus coriaria</i>	-	-	+(<1%)	-	-	-
<i>Rostraria smyrnacea</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Rubia tenuifolia</i>	-	+(<1%)	+(<1%)	-	-	-
<i>Sarcopoterium spinosum</i>	2(7%)	2(20%)	2(20%)	2(7%)	2(12%)	2(10%)

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Sedum sediforme</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Senecio leucanthemifolius subsp vernalis</i>	+(<1%)	-	-	+(<1%)	-	-
<i>Silene aegyptiaca</i>	+(<1%)	-	-	+(<1%)	+(<1%)	+(<1%)
<i>Silybum marianum</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Sinapis arvensis</i>	+(<1%)	+(<1%)	-	-	-	-
<i>Smilax aspera</i>	+(<1%)	-	-	+(<1%)	+(<1%)	+(<1%)
<i>Solanum nigrum</i>	-	+(<1%)	+(<1%)	-	-	-
<i>Taraxacum cyprium</i>	-	-	-	-	+(<1%)	+(<1%)
<i>Teucrium capitatum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Teucrium divaricatum</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Tolips virgata</i>	-	+(<1%)	+(<1%)	-	+(<1%)	+(<1%)

Transect	Transect 29(T29)		Transect 30 (T30)		Transect 31 (T31)	
	Q1	Q2	Q1	Q2	Q1	Q2
<b>Soil type</b>	Mixed patches of Terra Rossa and Rendzina	Terra Rossa	Terra Rossa	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina	Mixed patches of Terra Rossa and Rendzina
<b>Habitat</b>	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting batha association	Mixed man made Pine forest and Oak trees supporting garrigue-batha association	Oak forest supporting Batha association with excess of Pine reseeding	Oak forest supporting Batha association with excess of Pine reseeding
<b>Plant cover</b>	78% plants	75% plants	75% plants	80% plants	60% plants	58%
<b>Elevations above sea level</b>	579m	586m	579m	582m	565m	569m
<b>Slope</b>	Steep	Steep	Steep	Steep	Steep	Steep
<b>Species</b>	<b>Braun and Blanquet scale</b>					
<i>Thrinicia Tuberosa</i>	-	+(<1%)	+(<1%)	-	-	-
<i>Thymbra spicata</i>	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)	+(<1%)
<i>Trigonella arabica</i>	-	-	+(<1%)	-	-	-
<i>Trifolium boissieri</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Trifolium clypeatum</i>	-	-	+(<1%)	+(<1%)	-	-
<i>Trifolium purpureum</i>	+(<1%)	+(<1%)	-	-	-	-

Transect	Transect 32(T32) –southern side of path 3	Transect 33 (T33) – southern side of path 3
	Q1	Q1
Soil type	Terra Rossa	Terra Rossa
Habitat	Olive Groves and Fallow Land	Olive Groves and Fallow Land
Plant cover	58% plants	57% plants
Elevations above sea level	550m	551m
Slope	Flat	Flat
Species	<b>Braun and Blanquet scale</b>	
<i>Andropogon distachyos</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anemone coronaria</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Anacamptis pyramidalis</i>	+( <b>&lt;1%</b> )	-
<i>Anthemis pseudocotula</i>	+( <b>&lt;1%</b> )	-
<i>Arum Palaestinum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Asparagus aphyllus</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Avena sterilis</i>	+( <b>&lt;1%</b> )	-
<i>Bellis sylvestris</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Calicotome villosa</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Carlina hispanica</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )

Transect	Transect 32(T32) –southern side of path 3	Transect 33 (T33) – southern side of path 3
	Q1	Q1
Soil type	Terra Rossa	Terra Rossa
Habitat	Olive Groves and Fallow Land	Olive Groves and Fallow Land
Plant cover	58% plants	57% plants
Elevations above sea level	550m	551m
Slope	Flat	Flat
Species	<b>Braun and Blanquet scale</b>	
<i>Carlina curretum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Carthamus tenuis</i>	<b>1</b> ( <b>&lt;5%</b> )	<b>1</b> ( <b>&lt;5%</b> )
<i>Cyclamen persicum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Dittrichia viscosa (Inula viscosa)</i>	+( <b>&lt;1%</b> )	-
<i>Erodium gruinum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Erodium malacoides</i>	+( <b>&lt;1%</b> )	-
<i>Helichrysum sanguineum</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Lonicera etrusca</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Olea europaea</i>	<b>3</b> ( <b>35%</b> )	<b>3</b> ( <b>40%</b> )
<i>Onobrychis caput-galli</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Phagnalon rupestre</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Pistacia Palaestina</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Salvia hierosolymitana</i>	+( <b>&lt;1%</b> )	+( <b>&lt;1%</b> )
<i>Salvia Palaestina</i>	+( <b>&lt;1%</b> )	-



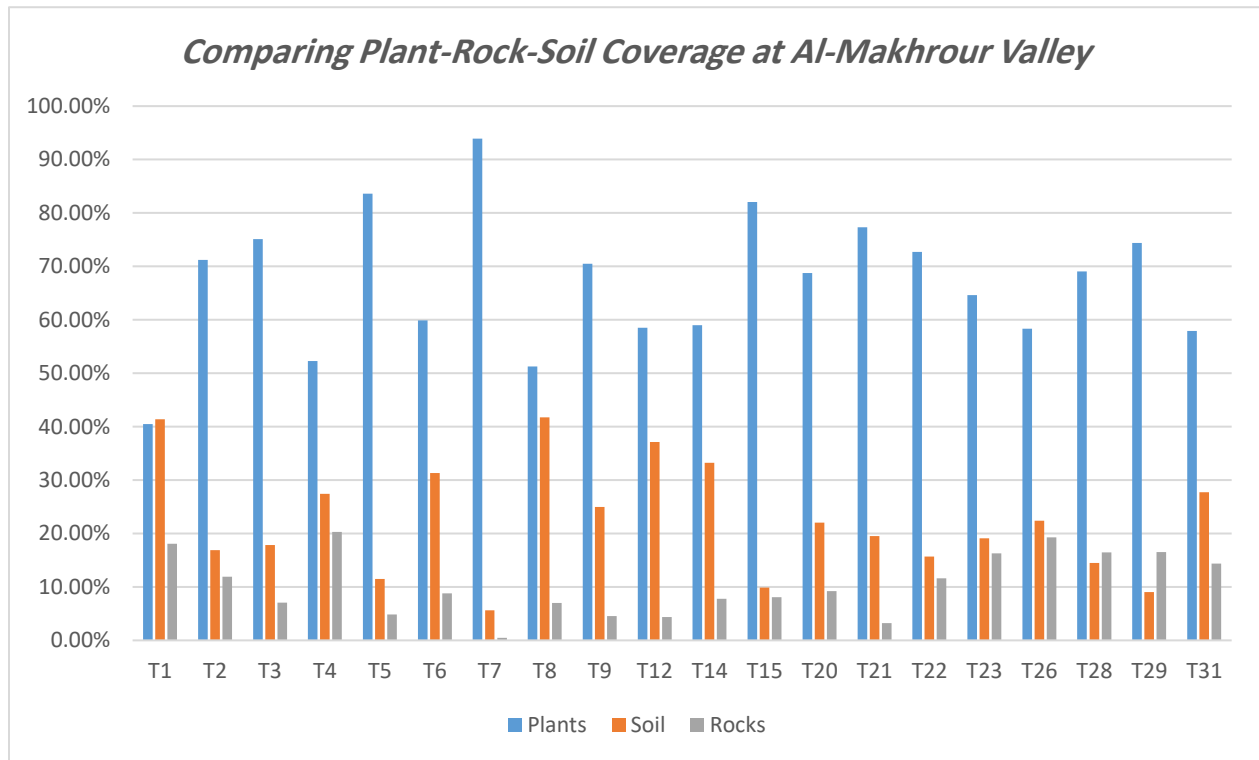
Transect	Transect 32(T32) –southern side of path 3	Transect 33 (T33) – southern side of path 3
	Q1	Q1
Soil type	Terra Rossa	Terra Rossa
Habitat	Olive Groves and Fallow Land	Olive Groves and Fallow Land
Plant cover	58% plants	57% plants
Elevations above sea level	550m	551m
Slope	Flat	Flat
Species	<b>Braun and Blanquet scale</b>	
<i>Sarcopoterium spinosum</i>	1(5%)	1(5%)
<i>Smilax aspera</i>	+(<1%)	+(<1%)
<i>Silene aegyptiaca</i>	+(<1%)	+(<1%)
<i>Sinapis arvensis</i>	+(<1%)	-
<i>Taraxacum cyprium</i>	+(<1%)	-
<i>Tolips virgata</i>	+(<1%)	+(<1%)
<i>Thrinicia Tuberosa</i>	+(<1%)	+(<1%)
<i>Trifolium boissieri</i>	+(<1%)	-
<i>Trifolium clypeatum</i>	+(<1%)	+(<1%)
<i>Trifolium purpureum</i>	+(<1%)	-
<i>Trifolium scutatum</i>	+(<1%)	+(<1%)
<i>Trigonella hierosolymitana</i>	+(<1%)	-
<i>Verbascum sinuatum</i>	+(<1%)	+(<1%)

### 3.2.3 Results of the Line Transect Survey done at Al Makhrou Valley

PCC team has conducted line transect methodology on 20 transects. Transects that were selected for conducting this methodology were the ones that were easy to access while the other transects (13 transects) were mainly very steep or very dense transects, where line transect as a methodology is not feasible. All transects showed plant coverage higher than 40% of the land cover. The average plant coverage at the whole valley has reached up to 67.05%, while the soil reach up to 22.45% and the rocks / terraces coverage reached up to 10.51% at Al Makhour valley in general. The highest plant coverage was 93.9% of total land coverage in Transect 7, followed by 82.03% in Transect 15, while the highest soil coverage was 41.74% in Transect 8, followed by 41.40% in Transect 1. The rocks and terraces were mainly concentrated in Transect 4 where 20.3% of the transect was covered with rocks, followed with Transect 1 with 18.06% rock coverage (Table 3.5 , Figure 3.2).

**Table 3.5: Comparison between plant coverage versus soil and rock coverage per studied transect at Al Makhrou Valley**

Transect Number	Plants	Soil	Rocks
T1	40.50%	41.40%	18.10%
T2	71.19%	16.91%	11.90%
T3	75.10%	17.85%	7.05%
T4	52.30%	27.40%	20.30%
T5	83.64%	11.50%	4.86%
T6	59.92%	31.30%	8.78%
T7	93.90%	5.60%	0.50%
T8	51.27%	41.74%	6.99%
T9	70.49%	24.99%	4.52%
T12	58.52%	37.14%	4.34%
T14	58.98%	33.21%	7.81%
T15	82.03%	9.89%	8.10%
T20	68.78%	22.02%	9.20%
T21	77.30%	19.50%	3.20%
T22	72.73%	15.69%	11.59%
T23	64.60%	19.11%	16.29%
T26	58.32%	22.41%	19.27%
T28	69.03%	14.50%	16.47%
T29	74.40%	9.05%	16.55%
T31	57.90%	27.75%	14.35%
<b>Average</b>	<b>67.05%</b>	<b>22.45%</b>	<b>10.51%</b>



**Figure 3.2: Comparison between plants vs. soil vs. rocks coverage at Al Makhrouir Valley**

Regarding the plant species coverage it was found that Oak trees, olive trees, Pine trees, Thorny Burnet, rockrose and Arabian Cistus, and headed thyme, and spiny broom were the dominant plant species covering the measured transects (see Table 3.6). For more details regarding the plant dominance measured at each transect see Annex 3.4.

**Table 3.6: Al Makhrouir habitats and their dominant plant species**

Habitat	Transect	Name of Dominant plant species	Percentage
Mature Maquis Oak forest	T7	<i>Quercus calliprinos</i>	50.58%
		<i>Cistus creticus and cistus salviifolius</i>	10.28%
Maquis oak forest supporting bath and garrigue association	T1	<i>Cistus salviifolius</i>	26%
		<i>Sarcopoterium spinosum</i>	22.5%
		<i>Quercus calliprinos</i>	17.5%
		<i>Coridothymus capitatus</i>	16.5%
	T4	<i>Cistus salviifolius</i>	41.24%
		<i>Coridothymus capitatus</i>	26.14%
	T5	<i>Cistus salviifolius</i>	39.28%
		<i>Coridothymus capitatus</i>	27.30

		<i>Quercus calliprinos</i>	17.05%
	T29	<i>Cistus creticus and cistus salviifolius</i>	25.68%
		<i>Sarcopoterium spinosum</i>	25.34%
		<i>Quercus calliprinos</i>	12.03%
	T31	<i>Cistus creticus and cistus salviifolius</i>	34.92%
		<i>Sarcopoterium spinosum</i>	20.78%
		<i>Quercus calliprinos</i>	15.09%
Mixed Oak , Pine forests supporting batha associations	T21	<i>Cistus creticus and cistus salviifolius</i>	23.15%
		<i>Calicotome spinosum</i>	22.38%
		<i>Coridothymus capitatus</i>	12.55%
Mixed habitats of maquis oak forest and olive groves	T2	<i>Olea Europea</i>	29.08%
		<i>Quercus calliprinos</i>	13.13%
	T9	<i>Cistus creticus and cistus salviifolius</i>	27.8%
		<i>Sarcopoterium spinosum</i>	24.68%
		<i>Quercus calliprinos</i>	15.21%
	T15	<i>Quercus calliprinos</i>	34.44%
		<i>Olea Europea</i>	17.04%
		<i>Cistus creticus and cistus salviifolius</i>	18.64%
	T23	<i>Quercus calliprinos</i>	20.43%
		<i>Sarcopoterium spinosum</i>	15.52%
<i>Cistus creticus and cistus salviifolius</i>		10.52%	
Mixed Oak, Pine forests and olive groves	T28	<i>Olea Europea</i>	27.39%
		<i>Sarcopoterium spinosum</i>	23.23%
		<i>Pinus halepensis</i>	12.39%
Olive groves, fallow land supporting batha and garrigue association	T3	<i>Sarcopoterium spinosum</i>	38.61%
		<i>Pomme and stone fruit trees</i>	13.32%
	T6	<i>Olea Europea</i>	29.79%
		<i>Sarcopoterium spinosum</i>	13.02%
	T8	<i>Olea Europea</i>	60.02%
		<i>Sarcopoterium spinosum</i>	7.67%
	T14	<i>Sarcopoterium spinosum</i>	56.68
		<i>Olea Europea</i>	10%
		<i>Calicotome villosa</i>	9.03%
	T26	<i>Olea Europea</i>	16.48%
<i>Sarcopoterium spinosum</i>		13.48%	

### 3.3 Plant Cover Studied at Battir Village

As noted earlier, the plant cover study done at Battir Village was handled as a separate study as this area is highly exposed to human interference either through agriculture activities, or urbanization. Not forgetting the abundance of water resources, and water canals available in the village. It was found that most of the wild species growing in the village were mainly found

sourding the water canals, in abundant lands, near water springs and on the sides of the walking paths and streets. Hence, there are high number of ruderal plants including thorny plants.

A total of 98 vascular plant species were recorded during the flora surveys done at Battir village covering the period of the report. It was found that there are 35 plant families growing at Battir village; most dominantly are Compositae, Papilionaceae, Labiatae, Graminae and Umbellifecae. The total number of tree species surveyed at the village is 8 trees, while the village encompasses 17 shrubs and sub-shrubs, 1 aquatic plants, and 70 herbaceous plant species. Up to 3 rare plant species were recorded, 7 species were found rare at the study area level, 9 LC species, and 1 NT species according to IUCN Red list according to IUCN Red list. It was also found that the village supports the growth of 3 endemic species. Of the plant species that were only found in Battir Village and of high conservation value are: Italian buckthorn (*Rhamnus alaternus*), Polular tree *Populus euphratica* and water arum (*Arum hygrophilum*). *Arum hygrophilum* is of high importance as it was found near threatened according to IUCN RED List. Of the endemic species that was found of high conservation value is *Onopordum carduiforme*, which is a very rare species and endemic to Palestine.

For more details about the village's plant cover see Annex 3.3.

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### Annex 3.1: Plant species identified during the plant inventory surveys at Al Makhrou Valley

It includes the list of Species according to its type, status, and uses (GF = Growth Form, Abd 1 = Abundance in Palestine, Abd 2 = Abundance at global level according to IUCN Red List, End = Endemism, CD = Climate Distribution)

Family Name	Species Scientific Name	Species English Name	Species Arabic Name	GF	Occurrence in Nature	Status		End	CD
						Abd 1	Abd 2		
Adiantaceae	<i>Adiantum capillus-veneris</i>	Southern Maidenhair Fern	كزبرة البئر	Annual	Wild	C	LC	-	MTD X
Aizoaceae	<i>Mesembryanthemum nodiflorum</i>	Egyptian Fig-Marigold	عنب سيدي موسى	Annual	Wild	C (Rare in Study area)	-	-	DX
Amaranthaceae	<i>Amaranthus blitoides</i>	Prostrate Pigweed	بقلة يمانية كاذبة، شدخ كاذب	Annual	Wild	CC	-	IM	MTD
	<i>Amaranthus viridis</i>	Least Amaranth	قطيفة نحيلة	Annual	Wild	C (Rare in Study area)	-	IM	MTD X
Amaryllidaceae	<i>Vagaria parviflora (pancratium parviflorum)</i>	Small- Flowered Pancratium	زنبقية الفناء/رجل الحمامة البيضاء	Perennial	Wild	F (Rare in study area)	LC	ES	M
Anacardiaceae	<i>Pistacia palaestina (terebinthus)</i>	Terebinth Tree	بطم فلسطيني	Tree	Wild	CC	-	-	M
	<i>Pistacia lentiscus</i>	Lentisk	سريس	Sub-Shrubs	Wild	CC	LC	-	M
	<i>Rhus coriaria</i>	Sumach	سماق	Tree	Wild	F (LD)	LC	-	M
Apocynaceae	<i>Nerium oleander</i>	Oleander	ورد الحمار/سم الحمار / دفل	Shrub	Wild	F (Rare in Study area)	LC	-	MTD
Araceae	<i>Arum Palaestinum</i>	Solomon's lily	لوف فلسطيني	Annual	Wild	C	-	-	MTD
	<i>Arisarum vulgare</i>	Friar's cowl	الصميعة	Perennial	Wild	C	-		M
	<i>Biarum angustatum</i>	Narrow Biarum	مكحلة الغول	Perennial	Wild	F(LD)	-	ET	MTD



	<i>Eminium spiculatum</i>	Thick Friar's cowl	صميعة ثخينة	Perennial	Wild	F	-	-	MTD
Aspleniaceae (سرخسية)	<i>Ceterach officinarum</i>	Scaly Spleenwort	شوكية نجمية	Perennial	Wild	C	-	-	MTD
Boraginaceae	<i>Alkanna strigosa</i>	Strigose Alkanet	حنائية شعرية	Sub-Shrubs	Wild	C	-	ET	MT
	<i>Anchusa aegyptiaca</i>	Egyptian Alkanet	حنائية مصرية (حمم مصري)	Annual	Wild	CC	-	-	MTD
	<i>Anchusa azurea (Anchusa italica)</i>	Large Blue Alkanet	ذنب القط	Perennial	Wild	C(LD)	-	-	M
	<i>Anchusa undulata (Anchusa hybrida)</i>	Common Alkanet	لسان الثور/ حنائية هجينة	Perennial	Wild	C (Rare in study area)	-	-	M
	<i>Anchusa strigosa</i>	strigose bugloss	حمم	Perennial	Wild	CC	-	-	MT
	<i>Asperugo procumbens</i>	German Madwort	مبشرة منسطة	Annual	Wild	C(LD)	-	-	TD
	<i>Cynoglossum creticum</i>	Blue Hound's Tongue	لسان الكلب	Perennial	Wild	C	-	-	M
	<i>Echium angustifolium</i>	Hispid Viper's Bugloss	اخيوم ضيق الورق	Sub-Shrub	Wild	CC	-	-	MT
	<i>Echium judaeum</i>	Judean Viper's Bugloss	دبوس الراعي (دبابيس الراعي) /حناء الضبع	Annual	Wild	CC	-	ES	MT
	<i>Heliotropium rotundifolium</i>	Round-Leaved Heliotrope	اكرير مستدير الورق	Sub-shrub	Wild	C	-	-	MTD
	<i>Nonea obtusifolia</i>	Blunt nonea	نونيا كليلة الورق/نونيا بليده	Annual	Wild	CC	-	-	MT
	<i>Nonea philistaea</i>	Palestinian Monkswort	نونيا فلسطينية	Annual	Wild	C(LD)	-	EP	M
<i>Onosma gigantea</i>	Giant Golden-Drop	انوزما عملاقة	Perennial	Wild	RR (LD)	-	-	MT	
<i>Podonosma orientalis ( Podonosma syriacum)</i>	Golden Drop	لزيقة صخور، مصيص	Perennial	Wild	CC	-	-	MT	

	<i>Symphytum brachycalyx (Palestina)</i>	Palestine Comfrey	ملتصقة فلسطينية/سمفائي قصيرة الكأس	Perennial	Wild	F	-	-	M
Caesalpiniaceae	<i>Ceratonia siliqua</i>	carob, St. John's-Bread	خروب	Tree	Wild	F	LC	-	MT
Campanulaceae	<i>Campanula hierosolymitana</i>	Jerusalem Bellflower	جريس القدس	Annual	Wild	C(LD)	-	EL	MT
	<i>Campanula rapunculus</i>	Rampion Bellflower	جرسية جدلة (تنشية)	Perennial	Wild	C	-	-	M
	<i>Campanula stellaris</i>	Starry Bellflower	جريس نجمي	Annual	Wild	C(LD)	-	EL	MT
	<i>Campanula strigosa</i>	Strigose Bellflower	جرسية شعرية	Annual	Wild	C (LD)	-	-	M
Capparaceae	<i>Capparis spinosa</i>	Common Caper	كبار شوكي	Shrub	Wild	C	-	-	MTD
Caprifoliceae	<i>Lonicera etrusca</i>	Italian Honeysuckle	علندة / سلطان الجل	Annual	Wild	C	-	-	M
Caryophyllaceae	<i>Arenaria leptoclados</i>	Lesser Thyme – leaved Sandwort	اريناريا رملية، رملية ناعمة	Annual	Wild	C	-	-	MTD
	<i>Cerastium dichotomum</i>	mouse-ear chickweed	قرناء ثنائية التشعب	Annual	Wild	F	-	-	MTD
	<i>Cerastium glomeratum (Cerastium viscosum)</i>	Sticky Mouse-Ear Chickweed	قرناء مجمعة	Annual	Wild	C (Rare in Study area)	-	-	M
	<i>Dianthus strictus</i>	Wild pink	قرنفل مرقط	Perennial	Wild	CC	-	-	MTD
	<i>Gypsophila pilosa</i>	Hairy Soapwort	جيسوفلا زغبية	Annual	Wild	RR (LD)	-	-	TD (حقول الزيتون )
	<i>Herniaria glabra</i>	Smooth Rupture-Wort	نورمان امرد	Annual	Wild	R (LD)	-	-	M
	<i>Paronychia argentea</i>	Silvery Whitlow Wort	عصا الراعي، رجل الحمامة الصخرية	Sub-shrubs	Wild	CC	-	-	MT
	<i>Silene aegyptiaca</i>	Egyptian Campion	عين البنت	Annual	Wild	CC	-	-	MT



	<i>Silene alexandrina ( Silene apetala)</i>	Apetala Campion	سيلينة إسكندرانية	Annual	Wild	F (Rare in Study area) (LD)	-	-	TD
	<i>Silene arabica</i>	Arabian Catchfly	سايلين عربي	Annual	Wild	R (NR)	-	-	DX
	<i>Silene colorata</i>	Cloven-Petalled Campion	سيلينة ملونة	Annual	Wild	CC	-	-	MTD
	<i>Silene coniflora</i>	Cone-Flowered Catchfly	سيلينة مخروطية الزهر	Annual	Wild	C(LD)	-	-	TD
	<i>Silene dichotom</i>		سيلينة	Perennial	Wild	F	-	-	MT
	<i>Silene rubella</i>	Reddish Catchfly	سيلينة محمرة/نشاش الذباب	Annual	Wild	R	-	-	M
	<i>Silene vulgaris</i>	White Bladder Campion	سايلين شائع	Perennial	Wild	F	LC	-	MTD
	<i>Spergularia bocconei</i>	Boccone's Spurrey	سبيرغولة بكون	Annual	Wild	RR(LD)	LC	-	MT
Chenopodiaceae	<i>Beta vulgaris</i>	White Beet	سلق شائع	Annual	wild	C	LC	-	MTD
	<i>Chenopodium album</i>	White Goosefoot	غبيرة بيضاء	Annual	Wild	CC	-	-	MTD X
	<i>Chenopodium murale</i>	Nettle-Leaved Goosefoot	غبيرة المزابل	Annual	Wild	CC	-	-	MTD X
Cistaceae	<i>Cistus creticus (incanus)</i>	Soft-hairy Rockrose	اللباد الوردي (هنبل)	Sub-shrubs	Wild	CC	-	-	MDX
	<i>Cistus salviifolius</i>	Sage-leaved rockrose	ليبد ابيض	Sub-shrubs	Wild	CC	-	-	MDX
	<i>Fumana thymifolia</i>	Clammy Cistus	فومانيا/ دخانية زعترية	Sub-shrubs	Wild	C	-	-	MT
	<i>Fumana arabica</i>	Arabian Cistus	فومانيا عربية/دخانية عربية	Sub-shrubs	Wild	C	-	-	M
	<i>Helianthemum aegyptiacum</i>	Egyptian Sun-Rose	مداهين مصري	Annual	Wild	C	-	-	MT

	<i>Helianthemum salicifolium</i>	Willow-Leaved Sun-Rose	مداهين صفصافي الورق/جريد	Annual	Wild	CC	-	-	MTD
	<i>Helianthemum ventosum</i>	Egyptian sunrose	زهرة الشمس	Annual	Wild	C	-	-	MT
Colchicaceae	<i>Colchicum hierosolymitanum</i>	Jerusalem Colchicum	الودع المقدس	Annual	Wild	R	-	ET	M
Compositae	<i>Anthemis bornmuelleri</i>	-----	اقحوان تقليدي	Annual	Wild	CC	-	ES	M
	<i>Anthemis hebronica</i>	Hebron Chamomile	اقحوان الخليل	Annual	Wild	CC	-	-	T
	<i>Anthemis pseudocotula</i>	Common Chamomile	اقحوان كاذب	Annual	Wild	CC	-	-	MTD
	<i>Artemisia arborescens</i>	Shrubby Wormwood	شبيهه (شبح شجيري)	Sub-shrubs	Planted	-	-	II	M
	<i>Asteriscus aquaticus</i>	Sweet Scented Oxeye	قصاص طويلة	Annual	Wild	F	-	-	MT
	<i>Atractylis cancellata</i>	Netted Distaff Thistle	اداد شبكي/ام ضرس	Annual	Wild	C	-	-	MT
	<i>Bellis sylvestris</i>	Southern Daisy	عروس الغابة/حنونة البور	Perennial	Wild	C	-	-	M
	<i>Calendula arvensis</i>	Field Marigold	اذريون الحقول	Annual	Wild	CC	-	-	MTD X
	<i>Calendula palaestina</i>	Palestine Marigold	ذريون فلسطيني (عين القط)	Annual	Wild	C (LD)	-	EL	M
	<i>Carduus argentatus</i>	Silvery Thistle	كردوس فضي/شوك عنتر/خرفيش صغير	Annual	Wild	CC	-	-	MTD
	<i>Carduus australis</i>	Italian thistle	خرفيش استرالي، لسان غليظ الرأس	Annual	Wild	R (LD)	-	-	M
<i>Carlina curetum (Carlina involucrata var. joppensis)</i>	Involucrate Carline Thistle	شوك البان الأخضر	Perennial	Wild	CC	-	-	M	



<i>Carlina hispanica</i> ( <i>Carlina corymbosa</i> )	Spanish Carline Thistle	شوك البان الأحمر	Perennial	Wild	CC	-	-	MTD
<i>Carthamus tenuis</i>	Slender safflower	قوص	Annual	Wild	CC	-	-	MT
<i>Centaurea cyanooides</i>	Syrian Cornflower	يمرور ازرق	Annual	Wild	C(LD)	-	ES	M
<i>Centaurea hyalolepis</i>	Knapweed, Cornflower	مرار شفاف	Annual	Wild	CC	-	-	MTD
<i>Chiliadenus iphionoides</i> ( <i>Vartbemia iphionoides</i> )		كتيله	Annual	Wild	CC	-	-	MTD
<i>Conyza albida</i>	White Horseweed	نشاش ابيض	Annual	Wild	C	-	IM	MT
<i>Conyza bonariensis</i>	Horseweed	نشاش صادق	Annual	Wild	CC	-	IM	MTD
<i>Conyza canadensis</i>	Canadian Fleabane	نشاش كندي	Annual	Wild	C	-	IM	MTD
<i>Crepis hierosolymitana</i>	Jerusalem Hawk's Beard	سراغة مقدسية	Perennial	Wild	C	-	-	M
<i>Crepis palaestina</i>	Palestinian Hawk's Beard	سراغة فلسطينية	Annual	Wild	C	-	-	MT
<i>Crepis sancta</i>	hawk'sbeard	خفية مقدسة	Annual	Wild	CC	-	-	MTD X
<i>Dittrichia viscosa</i> ( <i>Inula viscosa</i> )	Clammy Inula	طيون	Sub-shrubs	Wild	CC	-	-	MTD
<i>Echinops adenocaulos</i>	Common Globe-Tistle	قنفذي أدني الساق	Perennial	Wild	CC	-	-	MT
<i>Echinops polyceras</i>	Blanche Globe-Thistle	شوك الجمال	Perennial	Wild	CC	-	-	DX
<i>Filago pyramidata</i>	Broad-Leaved Cudweed	قطينة هرمية	Annual	Wild	CC	-	-	MTD
<i>Geropogon hybridus</i>	Goat's Beard	ذنب الفرس المهجنة	Annual	Wild	CC	-	-	MT
<i>Glebionis coronarium</i> ( <i>Chrysanthemum coronarium</i> )	Crown Daisy	اقحوان تاجي	Annual	Wild	CC	-	-	MTD X
<i>Hedypnois rhabadioloides</i>	Cretanweed or Scaly Hawkbit	شفيرة	Annual	Wild	CC	-	-	MTD



<i>Helichrysum sanguineum</i>	Red Everlasting	دم الغزال، دم المسيح	Perennial	Wild	C	-	-	M
<i>Helminthotheca echioides</i>	Bristly Ox-Tongue	دويده وخرازه	Annual	Wild	C (LD)	-	-	M
<i>Ifloga spicata</i>	Spiked Ifloga	كريشة الجدي	Annual	Wild	C (NR)	-		MTD X
<i>Lactuca tuberosa</i>	Tuberous Lettuce	خس أكل	Perennial	Wild	C	-	-	-
<i>Lactuca undulata</i>	Wild Lettuce	خس متموج	Annual	Wild	RR (LD)	-	-	M
<i>Lactuca saligna</i>	Least Lettuce	خس حمير	Annual	Wild	C	-		MT
<i>Logfia gallica (Filago gallica)</i>	Narrow Leaved Cudweed	قطينة فرنسية	Annual	Wild	F	-	-	M
<i>Matricaria aurea</i>	Golden Cotula	بابونج عطري	Annual	Wild	C(LD)	-	-	MTD
<i>Notobasis syriaca</i>	Syrian Thistle	خرفيش داكن	Annual	Wild	CC	-	-	MT
<i>Onopordum carduiforme (Onopordum telavivense)</i>	False Plumed-Thistle	خرفيش ابيض/بنفسجي	Perennial	Wild	RP	-	EP	MT
<i>Pallenis spinosa (Asteriscus spinosus)</i>	Starwort	دبوه شوكية	Perennial	Wild	C	-	-	MTD
<i>Phagnalon rupestre</i>	African Fleabane	صوفان	Sub-shrub	Wild	C	-	-	MTD
<i>Picnomon acarna</i>	Yellow Plume Thistle	شوك الفأر	Annual	Wild	C	-	-	MT
<i>Picris altissima</i>	Yellow Succory	مرير شاهق	Annual	Wild	CC	-	-	M
<i>Pulicaria arabica</i>	Arabian Fleabane	رعاية عربية/أبو عين اصفر	Annual	Wild	F	LC	-	MT
<i>Reichardia tingitana</i>	Poppy -Leaved Reichardia	جلاويل	Annual	Wild	CC	-	-	DX
<i>Rhagadiolus stellatus</i>	Star Hawkbit	رغدة نجمية	Annual	Wild	CC	-	-	MTD
<i>Scorzonera papposa</i>	Oriental Viper's Grass	ذبح	Perennial	Wild	C	-	-	MTD





	<i>Senecio leucanthemifolius subsp vernalis</i>	Spring Groundsel	صفيير /بيسوم ربييعي /شرونه ربييعية	Annual	Wild	CC	-	-	OMT
	<i>Silybum marianum</i>	Holy Thistle	خرفيش	Annual	Wild	CC	-	-	MT
	<i>Sonchus oleraceus</i>	Common Sow- Thistle	جعضيض	Annual	Wild	CC	-	-	MTD X
	<i>Taraxacum cyprium</i>	Fall Dandelion	سلطة الرهبان	Perennial	Wild	F	-	-	M
	<i>Thrinicia tuberosa</i>	Bulbous Dandelion	كتيمه	Perennial	Wild	CC	-	-	MT
	<i>Tolpis virgata</i>	Rush Hawkweed	فيقوع قضيبي	Perennial	Wild	CC	-	-	OMT
	<i>Tragopogon coelestriacus</i>	Long-Beaked Goat's Beard	لحية التيس الطويلة	Sub-shrubs	Wild	C	-	-	MT
	<i>Urospermum picroides</i>	Prickly Cupped Goat's Beard	مذنبه مريرة	annual	wild	CC	-	-	MTD
	<i>Volutaria crupinoides</i> ( <i>Amberboa crupinoides</i> )	-----	يمرورية	Annual	Wild	F (NR)	-	-	DX
Convolvulaceae	<i>Convolvulus althaeoides</i>	Mallow-Leaved Bindweed	مداده مهبولة	Perennial	Wild	C	-	-	MTD
	<i>Convolvulus arvensis</i>	Corn blind	مدادة الحقول	Annual	Wild	CC	-	-	MTD
	<i>Cuscuta campestris</i>	Field Dodder	حامول	Annual (parasite, climber plant)	Wild	F	IM (دخلية من مصر مع بذور نبات الملوخية)	-	MT
Crassulaceae	<i>Umbilicus intermedius</i>	Common Pennywort	مخلدة	Perennial	Wild	F	-	-	MTD, hard rocks
	<i>Sedum sediforme</i>	Tall Stoncrop	شبه عنب سيدي موسى	Sub-shrubs	Wild	F	-	-	M



Cruciferae	<i>Aethionema heterocarpum</i>	Burnt Candytuft	اثيونيمة متغايرة التمر	Annual	Wild	C	-	-	MT
	<i>Alyssum strigosum</i>	strigose madwort	الوسن ستربرني	Annual	Wild	CC	-	-	M
	<i>Biscutella didyma</i>	Buckler Mustard	بسكوتية مزدوجة	Annual	Wild	CC	-	-	MTD
	<i>Brassica nigra</i>	Black Mustard	خردل اسود/ليبسان	Annual	Wild	F (Rare in study area)	-	-	M
	<i>Cardaria draba</i>	Heart-Podded Hoary Cress	قنبيرة	Perennial	Wild	CC	-	-	MTD
	<i>Carrichtera annua</i>	Cress-Rocket	كرشتيرة حولية	Annual	Wild	C	-	-	TDX
	<i>Chlypeola aspera</i>	Spiny Treacle Mustard	تريس	Annual	Wild	C(LD)	-	-	TD
	<i>Crambe hispanica</i>	Spanish Seakale	كرب اسباني	Annual	Wild	F	-	-	MT
	<i>Diplotaxis erucoides</i>	White Wall Rocket	خفج جرجيري، حارة جرجيرية	Annual	Wild	C	-	-	MTD X
	<i>Eruca sativa</i>	Garden Rocket	جرجير بري	Annual	Wild	C (Rare in the study area)	-	-	MT
	<i>Erucaria hispanica</i>	Spanish Pink Mustard	سليح اسباني	Annual	Wild	C	-	-	MT
	<i>Erysimum crassipes</i>	Blister Cress	اريسموم ثخين الزنيدي	Perennial	Wild	C(LD)	-	-	MT
	<i>Hirschfeldia incana</i>	Hoary Mustard	لفيته	Annual	Wild	CC	-	-	MT
	<i>Leptaleum filifolium</i>	-----	حولية	Annual	Wild	F (NR)	-	-	DX
	<i>Lobularia arabica</i>	-----	فصيفصية عربية	Annual	Wild	F	-	-	DX
<i>Malcolmia crenulata</i>	Common Malcolmia	ملكلمية مفرضة	Annual	Wild	C(LD)	-	-	MT	
<i>Nasturtium officinale</i>	True Water-Cress	جرجير الماء	Perennial	Wild	C (Rare in study area)	-	-	MT	



	<i>Neslia apiculata</i>	Ball Mustard	نيسيلية مسترقة	Annual	Wild	F	-	-	MT
	<i>Ochthodium aegyptiacum</i>	Egyptian Gold-of-Pleasure	اخطديوم مصري	Annual	Wild	C (Rare in study area)	-	-	M
	<i>Raphanus rostratus</i>	Beaked Radish	فجل منقاري	Annual	Wild	F (NR)	-	-	M
	<i>Sinapis alba</i>	White Mustard	خردل ابيض	Annual	Wild	CC	-	-	MT
	<i>Sinapis arvensis</i>	Charlock	خردل بري	Annual	Wild	CC	-	-	MT
	<i>Sisymbrium irio</i>	London rocket	حوية / سمارة رثة	Annual	Wild	C (Rare in Study area)	-	-	MTD X
	<i>Thlaspi perfoliatum</i>	Perfoliate Penny-Cress	ثلسبي مخروق	Annual	Wild	CC	-	-	MT
Cucurbitaceae	<i>Bryonia syriaca</i>	Syrian Bryony	بطيخ افاعي سوري	Annual	Wild	C	-	-	M
	<i>Ecballium elaterium</i>	Squirting Cucumber	قتاء الحمار	Perennial	Wild	C	-	-	MT
Cupressaceae	<i>Cupressus sempervirens</i>	Cypress	سرو	Tree	Wild	C	LC	-	M
Dipsacaceae	<i>Cephalaria syriaca</i>	Syrian Scabious	سيوان رأسي/كروان رأسي	Annual	Wild	RP	-	-	T
	<i>Lomelosia prolifera</i> ( <i>Scabiosa prolifera</i> )	Prolific Scabious	كعب الغزال	Annual	Wild	C	-	-	M
	<i>Pterocephalus brevis</i>	Short Winghead	عقس قصير	Annual	Wild	CC	-	-	MT
	<i>Pterocephalus plumosus</i>	Plumed Scabious	عقس ريشي	Annual	Wild	C	-	-	MTD
Ephedraceae	<i>Ephedra aphylla</i>	Leafy Shrubby-Horsetail	علا لاورقي	Shrub	Wild	C	LC	-	MTD X
	<i>Ephedra foeminea</i>	Leafless Shrubby Horsetail	علا صغير الثمرة	Shrub	Wild	C	LC	-	MTD
Ericaceae	<i>Arbutus andrachne</i>	Eastern Strawberry tree	قطلب او قاتل ابيه	Tree	Wild	C	LC	-	M



Euphorbiaceae	<i>Andrachne telephioides</i>	Bastard Orpine	نباده، كماش	Sub- shrub	Wild	F	-	-	MTD
	<i>Chrozophora tinctoria</i>	Dye's Litmus Plant	عباد الشمس النيلي	Annual	Wild	C	LC	-	MTD
	<i>Euphorbia chamaesyce</i>	Crenated Annual Spurge	تين الأرض	Annual	Wild	F (Rare in study area)	-	-	MTD
	<i>Euphorbia belioscopia</i>	Sun Spurge	ام اللبن الشمية/ام اللبن الفجر	Annual	Wild	C	-	-	MT
	<i>Euphorbia hierosolymitana</i>	Woody Spruge	ام اللبن المقدسية	Sub-Shrub	Wild	C	-	-	MTX
	<i>Euphorbia hirta (Euphorbia pilulifera)</i>	Garden Spurge	لبين	Annual	Wild	F (Rare in study area)	-	IF	M
	<i>Mercurialis annua</i>	Annual Mercury	حلبوب حولي	Annual	Wild	CC	-	-	MT
Fagaceae	<i>Quercus calliprinos</i>	Kermes Oak	بلوط	Tree	Wild	CC	-	-	M
Fumariaceae	<i>Fumaria parviflora</i>	Small-Flowered Fumitory	شاهترج حقول	Annual	Wild	C (Rare in study area)	-	-	M
Geraniaceae	<i>Erodium acaule</i>	Roman Stork's-Bill	ابرة عجوز مستدقة (صغيرة)	Perennial	Wild	R	-	-	M
	<i>Erodium ciconium</i>	Long- Beaked Stork's Bill	مسلة العجوز	Annual	Wild	F (Rare in study area)	-	-	MTD
	<i>Erodium gruinum</i>	Crane Stork's Bill	ابرة العجوز الكبيرة	Annual	Wild	CC	-	-	MT
	<i>Erodium malacoides</i>	Mallow Stork's - Bill	ابرة العجوز الصغيرة	Annual	Wild	CC	-	-	MT
	<i>Erodium moschatum</i>	Musk stork's-Bill	ابرة عجوز مسكين	Annual	Wild	CC	-	-	MT
	<i>Erodium cicutarium</i>	Common Stork's-Bill	جزاب شوكراني/دردر	Annual	Wild	C (LD)	-	-	MT
	<i>Erodium laciniatum</i>	Cut-Leaved Stork's- Bill	جزاب مشرشر	Annual	Wild	C (Rare in study area)	-	-	MTD X



	<i>Geranium dissectum</i>	Cut-Leaved Crane's-Bill	غرناقوي مقطع	Annual	Wild	F (Rare in study area)	-	-	M
	<i>Geranium molle</i>	Doves's-Foot Crane's-Bill	ابرة صغيرة لينة	Annual	Wild	CC	-	-	MT
	<i>Geranium robertianum</i>	Purple Crane's-Bill	ابرة الراهب	Annual	Wild	C	-	-	M
	<i>Geranium rotundifolium</i>	Round-Leaved Crane's-Bill	غرناقوي مستدير الورق/يمان	Annual	Wild	C	-	-	MT
	<i>Geranium tuberosum</i>	Tuberous Crane's-Bill	غرناقوي عسقولي	Perennial	Wild	C(LD)	-	-	MTD
Gramineae	<i>Aegilops geniculata</i>	Ovate Goatgrass	ثرغول	Annual	Wild	CC	LC	-	MTD
	<i>Aegilops peregrina</i>	Goatgrass	ثرغول رحال	Annual	Wild	CC	LC	-	MT
	<i>Alopecurus myosuroides</i>	Mouse Foxtail	ذنب الفأر	Annual	Wild	F	-	-	M
	<i>Andropogon distachyos</i>	Two-spiked beard-grass	سنام	Perennial	Wild	C	-	-	M
	<i>Avena barbata</i>	Slender Oat	شوفان ملتج/شعيرة	Annual	Wild	CC	-	-	MT
	<i>Avena sterilis</i>	Wild Oat	شوفان عقيم	Annual	Wild	CC	LC	-	MTD X
	<i>Brachypodium distachyon</i>	Purple False- Brome	قضبان قصير	Annual	Wild	CC	-	-	MTD X
	<i>Briza maxima</i>	Large Quaking Grass	قصفة كبيرة	Annual	Wild	C	-	-	MT
	<i>Bromus scoparius</i>	Twiggy brome	خافورة مكنسية	Annual	Wild	C	-	-	MTD
	<i>Bromus sterilis</i>	Barren Brome	خافورة عقيمة	Annual	Wild	C	-	-	M
	<i>Bromus tectorum</i>	Wall Brome Grass	خافورة متدليلة	Annual	Wild	C	-	-	MTD X
	<i>Catapodium rigidum</i>	Hard Meadow Grass	كتبديوم قاس	Annual	Wild	CC	LC	-	MTD
	<i>Crithopsis delileana</i>	False Barley	كرثبسيس دليل	Annual	Wild	C	-	-	MTD



<i>Dactylis glomerata</i>	Rough Cock's-foot	إصبعية عنقودية (مجتمعة)/صبورة الجيل	Perennial	Wild	CC	-	-	MT
<i>Hordeum bulbosum</i>	Bulbous Barley	شعير معمر، شعير بصلي	Perennial	Wild	CC	LC	-	MT
<i>Hordeum glaucum</i>	Wall Barley	شعير زغبى	Annual	Wild	CC	-	-	MTD
<i>Hordeum marinum</i>	Sea Barley	شعير الديب	Annual	Wild	C (Rare in study area)	LC	-	MT
<i>Hordeum spontaneum</i>	Wild Barley	شعير ابلبس/شعير برى	Annual	Wild	CC	-	-	OMT DX
<i>Hyparrhenia birta</i>	Hairy Beard-Grass	حمرور أشعر (حجر زغبى)	Perennial	Wild	CC	-	-	MTD X
<i>Lamarckia aurea</i>	Golden Dog's Tail	مشعرة ذهبية	Annual	Wild	C(LD)	-	-	MTD
<i>Phalaris aquatica (tuberosa)</i>	Tuberous Canary Grass	قرا، حشيشة الكناري المعمرة	perennial	Wild	F	-	-	MT
<i>Phalaris paradoxa</i>	Bristle-Spiked Canary Grass	بشنة متناقضة/خرفار	Annual	Wild	C	-	-	MT
<i>Piptatherum blancheanum</i> ( <i>Oryzopsis caerulescens</i> )	Bluish Mountain- Rice	خافورة بيضاء	perennial	Wild	F	-	-	M
<i>Piptatherum miliaceum</i>	Many-Flowered Millet Grass	مكنسة برية	Perennial	Wild	CC	-	-	MTD
<i>Poa bulbosa</i>	Bulbous Meadow Grass	نزع، زعزاع	Perennial	Wild	CC	-	-	MT
<i>Poa trivialis</i>	Rough Meadow Grass	نزع مبدول (زعزاع مبدول)	Perennial	Wild	R (NR)	-	-	MT (humid habitats)
<i>Polypogon monspeliensis</i>	Annual Beardgrass	ذيل الثعلب	Annual	Wild	C (Rare in study area)	LC	-	MTD X



	<i>Polygogon viridis</i>	Waterbent	شعر الفأر الأخضر	Perennial	Wild	F	LC	-	MTD
	<i>Rostraria smyrnacea</i> ( <i>Lophocbloa berythea</i> )	Timothy Hair-Grass, Cat's-Tail	منقارية أزميرية	Annual	Wild	C	-	-	M
	<i>Stipa capensis</i>	Twisted-Awned Spear-Grass	حلفاء الرأس/صمعاء	Annual	Wild	CC	-	-	MTD X
	<i>Trisetaria macrochaeta</i>			Annual	Wild	C (LD)	-	-	D
	<i>Vulpia ciliata</i>	Ciliate Fescue	ثعلبية مهدبة	Annual	wild	F	-	-	MT
Hypericaceae	<i>Hypericum triquetrifolium</i>	Curled-Leaves St. John's-Wort	دادي مثلث الورق	Perennial	Wild	CC	-	-	MT
Iridaceae	<i>Crocus hyemalis</i>	Winter crocus	زعفران	Annual	Wild	C	LC	ES	M
	<i>Moraea sisyrinchium</i> ( <i>Gynandris sisyrinchium</i> )	Barbary Nut, crocus rooted iris	سوسن الخنازير، شعبي، خيطة	Perennial	Wild	CC	-	-	MT
	<i>Gladiolus italicus</i>	Common Gladiolus	سيف القمح	Perennial	Wild	F	LC	-	MT
Labiatae	<i>Ajuga chamaepitys</i>	Chian Bugle	عرصف محلي	Sub-shrub	Wild	CC	-	-	MTD
	<i>Ballota saxatilis</i>	Rock horehound	الدانة الصخرية	Sub-shrub	Wild	C	-	-	M
	<i>Clinopodium insulare</i> ( <i>Calamintha incana</i> )	Grey Calamint	كلمنتة مبيضة	Shrub	Wild	R	-	-	MT
	<i>Coridothymus capitatus</i>	Headed Thyme	زحيف	Sub-shrub	Wild	CC	-	-	M
	<i>Eremostachys laciniata</i>	Desert Spike	صوفية	Perennial	Wild	F	-	-	MTD
	<i>Lamium amplexicaule</i>	Henbit dead-nettle	مقاصيص الجارية/رأس المهر	Annual	Wild	C	-	-	MT
	<i>Lamium moschatum</i>	Musk Deadnettle	خوذية بيضاء/برج الحمام	Annual	Wild	F	-	-	M
	<i>Majorana syriaca</i> ( <i>Origanum syriacum</i> )	Wild Marjoram, wild thyme	زعتري بري	Sub-shrub	Wild	C	-	-	MTD





<i>Mentha longifolia</i>	Horse mint	نعنع طويل	Perennial	Wild	C ( Rare study Rare in area)	LC	-	MTD X
<i>Micromeria nervosa</i>	Round-leaved mint	شمسية معرقة، زعتر عراق، زعتر ناعم	Perennial	Wild	C	-	-	MT
<i>Moluccella spinosa</i>	Prickly Molucca Balm	ذنبية شائكة	Annual	Wild	C (LD)	-	-	M
<i>Nepeta curviflora</i>	Syrian Cantip	قطرم مقوس الزهر	Sub-shrubs	Wild	C (LD)	-	-	M
<i>Phlomis viscosa</i>	Shrubby Phlomis	ضرس الشايب الاصفر	Shrub	Wild	C	-	-	M
<i>Prasium majus</i>	Great Hedge-Nettle	فرسيون كبير	Annual	Wild	CC	-	-	M
<i>Salvia ceratophylla</i>	Horn-Leaved Sage	مرمية قرنية، قصعين قرني الاوراق	Perennial	Wild	RR (LD)	-	-	D
<i>Salvia dominica</i>	Dominica sage	ميرمية سائدة	Sub-shrub	Wild	C	-	-	MT
<i>Salvia fruticosa</i>	Three-Leafed Sage	مرمية لبنان، قصعين لبنان، قصعين مخشوشب	Sub-shrub	Wild	CC	-	-	M
<i>Salvia hierosolymitana</i>	Jerusalem Sage	قصعين مقدسي، مرمية مقدسة	Perennial	Wild	C (LD)	-	ES	M
<i>Salvia indica</i>	Large Flowered Sage (Blue Sage)	قصعين هندي	Perennial	Wild	R	-	-	M
<i>Salvia judaica</i>	Judean sage	ميرمية جبال القدس	Perennial	Wild	C	-	ES	M
<i>Salvia palaestina</i>	Palestine sage	ورق اللسان (اللسيتة)	Perennial	Wild	RP	-	-	MTD



	<i>Salvia pinnata</i>	Cut-Leaved Sage	قصعين ريبي	Perennial	Wild	C(LD)	-	ET	MT
	<i>Salvia verbenaca</i>	Vervain Sage	لسان الثور حمامي	Annual	Wild	C	-	-	M
	<i>Salvia viridis</i>	Common Sage	مردقوش احمر	Annual	Wild	CC	-	-	MT
	<i>Sideritis perfoliata</i>	Perfoliate Ironwort	فقاح مخروق /طرنجان	Perennial	Wild	C	-	-	M
	<i>Teucrium capitatum</i>	Cat Thyme Germander	جعدة شائعة	Sub-shrub	Wild	CC	-	-	MTD
	<i>Teucrium creticum</i>	Cretan Germander	جعدة قمية	Sub-shrubs	Wild	C(LD)	-	-	M
	<i>Teucrium divaricatum</i>	Hedge Germander	كمندرة	Sub-shrubs	Wild	C	-	-	M
	<i>Thymbra spicata</i>	Spiked Thymbra	زعترا سبل	Sub-shrubs	Wild	F	-	-	M
Liliaceae	<i>Asphodeline lutea</i>	King's spear	عنصل كبير	Annual	Wild	F (Rare in study area)	-	-	MTD
	<i>Asphodelus ramosus</i>	Yellow Asphodel	عنصل صغير	Perennial	Wild	CC	-	-	MD
	<i>Asparagus aphyllus</i>	Prickly Asparagus	هليون الحرش (الاورقي)	Perennial	Wild	CC	LC	-	MT
	<i>Allium trifoliatum (Allium subhirsutum)</i>	Hirsute Garlic	ثوم صخري	Perennial	Wild	C (LD)	-	-	M
	<i>Allium neapolitanum</i>	Naple's Garlic	ثوم بري	Perennial	Wild	C	DD	-	M
	<i>Allium israeliticum (Allium orientale)</i>	Oriental Garlic	ثوم شرقي	Perennial	Wild	F	-	-	T
	<i>Bellevalia eigii</i>	Eig's Roman Squill	بصيلة ايج	Perennial	Wild	F	-	EE	TD
	<i>Bellevalia flexuosa</i>	Common Roman Squill	بصيلة الفأر	Perennial	Wild	CC	-	ES	M
	<i>Gagea commutata</i>	Star of Bethlehem	ذهبية شائعة/نجمة بيت لحم	Perennial	Wild	C	LC		MT
	<i>Muscari neglectum</i>	Common Grape Hyacinth	بلبوس جميل	Perennial	Wild	F	-	-	MT



	<i>Smilax aspera</i>	Rough Binweed	عليق	Perennial	Wild	CC	-	-	M
	<i>Urginea maritima</i>	Sea Squill	بصيل الفار	Perennial	Wild	CC	-	-	MTD X
Linaceae	<i>Linum bienne</i>	Pale-Flowered Flax	كتان محول	Annual	Wild	F	-	-	M
Malvaceae	<i>Alcea acaulis</i>	Stemless hollyhock	ختمية شوكية	Annual	Wild	C	-	-	MTD
	<i>Alcea setosa</i>	Bristly Hollyhock	ختمية/ورد الحصان	Perennial	Wild	C	-	-	MT
	<i>Malva nicaeensis</i>	Nice Mallow	خبيزة نيس	Annual	Wild	C	-	-	MTD
	<i>Malva parviflora</i>	Small- Flowered Mallow	خبيزة الحقول	Annual	Wild	CC	-	-	TDX
	<i>Malvella sherardiana</i>	Sherard's Malvella	خبببيرة شررد	Perennial	Wild	F	-	-	MT
Moraceae	<i>Ficus carica</i>	Fig tree	شجرة التين	Tree	Planted	C	LC	-	MTD
Oleaceae	<i>Olea europaea</i>	Olive tree	زيتون	Tree	Planted (some reseeded)	C(LD)	-	-	M
Orchidaceae	<i>Anacamptis papilionacea</i> ( <i>Orchis papilionacea</i> )	Pink Butterfly Orchid	سحلبية فراشية	Perennial	Wild	C	-	-	M
	<i>Anacamptis pyramidalis</i>	Pyramidal orchid	سحلب هرمي	Perennial	Wild	F	-	-	M
	<i>Ophrys iricolor</i>	Iris Coloured Bee Orchid	نحلة زرقاوية/حاجبية زرقاء	Perennial	Wild	RP	-	-	M
	<i>Ophrys israelitica</i> ( <i>Ophrys fleischmannii</i> )	Tawny Bee-Orchid	حاجبية سمراء	Perennial	Wild	F (LD)	-	-	M
	<i>Ophrys sphagodes</i> ( <i>ophrys transhyrcana</i> )	Early spider-orchid	حاجبية دبورية	Perennial	Wild	R	-	-	M
	<i>Orchis anatolica</i>	Anatolian Orchid	سحلب الاناضول	Perennial	Wild	F(LD)	LC	-	M
	<i>Orchis galilaea</i>	Galilee Orchid	سحلب الجليل	Perennial	Wild	F	LC	-	M



	<i>Orchis tridentata</i>	Toothed Orchid	سحلب مسنن	Perennial	Wild	C	-	-	M
Oxalidaceae	<i>Oxalis pes-caprae</i>	Nodding Wood-Sorrel	عرف الليمون الكبير	Perennial	Wild	C (LD) - exotic	-	-	M
Ranunculaceae	<i>Adonis microcarpa</i>	Small Pheasant's Eye	ادونيس صغير الثمر	Annual	Wild	C	-	-	MT
	<i>Anemone coronaria</i>	Crown Anemone	شقائق النعمان	Perennial	Wild	CC	-	-	MTD
	<i>Clematis Cirrbosa</i>	Virgin's-Bower	حبل المسك	Annual	Wild	C	-	-	M
	<i>Clematis flammula</i>	Fragrant Clematis	عبق الملك (معلی)	Annual	Wild	R	-	-	M
	<i>Ranunculus arvensis</i>	Corn Buttercup	برقوق الحقول (برواق الحقول)	Annual	Wild	C	-	-	MT
	<i>Ranunculus asiaticus</i>	Turban Buttercup	كف الضيع (حنون احمر شائع) /برقوق	Perennial	Wild	CC	-	-	MTD
	<i>Ranunculus scardicinus</i> ( <i>Ranunculus marginatus</i> )	Shepherd's- needle buttercup, Crowfoot	برواق اصفر/برواق هامش	Annual	Wild	C	-	-	M
Resedaceae	<i>Reseda alba</i>	White mignonette	ذيل الخروف / البليحاء البيضاء	Annual	Wild	C	-	-	MT
	<i>Reseda alopecuros</i>	Fox Mignonette	بليحاء الثعلب	Annual	Wild	R	-	EP	MT
	<i>Reseda lutea</i>	Yellow Mignonette	البليحاء صفراء/حصادة	Perennial	Wild	F	-	-	MTD X
Rhamnaceae	<i>Rhamnus lycioides (palaestinus)</i>	Palestine Buckthorn	سويد فلسطيني	Shrub	Wild	C	-	-	MTD
Rosaceae	<i>Amygdalus communis</i>	Common Almond	لوز بري	Tree	Planted (some reseeding)	C	-	-	MT
	<i>Crataegus aronia</i>	Spiny Hawthorn	زعرور أصفر	Tree	wild	C	LC	-	MDX
	<i>Sarcopoterium spinosum</i>	Prickly Burnet	التش، البلان	Sub-shrub	Wild	CC	-	-	MT



	<i>Pyrus syriaca</i>	Syrian pear	انجاص بري (كمتري سورية)	Tree	Wild	F(LD)	LC	-	M
	<i>Pyrus communis</i>	Common Pear, European Pear	اجاص الاوروبي، الكمتري	Tree	Planted	-	-	-	M
	<i>Rubia tenuifolia</i>	Narrow – Leaved Madder	الفوية	Shrub	Wild	C	-	-	MT
	<i>Rubus sanctus</i>	Holy Bramble	عليق مقدس	Shrub	Wild	F (Rare in study area))	-	-	MX
Rubiaceae	<i>Galium murale</i>	Wall Bedstraw	لزيقة الحقول/دييقة الحقول	Annual	Wild	C	-	-	MT
	<i>Galium tricoratum</i>	Roug-Fruited Bedstraw	غالوم	Annual	Wild	C(LD)	-	-	M
	<i>Crucianella macrostachya</i>	Common Crosswort	صليبية كبيرة السنابل	Annual	Wild	CC	-	-	MT
Papaveraceae	<i>Papaver hybridum</i>	Prickly Round- Headed Poppy	خشخاش هجين	Annual	Wild	C	-	-	MTD X
	<i>Papaver umbonatum</i> ( <i>Papaver subpiriforme</i> )	Corn Poppy	بخيطة كمتريية	Annual	wild	CC	-	-	MT
Papilionaceae	<i>Anagyris foetida</i>	Bean Trefoil	خروب الكلاب، لتين، جرود	Shrub	Wild	F	-	-	MT
	<i>Astragalus asterias</i> ( <i>Astragalus cruciatus</i> )	Cross Milk-Vetch	كدس نجمي	Annual	Wild	C	-	-	TDX
	<i>Astragalus hamosus</i>	Dwarf Yellow Milk- Vetch	كدس حمص	Annual	Wild	C	-	-	MT
	<i>Astragalus pelecinus</i> ( <i>Biserrula pelecinus</i> )	Common Hatchet Vetch	منشارية بلكينس	Annual	Wild	F	-	-	MT
	<i>Astragalus caprinus</i>	Beer-sheva Milk- Vetch	كدس الماعز	Perennial	Wild	F (Rare in study area)	-	-	D



<i>Astragalus tribuloides</i>	Caltrop Milk-Vetch	كدس ممتحن/كدس اشعر الاجنحة	Annual	Wild	C (Rare in study area))	LC	-	DX
<i>Bituminaria bituminosa</i>	Bitumen Trefoil	العنان	Perennial	Wild	C	-	MT	
<i>Calicotome villosa</i>	Spiny Broom	قنديل (قندول)	Shrub	Wild	CC	-	MT	
<i>Coronilla scorpioides</i>	Scorpion Vetch	اكليل عقربي	Annual	Wild	F	-	MTD X	
<i>Hippocrepis unisiliquosa</i>	Common Horse-Shoe Vetch	تخنن احادي الخردل	Annual	Wild	CC	-	MTD X	
<i>Hymenocarpus cirinnatus</i>	Spanish Medick	خبز محلق (حولي)	Annual	Wild	CC	-	MT	
<i>Lathyrus aphaca</i>	Yellow Vetchling	البازيلاء البرية، جلبان عفقة، بريد حيايا	Annual	Wild	CC	-	MT	
<i>Lathyrus hierosolymitanus</i>	Jerusalem Vetchling	سعيسة مقدسية	Annual	Wild	C	-	M	
<i>Lathyrus pseudocicera</i>	Nerved Vetchling	جلبان كاذب	Annual	Wild	F	-	TD	
<i>Lotus peregrinus</i>	Flat – Podded Bird's Foot Trefoil	قرن الغزال أصفر لوتوس رحال	Annual	Wild	CC	-	MT	
<i>Medicago monspeliaca (Trigonella monspeliaca)</i>	Trailing Fenugreek	حلبة وحيد السداة	Annual	Wild	CC	-	MT	
<i>Medicago orbicularis</i>	Flat – Podded Medick	نفل مستدير، خبز الراعي	Annual	Wild	F	-	MT	
<i>Medicago polymorpha</i>	Bur Clover	نفل محلي/فضة محلية	Annual	Wild	CC	LC	MT	
<i>Melilotus sulcatus</i>	Grooved Melilot	حندقوق	Annual	Wild	C(LD)	-	MT	
<i>Onobrychis caput-galli</i>	Cock's Head Sainfoin	دريس، ضرس العجوز	Annual	Wild	F	-	MT	



<i>Onobrychis squarrosa</i>	Squarrose <i>Hippocrepis</i> , <i>unisiliquosa</i> Sainfoin	جريس قائم العنقود	Annual	Wild	C	-		MTD
<i>Ononis natrix</i>	Shrubby Rest - Harrow	شبرق	Sub-shrub	Wild	C	-	-	MTD
<i>Ononis ornithopodioides</i>	Bird's-Foot Rest- Harrow	شبرق الطيور	Annual	Wild	C	-	-	MT
<i>Ononis serrata (Ononis diffusa)</i>	Serrate-Leaved Rest Harrow	شبرق مسنن	Annual	Wild	F (NR)	-	-	MTD X
<i>Ononis sicula</i>	Persian Rest-Harrow	شبرق صيقلية	Annual	wild	C	-	-	TD
<i>Ononis spinosa (Ononis leiosperma)</i>	Tall Spiny Rest - Harrow	شبرق شوكي	Perennial	Wild	C	-	-	MTD X
<i>Ononis viscosa</i>	Clammy Rest- Harrow	شبرق دبق	Annual	wild	F	-	-	MT
<i>Pisum elatius</i>	Purple Wild Pea	بريد	Annual	Wild	F	-	-	M
<i>Pisum fulvum</i>	Yellow Wild Pea	سبلة كهربانية	Annual	Wild	C			MT
<i>Pisum sativum</i>	Wild Peas	بازيلاء برية	Annual	Wild	F	-	-	MT
<i>Scorpiurus muricatus</i>	Two-Flowered Caterpillar	عقربية شائكة	Annual	Wild	CC	-	-	MT
<i>Securigera securidaca</i>	Crownvetch	سعيسعة، صبيره	Annual	Wild	F	-	-	M
<i>Spartium junceum</i>	Spanish broom	وزال	Shurb	Wild	C (Rare in study area)	-	-	M
<i>Tetragonolobus palaestinus</i>	Four-winged pea	جلثون فلسطيني/اصابع العروس	Annual	Wild	C	-		M
<i>Tetragonolobus requienii</i>		جلثون الأموات	Annual	Wild	RP (LD)	-	-	M
<i>Trifolium argutum</i>	Dry-Headed Clover	نفل جاف الرأس	Annual	Wild	C	-	-	MT
<i>Trifolium boissieri</i>	Boissier's Clover	نفل بواسييه	Sub-shrub	Wild	R (LD)	-	-	M





<i>Trifolium campestre</i>	Hop Clover	برسيم الحقول	Annual	Wild	CC	-	-	MT
<i>Trifolium clusii</i>	Clusius' Clover	نفل كلوزيوس	Annual	Wild	F	LC	-	M
<i>Trifolium clypeatum</i>	Helmet Clover	برسيم ترسي ابيض	Annual	Wild	C	-	-	M
<i>Trifolium eriosphaerum</i>	Woolly-Headed Clover	نفل صوفي الرؤيسات	Annual	Wild	C	-	ES	MT
<i>Trifolium erubescens</i>	Blushing Clover	نفل متورد	Annual	Wild	C(LD)	-	EL	M
<i>Trifolium fragiferum</i>	Strawberry Clover	نفل فراولي	Perennial	Wild	F	-	-	M
<i>Trifolium pilulare</i>	Ball Cotton Clover	برسيم قطني	Annual	Wild	CC	-	-	MT
<i>Trifolium purpureum</i>	Purple Clover	برسيم فراولة /أرجواني	Annual	Wild	CC	-	-	MT
<i>Trifolium resupinatum</i>	Reversed Trefoil	برسيم متقلب	Annual	Wild	CC	LC	-	MT
<i>Trifolium scutatum</i>	Shield Clover	برسيم درعي	Annual	Wild	R	-	ET	M
<i>Trifolium stellatum</i>	Star Clover	برسيم نجمي الثمرة	Annual	Wild	C	-	-	MT
<i>Trifolium subterraneum</i>	Subterranean Clover	نفل مطمور	Annual	Wild	F (Rare ins tudy area)	LC	-	M
<i>Trifolium spumosum</i>	Bladder Trefoil	نفل مزبد	Annual	Wild	F	-	-	M
<i>Trifolium tomentosum</i>	Wooly Clover	نفل لبدي/كربشة	Annual	Wild	CC	-	-	MTD
<i>Trigonella arabica</i>	Arabian Fenugreek	حلبة عربية	Annual	Wild	CC	-	-	DX
<i>Trigonella berythea</i>	Beirut Fenugreek	حلبة شائعة/حلبة الاكل حلبة العطارين /الحلبة المزروعة	Annual	Wild	F	-	ET	M
<i>Trigonella foenum-graecum</i>	Fenugreek	الحلبة التيبية اليونانية	Annual	Wild	F (Rare in stury area)	-	-	M



	<i>Trigonella hierosolymitana</i>	Jerusalem Fenugreek	حلبة القدس	Annual	Wild	F	-	-	MT
	<i>Vicia galeata</i>	Helmeted Vetch	بيقيا عديسية	Annual	Wild	F	LC	-	M
	<i>Vicia palaestina</i>	Palestine Vetch	بيستيا فلسطينية	Annual	Wild	C	-	-	M
	<i>Vicia peregrina</i>	Rambling Vetch	جلبانة رحالة	Annual	Wild	CC	-	-	MT
	<i>Vicia sativa</i>	Common vetch	بيقيا شائعة	Annual	Wild	CC	-	-	MTD
Pinaceae	<i>Pinus halepensis</i>	Aleppo pine	صنوبر حليبي (قريش)	Tree	planted	-	LC	-	-
	<i>Pinus pinea</i>	Pine	صنوبر الطعام	Tree	planted	-	-	-	-
Plantaginaceae	<i>Plantago afra</i>	Clammy Plantain	لسان الحمل الافريقي	Annual	Wild	CC	-	-	MTD X
	<i>Plantago cretica</i>	Cretan Plantain	لسان الحمل الكريتي	Annual	Wild	CC	-	-	MTD
	<i>Plantago lagopus</i>	Round-Headed Plantain	ودنة	Annual	Wild	CC	-	-	MT
Plumbaginaceae	<i>Plumbago europaea</i>	European Leadwort	رصاصية أوروبية	Perennial	Wild	C(LD)	-	-	M
Polygonaceae	<i>Emex spinosa</i>	Spiny Dock	ضرس العجوز	Annual	Wild	C (Rare in study area)	-	-	MTD X
	<i>Polygonum argyrocoleum</i>	Knotweed, Knotgrass	القطاب	Annual	Wild	R (known to be common)	-	-	MT
	<i>Rumex dentatus</i>	Dentate Dock, Sorrel	الحماض المسنن أو ضرس العجوز	Annual	Wild	F	LC	-	MT
Portulacaceae	<i>Portulaca oleracea</i>	Garden Purslane	بقلة	Annual	Wild	C	-	-	MTD X
Primulaceae	<i>Anagallis arvensis</i>	Scarlet Pimpernel	عين القط	Annual	Wild	CC	-	-	MTD X
	<i>Cyclamen persicum</i>	Persian Cyclamen	قرن الغزال	Perennial	Wild	CC	-	-	MT



	<i>Samolus valerandi</i>	Brookweed	صابون العرب/لبين الماء	Perennial	Wild	R	LC	-	MTD
Santalaceae	<i>Osyris alba</i>	Poet's Cassia	صندل ابيض	Sub-shrub	Wild	C	-	-	MT
	<i>Thesium humile</i>	Dwarf Thesium	حب الحريش/حريش متواضع	Annual	Wild	C(LD)	-	-	MTD
Scrophulariaceae	<i>Scrophularia peyronii</i>	Figwort	خنازيرية بيرون	Perennial	Wild	F	-	-	MT
	<i>Scrophularia hierochuntina</i>	Valley Figwort	خنزيرية مدممة	Perennial	Wild	RP		ES	M
	<i>Scrophularia rubicaulis</i>	Red Stemmed Figwort	برواك خنازيرية، جرطم	Perennial	Wild	F	-	ES	M
	<i>Scrophularia xanthoglossa</i>	Yellow-Scaled Figwort	خنازيرية صفراء السداة العقيمة	Sub shrub	Wild	C	-	-	MTD
	<i>Verbascum orientale</i>	Oriental Celsia	بوصير شرقي	Annual	Wild	F (Rare in study area)	-	-	MT
	<i>Verbascum sinuatum</i>	Scallop- Leaved Mullein	عورور	Perennial	Wild	CC	-	-	MT
	<i>Veronica anagallis-aquatica</i>	Blue Water Speedwell	فيرونكا حب الماء	Aquatic plants (hemicryptophyte)	Wild	C(LD)	-	-	MT (Humid Habitats)
	<i>Veronica arvensis</i>	Wall Speedwell	فيرونكا الحقول	Annual	Wild	R	-	-	M
	<i>Veronica cymbalaria</i>	Cymbalaria Speedwell	فيرونكا صنجية	Annual	wild	CC	-	-	MT
	<i>Veronica syriaca</i>	Syrian Speedwell	فيرونكا سورية	Annual	Wild	C(LD)	-	-	M
Solanaceae	<i>Hyoscyamus aureus</i>	Golden Henbane	بنج ذهبي	Shrub	Wild	C	-	-	MTD
	<i>Mandragora autumnalis</i>	Autumn Mandrake, Pomme D'amour	تفاح النجم	perennial	Wild	C	LC	-	M



	<i>Nicotiana glauca</i>	Tobacco Tree	تبغ بري	Tree	Wild	C (Rare in study area)	-	IM	MD
	<i>Solanum nigrum</i>	Black nightshade	عنب الدير الاسود	Annual	Wild	C	-	-	MTD
	<i>Solanum villosum (Solanum luteum)</i>	Woolly Nightshade	حصيل اصفر	Annual	Wild	C	-	-	MTD
	<i>Withania somnifera</i>	Common Winter - Cherry	سكران/سم الفأر	Shrub	Wild	C	-	-	MTD X
Styracaceae	<i>Styrax officinalis</i>	Official Storax	عبر	Tree	Wild	C	LC	-	M
Umbelliferae	<i>Ammi majus</i>	Bishop's Weed	خلة كبيرة/خلة شيطانية	Annual	Wild	C	-	-	MT
	<i>Artemisia squamata</i>	Crown Flower	ارتدية حرشفية	Annual	Wild	CC	-	-	MT
	<i>Apium nodiflorum</i>	Fool's-Water-Cress	كرفس بري	Aquatic plants	Wild	R	LC	-	M (humid habitat)
	<i>Bifora testiculata</i>	Small Coriander	بيفورة توأمية	Annual	Wild	F	-	-	MT
	<i>Chaetosciadium trichospermum</i>	Hairy-Seeded Chervil	مشعرة ثلاثية البذور	Annual	Wild	CC	-	ES	MTD
	<i>Conium maculatum</i>	Mother Die	سكيكران	Perennial	Wild	C(LD)	-	-	M
	<i>Daucus carota</i>	Wild Carrot	جزر بري	Annual	Wild	CC	DD	-	MT
	<i>Eryngium creticum</i>	Field Eryngo	قرصنة	Perennial	Wild	F	-	-	M
	<i>Eryngium glomeratum</i>	Clustered eryngo	شنداب، متجمع، عود القسم	Perennial	Wild	C	-	-	MTD
	<i>Ferula communis</i>	Common Giant Fennel	كلح (شرش زلوع محلي)	Perennial	Wild	C	LC	-	MT
<i>Foeniculum vulgare</i>	Common Fennel	شومر شائع	Perennial	Wild	CC	-	-	MT	



	<i>Ridolfia segetum</i>	Bishop's weed	خلة الحقول / شومر الحقول	Annual	Wild	CC	-	-	MT
	<i>Scandix verna (Scandix iberica)</i>	Venus' Comb	مشطية ايبيريا	Annual	Wild	CC	-	-	M
	<i>Scandix pecten-veneris</i>	Shepherd's Needle	مشط الراعي	Annual	Wild	C	-	-	MT
	<i>Tordylium trachycarpum (Ainsworthia trachycarpa)</i>	Common Ainsworthia	انسورثية جاسنة الثمر	Annual	Wild	C	-	-	MT
	<i>Torilis arvensis</i>	Spreading Hedge-Parsely	جزر الشيطان	Annual	Wild	C	-	-	M
	<i>Torilis leptophylla</i>	Fine-Leaved Hedge-Parsely	لزيقة صغيرة	Annual	Wild	CC	-	-	MT
	<i>Torilis tenella</i>	Many-Rayed Bur Parsley	توريلس رهيف	Annual	Wild	CC	-	-	MT
	<i>Turgenia latifolia</i>	Greater Bur Parsley	فرنجية عريضة الأوراق	Annual	Wild	RR	-	-	OT
Urticaceae	<i>Parietaria alsinifolia</i>	Sandwort-Leaved Pellitory	حشيشة الزجاج الرملية	Annual	Wild	C	-	-	TDX
	<i>Parietaria judaica</i>	Wall Pellitory	حشيشة الزجاج الجدارية	Sub-Shrub	Wild	CC	-	-	MTD
	<i>Parietaria lusitanica</i>	Rock Pellitory	حشيشة الزجاج الصخرية	Annual	Wild	C(LD)	-	-	MTD
	<i>Urtica urens</i>	Burning nettle	قراص حارق	Annual	Wild	C	-	-	MT
	<i>Urtica pilulifera</i>	Roman Nettle	قريص حبابي/عقار	Annual	Wild	C	-	-	MT
Valerianaceae	<i>Valerianella vesicaria</i>	Bladder-Fruited Corn Salad	سمنة مثنانية/حشيشة الهر	Annual	Wild	C	-	-	MT
Verbenaceae	<i>Verbena officinalis</i>	Common Vervain	رعي الحمام المخزني	Perennial	Wild	C (Rare in study area)	-	-	MT
	<i>Verbena supina</i>	Trailing Vervain	رعي الحمة المفرقش	Annual	Wild	R	-	-	M

	<i>Vitex agnus-castus</i>	Lilac Chaste Tree	ذو الخمس أصابع/كف مريم/ غار بلدي	Shrub	Wild	F	DD	-	MT
Violaceae	<i>Viola modesta</i>	Humble Viola	بنفسج متواضع	Annual	Wild	RR	-	-	OMT
	<i>Viola occulta</i>	Sweet Viola	بنفسج محبوب	Annual	Wild	RR	-	-	OMT

- Ad1 (abundance at local level, according to Checklist and Ecological Database<sup>19</sup>): CC=Very common species, C=Common species, F=Frequent species, R=somewhat rare species, RP=Rare species with 31-100 surviving sites, RR=Very rare species with only 4-30 surviving sites, NR= Not Registered in the study area before but was found during surveys, (LD)= species with limited distribution.
- Abd2 (abundance at global level, according to IUCN RED List<sup>20</sup>): LC= Least Concern, DD= Data Deficient, VU= Vulnerable - decreasing
- End= Endemism, EP=Endemic to Palestine, ET=Endemic to Palestine and Turkey, EL=Endemic to Palestine and Lebanon, ES=Endemic to Palestine and Syria, EE=Endemic to Palestine and Sinai, IF= Introduced originating in Africa, IM=Introduced originating in American, II=Introduced originating in the Mediterranean Basin.
- CD= Climate Distribution. M= The Mediterranean Zone, T=Transitional zone (between Mediterranean and desert zone), D=Semi-desert, X=extreme desert, O=Montane Mediterranean zone.

<sup>19</sup> Ori F., Uzi P., David H., Avi S. (1999). Checklist and Ecological Data-Base of the Flora of Israel and its Surroundings. Hebrew University, Jerusalem.

<sup>20</sup> <http://www.iucnredlist.org/search>

### Annex 3.2: Coordinates of the Studied Transects at Al Makhrou Valley

<b>T1</b>	T1C1 31°42'52.30"N 35°10'13.40"E	T1C2 31°42'55.30"N 35°10'13.00"E	T1C3 31°42'54.10"N 35°10'15.10"E	T1C4 31°42'49.84"N 35°10'17.42"E
<b>T2</b>	T2C1 31°42'52.08"N 35°10'17.16"E	T2C2 31°42'49.60"N 35°10'14.75"E	T2C3 31°42'51.86"N 35°10'14.38"E	T2C4 31°42'49.84"N 35°10'17.42"E
<b>T3</b>	T3C1 31°42'49.68"N 35°10'9.72"E	T3C2 31°42'46.56"N 35°10'10.86"E	T3C3 31°42'48.66"N 35°10'12.08"E	T3C4 31°42'47.70"N 35°10'8.52"E
<b>T4</b>	T4C1 31°42'55.70"N 31°42'55.70"E	T4C2 31°42'58.50"N 35°10'3.50"E	T4C3 31°42'57.76"N 35°10'5.99"E	T4C4 31°42'56.54"N 35°10'2.27"E
<b>T5</b>	T5C1 31°42'59.70"N 35° 9'59.10"E	T5C2 31°43'2.78"N 35° 9'58.84"E	T5C3 31°43'1.42"N 35°10'1.00"E	T5C4 31°43'1.80"N 35° 9'56.49"E
<b>T6</b>	T6C1 31°42'58.93"N 35° 9'56.70"E	T6C2 31°42'56.34"N 35° 9'59.26"E	T6C3 31°42'58.46"N 35° 9'59.36"E	T6C4 31°42'56.60"N 35° 9'56.78"E
<b>T7</b>	T7C1 31°42'59.92"N 35° 9'55.45"E	T7C2 31°43'1.58"N 35° 9'51.28"E	T7C3 31°43'1.61"N 35° 9'53.74"E	T7C4 31°42'59.78"N 35° 9'52.75"E
<b>T8</b>	T8C1 31°43'5.16"N 35° 9'47.75"E	T8C2 31°43'5.14"N 35° 9'43.83"E	T8C3 31°43'4.05"N 35° 9'45.64"E	T8C4 31°43'6.62"N 35° 9'45.88"E
<b>T9</b>	T9C1 31°42'44.27"N 35°10'7.41"E	T9C2 31°42'46.84"N 35°10'5.04"E	T9C3 31°42'44.63"N 35°10'4.81"E	T9C4 31°42'46.52"N 35°10'7.31"E
<b>T10</b>	T10C1 31°42'50.47"N 35°10'6.63"E	T10C2 31°42'51.43"N 35°10'3.20"E	T10C3 31°42'49.33"N 35°10'4.49"E	T10C4 31°42'52.27"N 35°10'5.80"E
<b>T11</b>	T11C1 31°42'53.70"N 35° 9'58.40"E	T11C2 31°42'53.80"N 35°10'2.11"E	T11C3 31°42'52.15"N 35°10'0.36"E	T11C4 31°42'55.11"N 35°10'0.26"E
<b>T12</b>	T12C1 31°42'55.40"N 35° 9'40.02"E	T12C2 31°42'55.28"N 35° 9'43.80"E	T12C3 31°42'56.88"N 35° 9'42.40"E	T12C4 31°42'53.48"N 35° 9'41.41"E
<b>T13</b>	T13C1	T13C2	T13C3	T13C4



	31°42'57.00"N 35° 9'39.01"E	31°42'58.82"N 35° 9'37.47"E	31°42'58.79"N 35° 9'40.35"E	31°43'0.56"N 35° 9'38.77"E
<b>T14</b>	T14C1 31°42'56.32"N 35° 9'22.33"E	T14C2 31°42'57.57"N 35° 9'25.80"E	T14C3 31°42'58.24"N 35° 9'23.73"E	T14C4 31°42'55.40"N 35° 9'24.70"E
<b>T15</b>	T15C1 31°43'1.60"N 35° 9'6.51"E	T15C2 31°43'0.96"N 35° 9'2.57"E	T15C3 31°43'0.02"N 35° 9'4.89"E	T15C4 31°43'2.61"N 35° 9'4.03"E
<b>T16</b>	T16C1 31°43'26.20"N 35° 8'53.80"E	T16C2 31°43'25.41"N 35° 8'50.33"E	T16C3 31°43'27.37"N 35° 8'52.01"E	T16C4 31°43'24.55"N 35° 8'51.95"E
<b>T17</b>	T17C1 31°43'38.95"N 35° 8'46.43"E	T17C2 31°43'37.71"N 35° 8'50.08"E	T17C3 31°43'37.05"N 35° 8'48.51"E	T17C4 31°43'39.98"N 35° 8'47.82"E
<b>T18</b>	T18C1 31°43'27.92"N 35° 9'1.66"E	T18C2 31°43'30.40"N 35° 8'59.55"E	T18C3 31°43'30.24"N 35° 9'1.46"E	T18C4 31°43'28.06"N 35° 9'0.07"E
<b>T19</b>	T19C1 31°43'28.91"N 35° 8'57.72"E	T19C2 31°43'26.73"N 35° 9'0.24"E	T19C3 31°43'26.82"N 35° 8'58.30"E	T19C4 31°43'28.43"N 35° 8'59.62"E
<b>T20</b>	T20C1 31°43'11.74"N 35° 9'3.78"E	T20C2 31°43'11.24"N 35° 9'0.35"E	T20C3 31°43'9.23"N 35° 9'2.56"E	T20C4 31°43'13.25"N 35° 9'1.44"E
<b>T21</b>	T21C1 31°43'11.53"N 35° 9'4.15"E	T21C2 31°43'11.49"N 35° 9'6.88"E	T21C3 31°43'9.64"N 35° 9'4.60"E	T21C4 31°43'13.71"N 35° 9'6.35"E
<b>T22</b>	T22C1 31°43'14.26"N 35° 9'14.53"E	T22C2 31°43'15.89"N 35° 9'18.98"E	T22C3 31°43'14.01"N 35° 9'17.77"E	T22C4 31°43'16.09"N 35° 9'15.62"E
<b>T23</b>	T23C1 31°43'13.58"N	T23C2 31°43'10.52"N	T23C3 31°43'11.63"N	T23C4 31°43'13.37"N



	35° 9'32.58"E	35° 9'32.98"E	35° 9'34.71"E	35° 9'29.94"E
<b>T24</b>	T24C1 31°43'13.00"N 35° 9'34.00"E	T24C2 31°43'16.44"N 35° 9'32.50"E	T24C3 31°43'14.33"N 35° 9'31.79"E	T24C4 31°43'15.12"N 35° 9'35.01"E
<b>T25</b>	T25C1 31°43'16.60"N 35° 9'33.50"E	T25C2 31°43'17.71"N 35° 9'35.47"E	T25C3 31°43'18.57"N 35° 9'33.08"E	T25C4 31°43'15.49"N 35° 9'35.85"E
<b>T26</b>	T26C1 31°43'50.37"N 35° 8'18.12"E	T26C2 31°43'49.58"N 35° 8'15.08"E	T26C3 31°43'53.08"N 35° 8'16.44"E	T26C4 31°43'47.68"N 35° 8'17.10"E
<b>T27</b>	T27C1 31°43'58.30"N 35° 8'14.88"E	T27C2 31°44'0.94"N 35° 8'12.36"E	T27C3 31°44'1.58"N 35° 8'14.31"E	T27C4 31°43'58.27"N 35° 8'12.30"E
<b>T28</b>	T28C1 31°44'6.55"N 35° 8'13.60"E	T28C2 31°44'6.63"N 35° 8'10.12"E	T28C3 31°44'8.08"N 35° 8'11.07"E	T28C4 31°44'5.04"N 35° 8'12.27"E
<b>T29</b>	T29C1 31°44'5.44"N 35° 7'56.27"E	T29C2 31°44'2.01"N 35° 7'54.31"E	T29C3 31°44'4.18"N 35° 7'53.50"E	T29C4 31°44'3.16"N 35° 7'57.46"E
<b>T30</b>	T30C1 31°44'1.03"N 35° 7'48.98"E	T30C2 31°43'57.78"N 35° 7'48.57"E	T30C3 31°43'59.41"N 35° 7'46.93"E	T30C4 31°43'59.19"N 35° 7'50.14"E
<b>T31</b>	T31C1 31°43'57.76"N 35° 7'43.43"E	T31C2 31°43'55.65"N 35° 7'44.80"E	T31C3 31°43'55.24"N 35° 7'42.22"E	T31C4 31°43'57.49"N 35° 7'45.80"E
<b>T32</b>	T32C1 31°43'56.90"N 35° 7'39.20"E	T32C2 31°43'52.82"N 35° 7'37.14"E	T32C3 31°43'55.65"N 35° 7'36.45"E	T32C4 31°43'53.92"N 35° 7'40.02"E
<b>T33</b>	T33C1 31°43'44.64"N 35° 7'38.58"E	T33C2 31°43'40.31"N 35° 7'38.80"E	T33C3 31°43'42.83"N 35° 7'37.08"E	T33C4 31°43'42.58"N 35° 7'40.65"E



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### Annex 3.3: Plant species identified during the plant inventory surveys at Battir Village

It includes the list of Species according to its type, status, and uses (GF = Growth Form, Abd 1 = Abundance in Palestine, Abd 2 = Abundance at global level according to IUCN Red List, End = Endemism, CD = Climate Distribution)

Family Name	Species Scientific Name	Species English Name	Species Arabic Name	GF	Occurrence in Nature	Status		End	CD
						Abd 1	Abd 2		
Amaryllidaceae	<i>Allium neapolitanum</i>	Naple's Garlic	ثوم بري	Perennial	Wild	C	DD	-	M
Anacardiaceae	<i>Pistacia lentiscus</i>	Lentisk	سريس	Sub-Shrubs	Wild	CC	LC	-	M
	<i>Pistacia palaestina</i> ( <i>terebinthus</i> )	Terebinth Tree	بطم فلسطيني	Tree	Wild	CC	-	-	M
Araceae	<i>Arum dioscoridis</i>	Spotted Arum	لوف مكحل	Perennial	Wild	F (NR)	-	-	M
	<i>Arum hydropilum</i>	Green Arum	لوف الماء	Perennial	Wild	F (Rare in study area)	NT	-	M
	<i>Arum Palaestinum</i>	Solomon's lily	لوف فلسطيني	Annual	Wild	C	-	-	MTD
Boraginaceae	<i>Anchusa strigosa</i>	strigose bugloss	حمم/لسان البر	Perennial	Wild	CC	-	-	MT
	<i>Podonosma orientalis</i>	Golden Drop	لسان الكلب، لزيقة صخور، مصيص	Perennial	Wild	CC	-	-	MT
Caesalpiniaceae	<i>Ceratonia siliqua</i>	carob, St. John's-Bread	خروب	Tree	Wild	F	LC	-	MT
Campanulaceae	<i>Campanula strigosa</i>	strigose bellflower	جريس زغبى (دبق)	Annual	Wild	C(LD)	-	-	M
Caryophyllaceae	<i>Paronychia argentea</i>	Silvery Whitlow Wort	عصا الراعي، رجل الحمامة الصخرية	Sub-shrubs	Wild	CC	-	-	MT
Chenopodiaceae	<i>Beta vulgaris</i>	White Beet	سلق شائع	Annual	Wild	C	-	-	MTD
Cistaceae	<i>Cistus creticus</i> ( <i>incanus</i> )	Soft-hairy Rockrose	اللباد الوردي (هنبل)	Sub-shrubs	Wild	CC	-	-	MDX
	<i>Cistus salvifolius</i>	Sage-leaved rockrose	لبيد ابيض	Sub-shrubs	Wild	CC	-	-	MDX



Compositae	<i>Anthemis pseudocotula</i>	Common Chamomile	اقحوان كاذب	Annual	Wild	CC	-	-	MTD
	<i>Centaurea cyanoides</i>	Syrian Cornflower	مرار الشائع (داكن)	Annual	Wild	C(LD)	-	ES	M
	<i>Chiliadennus iphionoides</i>		كتيله	Annual	Wild	CC	-	-	MTD
	<i>Cichorium endivia (Cichorium pumilum)</i>	Dwarf Chicory	هندباء/علك	Annual	Wild	CC	-	-	MT
	<i>Conyza bonariensis</i>	Horseweed	نشاش صادق	Annual	Wild	CC	-	IM	MTD
	<i>Conyza canadensis</i>	Canadian Fleabane	نشاش كندي	Annual	Wild	C	-	IM	MTD
	<i>Dittrichia viscosa (Inula viscosa)</i>	Clammy Inula	طيون	Sub-shrubs	Wild	CC	-	-	MTD
	<i>Echinops gaillardotii</i>		خمرة شائعة/قرقفان كبير	Perennial	Wild	C	-	-	M
	<i>Lactuca tuberosa</i>	Tuberous Lettuce	خس أكل	Perennial	Wild	C	-	-	-
	<i>Notobasis syriaca</i>	Syrian Thistle	خرفيش داكن	Annual	Wild	CC	-	-	MT
	<i>Onopordum carduiforme</i>	False Plumed-Thistle	خرفيش ابيض/بنفسجي	Perennial	Wild	RP	-	EP	MT
	<i>Phagnalon rupestre</i>	African Fleabane	صوفان	Sub-shrub	Wild	C	-	-	MTD
	<i>Senecio leucanthemifolius subsp vernalis</i>	Spring Groundsel	صفيير/بيسوم ريبيعي/شرونه ريبيعية/بسباس	Annual	Wild	CC	-	-	OMT
	<i>Silybum marianum</i>	Holy Thistle	خرفيش	Annual	Wild	CC	-	-	MT
<i>Sonchus oleraceus</i>	Common Sow-Thistle	جعضيض	Annual	Wild	CC	-	-	MTD X	
Convolvulaceae	<i>Convolvulus arvensis</i>	Corn Bind	مدادة الحقول	Annual	Wild	CC	-	-	MTD
	<i>Cuscuta campestris</i>	Field Dodder	حامول	annual	wild	C	-	-	IM
Cucurbitaceae	<i>Echballium elaterium</i>	Squirting Cucumber	قتاء الحمار	Perennial	Wild	C	-	-	MT

	<i>Sinapis arvensis</i>	Charlock	خردل بري	Annual	Wild	CC	-	-	MT
	<i>Sisymbrium irio</i>	London rocket	حويرة	Annual	Wild	C (Rare in Study area)	-	-	MTD X
Cucurbitaceae	<i>Ecballium elaterium</i>	Squirting Cucumber	فقوس الكلب/قثاء (الحمار)	Perennial	Wild	C	-	-	MT
Ericaceae	<i>Arbutus andrachne</i>	Eastern Strawberry tree	قطلب او قاتل ابيه	Tree	Wild	C	LC	-	M
Euphorbiaceae	<i>Andrachne telephoides</i>	Bastard Orpine	نباده، كماش	Sub- shrub	Wild	F	-	-	MTD
	<i>Euphorbia hirta (Euphorbia pilulifera)</i>	Garden Spurge	ام اللبن الشعرية	Annual	Wild	F (Rare in study area)	-	IF	M
	<i>Euphorbia hierosolymitana</i>	Woody Spruge	ام اللبن المقدسية	Sub-Shrub	Wild	C	-	-	MTX
Fagaceae	<i>Quercus calliprinos</i>	Kermes Oak	بلوط	Tree	Wild	CC	-	-	M
Geraniaceae	<i>Erodium malacoides</i>	Mallow Stork's - Bill	ابرة العجوز الصغيرة	Annual	Wild	CC	-	-	MT
	<i>Erodium moschatum</i>	Musk stork's-Bill	ابرة عجوز مسكين	Annual	Wild	CC	-	-	MT
Gramineae	<i>Andropogon distachyos</i>	Two-spiked beard-grass	سنام	Perennial	Wild	C	-	-	M
	<i>Alopecurus myosuroides</i>	Mouse Foxtail	ذنب الفأر	Annual	Wild	F	-	-	M
	<i>Avena sterilis</i>	Wild Oat	شوفان عقيم	Annual	Wild	CC	LC	-	MTD X
	<i>Bromus sterilis</i>	Barren Brome	خافورة عقيمة	Annual	Wild	C	-	-	M
	<i>Bromus tectorum</i>	Wall Brome Grass	خافورة متدلية	Annual	Wild	C	-	-	MTD X
	<i>Catopodium rigidum</i>	Hard Meadow Grass		Annual	Wild	CC	LC	-	MTD
	<i>Hordeum glaucum</i>	Wall Barley	شعير زغبى	Annual	Wild	CC	-	-	MTD
	<i>Hordeum spontaneum</i>	Wild Barley	شعير ابليلس/شعير بري	Annual	Wild	CC	-	-	OMT DX
	<i>Lamarckia aurea</i>	Golden Dog's Tail	مشعرة ذهبية	Annual	Wild	C(LD)	-	-	MTD



	<i>Phalaris aquatica (tuberosa)</i>	Tuberous Canary Grass	قرام، حشيشة الكناري المعمرة	perennial	Wild	F	-	-	MT
	<i>Poa bulbosa</i>	Bulbous Meadow Grass	نزع، زعزاع	Perennial	Wild	CC	-	-	MT
	<i>Rostraria smyrnacea</i>		ذيل الفرس	Annual	wild	C	-	-	M
Labiatae	<i>Ajuga chamaepitys</i>	Chian Bugle	عرصف محلي	Sub-shrub	Wild	CC	-	-	MTD
	<i>Ballota saxatilis</i>	Rock horehound	الدانة الصخرية	Sub-shrub	Wild	C	-	-	M
	<i>Coridothymus capitatus</i>	Headed Thyme	زحيف	Sub-shrub	Wild	CC	-	-	M
	<i>Lamium moschatum</i>	Musk Deadnettle	خوذية بيضاء/برج الحمام	Annual	Wild	F	-	-	M
	<i>Salvia hierosolymitana</i>	Jerusalem Sage	قصعين مقدسي ، مرمية مقدسة	Perennial	Wild	C (LD)	-	ES	M
	<i>Teucrium capitatum</i>	Cat Thyme Germander	جعدة شائعة	Sub-shrub	Wild	CC	-	-	MTD
	<i>Teucrium divaricatum</i>	Hedge Germander	كمندرة	Sub-shrubs	Wild	C	-	-	M
Liliaceae	<i>Asphodeline lutea</i>	King's spear	عنصل كبير	Annual	Wild	F (Rare in study area)	-	-	MTD
	<i>Smilax aspera</i>	Rough Binweed	عليق	Perennial	Wild	CC	-	-	M
Malvaceae	<i>Malva parviflora</i>	Small- Flowered Mallow	خبيزة الحقول	Annual	Wild	CC	-	-	TDX
Ranunculaceae	<i>Clematis Cirrhosa</i>	Virgin's-Bower	حبل المسك	Annual	Wild	C	-	-	M
	<i>Ranunculus arvensis</i>	Corn Buttercup	برقوق الحقول (برواق الحقول)	Annual	Wild	C	-	-	MT
	<i>Ranunculus asiaticus</i>	Turban Buttercup	كف الضبع (حنون احمر شائع) /برقوق	Perennial	Wild	CC	-	-	MTD
	<i>Ranunculus scandicinus</i>	Shepherd's- needle buttercup, Crowfoot	برواق اصفر/برواق هامش	Annual	Wild	C	-	-	M
Resedaceae	<i>Reseda alba</i>	White mignonette	ذيل الخروف / البليحاء البيضاء	Annual	Wild	C	-	-	MT



Rhamnaceae	<i>Rhamnus alaternus</i>	Italian Buckthorn	سويد الجبل	Tree	Wild	F (Rare in study area)	LC	-	M
Rosaceae	<i>Crataegus aronia</i>	Spiny Hawthorn	زعرور أصفر	Tree	wild	C	LC	-	MDX
	<i>Sarcopoterium spinosum</i>	Prickly Burnet	النتش، البلان	Sub-shrub	Wild	CC	-	-	MT
Rubiaceae	<i>Galium murale</i>	Wall Bedstraw	لزيقة الحقول/دييقة الحقول	Annual	Wild	C	-	-	MT
Papaveraceae	<i>Papaver hybridum</i>	Prickly Round-Headed Poppy	البخيته/الخشخاش الشائع	Annual	Wild	C (LD)	-	-	MTD X
	<i>Papaver umbonatum</i>	Corn Poppy	بخيئة كمثرية	Annual	wild	CC	-	-	MT
Papilionaceae	<i>Anagyris foetida</i>	Bean Trefoil	خروب الكلاب	Shrub	Wild	F	-	-	MT
	<i>Astragalus pelecinus (Biserrula pelecinus)</i>	Common Hatched Vetch	العنان	Annual	Wild	F	-	-	MT
	<i>Calicotome villosa</i>	Spiny Broom	قنديل (قندول)	Shrub	Wild	CC	-	-	MT
	<i>Medicago orbicularis</i>	Flat – Podded Medick	نفل مستدير، خبز الراعي	Annual	Wild	F	-	-	MT
	<i>Pisum elatius</i>	Purple Wild Pea	بريد	Annual	Wild	F	-	-	M
	<i>Trifolium campestre</i>	Hop Clover	برسيم الحقول	Annual	Wild	CC	-	-	MT
	<i>Trifolium purpureum</i>	Purple Clover	برسيم فراولة /أرجواني	Annual	Wild	CC	-	-	MT
	<i>Vicia galeata</i>	Helmeted Vetch	بيقيا عديسية	Annual	Wild	F	LC	-	M
Pinaceae	<i>Pinus halepensis</i>	Aleppo pine	صنوبر حليبي (قريش)	Tree	planted	-	LC	-	-
Polygonaceae	<i>Rumex pulcher</i>	Fiddle Dock	حميض	Perennial	Wild	C	-	-	MT

Primulaceae	<i>Cyclamen persicum</i>	Persian Cyclamen	قرن الغزال	Perennial	Wild	CC	-	-	MT
	<i>Samolus valerandi</i>	Brookweed	صابون العرب/لبين الماء	Perennial	Wild	R	LC	-	MTD
Salicaceae	<i>Populus euphratica</i>	Euphrates Poplar	حور/ادلب	Tree	Wild	R	LC	-	MTD
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>	Blue Water Speedwell	فيرونيكا حبق الماء	Aquatic plants	Wild	C(LD)	-	-	MT
Solanaceae	<i>Solanum nigrum</i>	Black nightshade	عنب الديب الأسود(بندورة برية)	Annual	Wild	C	-	-	MTD
Styracaceae	<i>Styrax officinalis</i>	Officinal Storax	عبر	Tree	Wild	C	LC	-	M
Umbelliferae	<i>Conium maculatum</i>	Mother Die	سكيكران	Perennial	Wild	C(LD)	-	-	M
	<i>Eryngium creticum</i>	Field Eryngio	قرصنة	Perennial	Wild	F	-	-	M
	<i>Ferula communis</i>	Common Giant Fennel	كلج (شرش زلوع محلي)/شومر كاذب	Perennial	Wild	C	LC	-	MT
	<i>Foeniculum vulgare</i>	Common Fennel	شومر شائع	Perennial	Wild	CC	-	-	MT
Urticaceae	<i>Parietaria lusitanica</i>	Rock Pellitory	حشيشة الزجاج الصخرية/كحلة	Annual	Wild	C(LD)	-	-	MTD
	<i>Urtica urens</i>	Burning nettle	قراص حارق	Annual	Wild	C	-	-	MT

- Ad1 (abundance at local level, according to Checklist and Ecological Database<sup>21</sup>: CC=Very common species, C=Common species, F=Frequent species, R=somewhat rare species, RP=Rare species with 31-100 surviving sites, RR=Very rare species with only 4-30 surviving sites, C(LD)= Common with limited distribution, CC(LD)= Very common with limited distribution, NR= Not Registered in the study area before but found during surveys, R(LD)= Rare with limited distribution, F(LD)= Frequent species with limited distribution

<sup>21</sup> Ori F., Uzi P., David H., Avi S. (1999). Checklist and Ecological Data-Base of the Flora of Israel and its Surroundings. Hebrew University, Jerusalem.

- Abd2 (abundance at global level, according to IUCN RED List<sup>22</sup>): LC= Least Concern, DD= Data Deficient, VU= Vulnerable - decreasing
- End= Endemism, EP=Endemic to Palestine, ET=Endemic to Palestine and Turkey, EL=Endemic to Palestine and Lebanon, ES=Endemic to Palestine and Syria, IF= Introduced originating in Africa, IM=Introduced originating in America.
- CD= Climate Distribution. M= The Mediterranean Zone, T=Transitional zone (between Mediterranean and desert zone), D=Semi-desert, X=extreme desert, O=Montane Mediterranean zone.
- Plants shaded in light green are the ones found during surveys in Battir Village only.

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<sup>22</sup> <http://www.iucnredlist.org/search>