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COUNTRY PROFILE: SYRIAN ARAB REPUBLIC (SYRIA)

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BACKGROUND

Syria is located on the eastern shore of the Mediterranean between longitude 35 and 42 and latitude 32 and 37. It has an area of 185,000 sq. km., 58% of which is desert steppe. Arable land amounts to less than 33% and forest about 3%. The topography changes from mountainous in the west and southwest to largely flat plains and valleys in the middle and deserts in the east and southeast. The 180 km coastline is mostly rocky with narrow sand beaches and a few islands. The average annual rainfall decreases from over 1000 mm in the coastal area to less than 200 mm in the dry plains and steppe in the east. In most places, it is below 500 mm. The majority of the 14 million people are concentrated on the Mediterranean coast in the western part of the country. The annual growth rate of the population is 3.6%, one of the highest in the world.

Evans (1995) describes Syria in six distinct regions: a) Mediterranean west; b) Agricultural area of the north Syrian plateau; c) Mountains and irrigated oases of west-central Syria; d) Southern basalt areas; e) Rivers and agricultural plains of the Northeast; and f) Deserts and steppes in the Southeast.

Forming a part of the Fertile Crescent where many of the world's agricultural plants have evolved, Syria is extremely rich in agrobiodiversity. Wild progenitors of wheat and barley and wild relatives of many fruit trees such as almonds and pistachio as well as forage species are still found in marginal lands and less disturbed areas. These are threatened by a wide range of human activities, notably modern, extensive agriculture, overgrazing, overcutting and urban expansion. Modern agricultural practices are especially damaging as they lead to widespread habitat loss and replacement of genetic resources.

With a national population growth rate of 3.5% and a large portion of the population residing impoverished, rural areas, heavily dependent on natural resources, over-exploitation in the form of deforestation, overgrazing, excessive hunting and uncontrolled fishing are common. Overgrazing is especially serious in the steppe areas in south and south--eastern Syria where the naturally sparse vegetation is declining, leading to land degradation and desertification.

As in many other arid and semi-arid countries, over-extraction of ground and surface water is a major concern. For Syria, over 80% of the water resources are exploited for irrigation. This,

coupled with domestic and industrial pollution (e.g. Barada and Al Assi Rivers near to Damascus) poses serious threats to the water resources and human health. The water resources of the Euphrates River, the largest river in Syria, is being shared with Turkey and Iraq. The ecological impacts of the construction of dams along this major transboundary river are not to be neglected.

POLICY AND LEGISLATION

The constitution was promulgated on the 14 March 1973. Complete independence from France was achieved in April 1946.

Traditional forms of protection included range reserves (*Mahmeya*) which are not uncommon up to 30 or 40 years ago (cf Hema protection of the Arabian Peninsula). In the steppe region, a diminishing number of such areas are found in steppe land (Khatib *in litt.* 1991). Whilst under Ottoman rule in the second half of the 19th century, the forests came under the jurisdiction of the Turkish forest administration. Forest legislation was primarily concerned with controlling tree felling by the issue of permits, and the transportation of wood for local industry and export to neighbouring countries. Limited legislation was covered under the Ottoman civil code within the body of Islamic law. Under Article 1243 of the civil code it was defined that land and associated trees growing wild in mountains could not be possessed and should remain ownerless. Under Article 1244 cutting wood on private forests was not permitted without authorisation, infringement resulting in payment for any damage caused. In 1935 the French mandate government issued a forest law providing for the protection of the few remaining forest areas (Science and Technology Division, 1981). From 1946, legislation was concerned with rectifying forest degradation and the need for its protection and management.

Extant nature conservation legislation concerns forest protection, hunting, protection of aquatic life and general care of the environment. The current law on forests, the Forest Code Legislative Decree No. 66 of 22 September 1953, includes a definition and provides for the establishment of state forests, defines the restrictions on forest usage rights and acts as general enabling legislation. Under Title IV of the Forest Code, the Directorate of Forests and Afforestation of the Ministry of Agriculture and Agrarian Reform has the jurisdiction to establish areas of state-owned protected forest as state forest protection zones (Science and Technology Division, 1981). Legislative Decree No. 86 of 22 September 1953, Law on the Forest Police, was enacted in order to establish a forest warden and policing system (Science and Technology Division, 1981).

Other laws relevant to nature conservation areas include:

- Law on Forest Goat Exclusion No. 128 of 23 August 1958, which concerns the protection of trees and plants from damage caused by goats and the implementation of this law by the forest police (Science and Technology Division, 1981).
- Legislative Decree No. 152 of 23 July 1970, Law on Hunting, which contains various acts including designation of the Hunting Council (Conseil Cynegétique) and areas where hunting is restricted.
- In Legislative Decree No. 50 of 5 April 1979, all hunting was banned for a five-year period, as a measure to preserve wildlife (penalties include fines and imprisonment terms of up to two years).
- Legislative Decree No. 30 of 25 August 1964, and Law on the Protection of Aquatic Life include articles which covered the protection of public waters (protected public waters) and the regulation of fishing in sea water extending 12 miles from the coast (Science and Technology Division, 1981).

- Following the Agrarian Reform Law, 1958, land reform was initiated in September 1959, such that private land holdings were restricted to 50 ha of irrigated land or 300 ha of rainfed land per person.
- Reviews of the protected area legislation have not been undertaken, although in September/October 1991 the UNEP Mediterranean Specially Protected Areas Task Force proposed to undertake a mission to Syria to draft legal acts for the proclamation of coastal areas of special natural value, together with proposals for the management of protected areas, financing, operational and institutional reforms (Jeudy de Grissac *in litt.*1991).

INTERNATIONAL ACTIVITIES

At the international level, the Syrian Arab Republic has entered a number of co-operative agreements and legal obligations. Syria is party to the Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), which it accepted on 13 August 1975. No natural sites have been inscribed to date. Syria does not participate in the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), but does participate in the UNESCO Man and Biosphere (MAB) Programme. The national MAB committee comprised 18 representatives in 1991. To date no biosphere reserves have been accepted under the Programme. The Convention for the Protection of the Mediterranean Sea against Pollution, usually known as the Barcelona Convention, was formally adopted in February 1976. The contracting parties to the Convention adopted the Protocol concerning Mediterranean Specially Protected Areas on 2 April 1982, which entered into force on 23 March 1986. No sites have been selected as specially protected areas, although a steering committee is studying the possibility of sites being listed. One site has been recommended by the UNEP SPA Task Force (Al Nimeh *in litt.* 1991).

Syria is a member of the FAO Commission on Plant Genetic Resources and has signed the International Undertaking to promote the conservation, exchange and utilization of plant genetic resources for food and agriculture. The Convention on Biological Diversity has also been signed and ratified by Syria.

Under the Mediterranean Environmental Technical Assistance Programme (CY90-92 METAP) of the World Bank, European Investment Bank, United Nations Development Programme and Commission of the European Community, representatives from Syria attended the first meeting of the Mediterranean Protected Areas Network (MEDPAN) meeting in Monaco from 5-6 October 1990 (Anon., 1990).

ADMINISTRATION AND MANAGEMENT

The main governmental body concerned with the environment, the Ministry of Agriculture and Agrarian Reform, was formed in 1967 from the Agrarian Reform Agency and the Ministry of Agriculture. The Ministry is responsible for agriculture, water pollution, hunting, fishing and management of protected areas. It is divided into sections including the Directorate of Forests and Afforestation, the Directorate of Rangeland and Countryside, the Fisheries Office (concerned with inland water and marine matters), and the Directorate of the Steppe and Sheep Production.

The Directorate of Forests and Afforestation has responsibility for reafforestation, establishment of state forests, state forest protection zones and green belt areas. It has established a significant area of protected forest and by 1980 had undertaken extensive reafforestation work in an area covering some 60 000ha (Science and Technology Division 1981). By law, forest police are detailed to patrol and manage state forests and forest protected areas.

The Directorate of Rangeland and Countryside has responsibility for the protected rangeland reserves, and works generally in the field of rangeland improvement.

The Ministry of State for Environmental Affairs in the Prime Minister's Office is concerned with the impact of air, water, chemical and noise pollution, although it also has interests in fauna, forest vegetation, coastal areas and deserts, botanic gardens, proposed wildlife areas and zoos. It provides public information and undertakes research on the future establishment of protected areas, preservation of individual species and environmental legislation (Montague & Bruun, 1987). Other ministries involved with environmental issues include the Ministry of Public Works and Water Resources, which has interests in water conservation and the construction of dams (also has responsibilities for water pollution control and in the drafting of legislation for the control of water pollution); the Ministry of Defence; the Ministry of the Euphrates Dam with its own special funds; and the Ministry of Local Administration which implements projects including the drainage and reclamation of swamps and ponds (Science and Technology Division 1981).

Semi-governmental organisations with interests in wildlife conservation include the Departments of Zoology, Forestry and Botany at the Universities of Damascus, Aleppo and Lataquia, that have undertaken surveys to identify important nature conservation areas. It is currently working closely with the UNEP SPA Task Force to identify marine and coastal protected areas (Montague & Bruun 1987; Al Nimeh *in litt.*1991). Other bodies include the Arab Agronomists Union which was established in 1968 and is concerned with the impact of water pollution, as well as environmental threats posed by urban development and conservation of agricultural lands (Montague & Bruun 1987). The Arab Centre for the Study of Arid Zones and Dry Lands (ACSAD) was established in 1971 as an autonomous intergovernmental organisation with activities covering Syria and assistance to 21 other Arab states. Its activities range from education and conferences to research on the impact of urban development, protected area surveys and data gathering on plants and natural vegetation in forests and deserts. ACSAD assists in the enhancement of natural vegetation, including the improvement of natural habitats utilised by wildlife (El Khash *in litt.* 1980). It promotes an integrated approach to the study of scientific, technological and human factors in regions where aridity is the environmental constraint (Montague & Bruun 1987).

The Government of Syria is increasingly aware of the need for biodiversity conservation and sustainable use. Under the Environmental Protection Act yet to be adopted by the Government, the General Commission for Environmental Affairs (GCEA), in co-ordination with the authorities concerned and upon the approval of the Higher Council for Environmental Safety, will issue a complete system of standards, specifications, and regulations for the protection of flora, fauna and protected areas to achieve conservation goals. On 2 January 1995, a Ministerial Decree established the National Unit for Biodiversity (NUB) under the GCEA which is an inter-ministerial commission established in 1991 and chaired by the Prime Minister. The NUB is a multi-disciplinary unit headed by a National Co-ordinator from the Ministry of Higher Education, and composed of a Steering Committee and an Advisory Scientific Committee of experts from various academic institutions, the Ministries of Environment, Agriculture and Planning, and ACSAD.

The NUB has completed the UNEP sponsored Biodiversity Country Study which was endorsed in a national workshop in October 1996. The Biodiversity Country Study is a fairly comprehensive document covering the geography, flora and fauna diversity, genetic resources, threats to biodiversity, socio-economics and a small section on priority actions. In addition, a Protected Areas Plan (1996) covering sixty proposed protected areas has been prepared and submitted to the regional MAB office.

To assist the Government of Syria in environmental management, a thirty months UNDP – Capacity 21 project entitled 'Strengthening the National Capacity for Environmental Affairs in

Syria' was initiated in June 1995. The project uses a bottom-up approach commenced by the preparation of Environmental Profiles for six drainage basins of the country, followed by basin specific analyses and preparation of Basin Environmental Action Plans. These, together with the findings of the Biodiversity Country Study, will provide the bases on which a National Environmental Strategy and Action plan (NESAP) will be developed. Parallel to these 'product'-oriented activities is the process of capacity building. The latter ranges from the development of a strategy for environmental law reform to a master training plan covering topics such as EIA, environmental economics and legislation, a public awareness action plan, and a central database.

In addition, a number of other international and regional organisations including ICARDA, IPGRI, SPANA and ACSAD, as well as a national non-governmental organisation, the Syrian Biologists Society established in 1968, have initiated a variety of research, conservation and rehabilitation projects in the country.

Despite the above initiatives, the relatively new concept of integrating biodiversity conservation with sustainable resource development and a young institutional framework for environmental management in Syria necessitate substantial external help. Capitalising on the national expertise and momentum generated during the process of the Biodiversity Country Study and the Capacity Strengthening project, the Enabling Activities will further promote environmental awareness, consensus and commitment through a highly participatory process involving multiple sectors, as key steps towards achieving the goals of Article 6 of the Convention of Biodiversity.

SYSTEMS REVIEWS

Syria is bounded on the west by the Mediterranean Sea, by Iraq on the east, Turkey in the north and Israel and Jordan in the south. The country is broadly divided by the Jebel el Ansariyah (1,550m), which separates the coastal Mediterranean type bioclimatic region, with its temperate and humid climate, from the dry steppe and desert country of the greater part of continental eastern Syria. Vegetation comprises Mediterranean, Irano-Turanian and Saharo-Sindian elements. However, virtually all natural vegetation has long since been altered and degraded by human activity. The surviving vegetation includes oak maquis along the narrow coastal plain, remnant coniferous forests on the slopes of the Jebel el Ansariyah and along the Anti-Lebanon mountains, inland Irano-Turanian steppe (and elements of Kurdo-Zagarosian steppe forest) and the Mediterranean subalpine and alpine communities in the southern mountains (found above 2,000m rising to Mt Hermon at 2,814m) (Davis & al. 1986; Khatib 1991; Khatib, *in litt.*, 1991).

About 32% of the land area is cultivated, 46% is steppe and 2.4% covered by forest (Science and Technology Division 1981). Cultivation tends to be concentrated in the coastal zones and along the banks of the River Euphrates and its tributaries in the north-east (Carp 1980). Loss of forest was probably at its most intense during the late 19th and early 20th centuries, brought about by increased human and livestock populations, increased access, technology and demands for additional sources of fuel.

In the early 1980s there was a strong desire by the Ministry of Agriculture and Agrarian Reform to reintroduce wildlife into the steppe regions of the country, particularly larger ungulates such as Syrian or Asiatic wild ass *Equus hemionus hemippus* and Saudi Arabian dorcas gazelle *Gazella dorcas saudiya* (Child *in litt.* 1978). This has led to the El Talilah Project releasing gazelle south of Palmyra (Khatib *in litt.* 1991). Attempts to improve the environment include the green belt programme which was launched in 1978 to restrict desertification.

Systems reviews or comprehensive surveys of selected biological resources have been undertaken on a countrywide basis, although not necessarily with the intention of setting up a network of protected areas. However, the UNEP SPA Task Force, in co-operation with the University of Damascus and the Ministry of Agriculture and Agrarian Reform, undertook a coastal resources

survey in 1989 and proposed a coastal resources management plan and survey for 1991 (Jeudy de Grissac *in litt.* 1991). One site was recommended for protection. This site, Om'Attouyour near Latakia, has also been proposed as a national park (Al Nimeh *in litt.* 1991). Botanical surveys of Syria and Lebanon have been carried out by a number of organisations including the CNRS of France (see Davis & al. 1986). For project AQUA, part of the International Biological Programme, the Ministry of Agriculture and Agrarian Reform undertook surveys of the wetlands of the country (Carp 1980; Luther & Rzoska 1971). In 1972 IWRB undertook an ornithological mission and identified two areas of importance (Koning & Dijksen 1973). At present, a steering committee is studying the possibilities of designating protected areas specifically for wildlife (RACSPA 1987/1988; Al Nimeh *in litt.* 1991; Director-General of ACSAD *in litt.* 1986; Jeudy de Grissac *in litt.* 1991).

Currently protected areas consist of state forest protection zones, green belts, enclosed rangeland and protected public waters. The first protected rangeland reserves (enclosed pasture areas) were established in 1968 to enrich the natural environment and prevent degradation. They total 220 000ha and in part were set up as green belts to ameliorate and develop vegetation cover in arid and desert conditions. Two were established in 1983 as animal sanctuaries or protection zones. There have been proposals to designate them as the first nature reserves, with nature conservation as the main management objective. Choula Protected Rangeland (governorate Dir Ezzour) covers 22 000ha, the other reserve is located on the border of the Oued el-Azieb (Maaher Abou Jaafar 1984; Science and Technology Division 1981). Four wetland sites had been nominated by the Ministry of Agriculture and Agrarian Reform for Project AQUA (Carp 1980; Luther & Rzoska 1971).

The natural environment is under increasing threat from agriculture and technological developments. Deforestation has been the most striking form of vegetation loss. Although extensive forests once covered western Syria (as noted in the Bible and in ancient texts), only a few areas of high forest remain. A concomitant problem is that of desertification, the result of continuous cultivation and overgrazing (Science & Technology Division 1981). Other constraints continue to include uncontrolled and excessive livestock grazing and illicit tree felling. A major dam on the Euphrates was constructed in 1968 to increase the irrigated area of the valley, but has had massive consequences for the environment as a whole. The resultant reservoir, Lake Bahret Assad, has flooded over 63 000 ha of land and through the increased use of irrigation water, Syria is now bringing more of the arid eastern region under cultivation, leading to a dramatic decline in the area of natural steppe (Carp 1980; Science and Technology Division 1981). Oil pollution has become a major threat to the environment, following the discovery of oil at Karachok, Suweidiya and Rumailan in the north-east of the country. Pipelines cross Syria to the Mediterranean coast at Homs, Banyas and Tartus, where major pollution problems are attributable to a lack of sewage disposal systems and to industrial waste from petroleum processing and fertiliser production (Sardar 1982; Science and Technology Division 1981).

THE FLORA

The latest published flora for Syria and Lebanon is 'Nouvelle de la Syrie et du Liban' by Paul Mouterde in three volumes with atlas: 1966, 1969, 1983. The following list summarised the flora in numbers. According to Mouterde, there are 237 endemic species in Syria. The status of these endemics has not been studied recently, but considering the dangers to which the whole flora is exposed, these species are at least endangered. The distribution of these endemics is concentrated on the mountains of the Hermon, Antilebanon and Steppe mountains as shown on the map in the appendix (Barkoudah & Cheikh 1992).

TAXON	FAMILIES	GENERA	SPECIES	ENDANGERED
Lycopodiophyta	2	3	3	2
Equisetophyta	1	1	2	3
Polypodiophyta	6	15	17	15
Gymnospermae	3	7	13	12
Angiospermae	121	1016	3268	not known
TOTAL	133	1042	3301	

Of this wealth of plant biodiversity there are more than 400 plant species that are or have been collected from the wild and used as food or non-food plants. These can be classified as follows:

150 species used as food or food additives, cooked or fresh.

80 species used as medicinal plants

50 species used as dye plants for textile or leather.

50 species used as aromatic plants or for the extraction of essential oils.

32 species used as ornamental or garden plants.

22 species used as condiments or as kitchen herbs.

10 species used as tea plants.

Herbaria

The main herbarium collections from Syria are in Geneva. These range from those of Edmond Boissier to the collections made by George Post and Henry Pabot. Any major consultation of such material passes through Geneva. There are some collections in Paris (France), Leiden (Netherlands) Kew and Edinburgh (UK). Henry Pabot left a modest herbarium in the Directorate of Agricultural Research of the Ministry of Agriculture and Agrarian Reform. A similar collection was left also in the Department of Botany at the Faculty of Sciences in Damascus University. At present there are small herbaria (a few thousands sheets) in the Department of Botany, Faculty of Sciences and Department of Botany, Faculty of Agriculture, in each of the three Universities of the countries. The Department of Forestry in Aleppo University has a good collection of forest plants. This material is preserved according to the traditional way and the corresponding data maintained as paper records.

GOVERNMENTAL ORGANISATIONS

There are three universities in Syria. Each has a Faculty of Science, a Faculty of Agriculture and a Faculty of Pharmacy. Some scientific research on wild food and non-food useful plants is being conducted. but there is no special programme for research on these plants. Applied research is encouraged, especially that with an economic outcome.

Ministry of Agriculture and Agrarian Reform

Directorate of Agricultural Research
Douma, Damascus, Syria
Fax. 963 11 5323029/2244078/2244038
Tel. 963 11 5323067

There is a Department for Plant Genetic Resources, which started working since the begin of the 1980s. The activities were directed towards collection in co-operation with IBPGR. At present there is a genebank with a few thousand accessions, mainly of cereals, food legume, forage legumes and their wild relatives. The collection is documented on the computer and it is enriched through co-operation with ICARDA. Co-operation is also strong with IPGRI/WANA.

There are some activities on *in situ* conservation of wild relatives of crops like wheat and lentil in co-operation with ICARDA. There is no work done on wild food and non-food useful plants.

Accessions stored by GRU of the Directorate of Scientific Agricultural Research:

Cereals (*Triticum, Hordeum, Aegilops* and *Avena*)	2461
Food and feed legumes (*Lens, Cicer, Vicia, Lathyrus*)	2586
Vegetables (*Solanum, Capsicum, Cucurbita, Cucumis, Allium)*	1720
Other crops (*Carthamus, Sesame, Sorghum, Helianthus*)	391

These include land races, improves varieties as well as wild relatives of the above mentioned crops.

There are 15 field gene banks in the country containing nearly 700 different cultivars of fruit trees. The majority of these plant resources is introduced, but local breeds are maintained also. (*Olea, Vitis, Malus, Pyrus, Cydonia, Amygdalus, Cerasus, Juglans, Pistacia, Punica, Ficus, Prunus*).

A special Department for Ornamental and Aromatic Plants started work in 1990. The work is directed towards the collection of these plants and propagation and evaluation. Till now the number of species collected and propagated is around thirty. But there is no systematic programme of research and no real connection with breeding programmes. The main results are the maintenance of live collections of some of the important wild aromatic and ornamental species.

Ministry of Agriculture and Agrarian Reform
Directorate of Forestry and Afforestation
Sab'i Bahrat, Damascus, Syria.
Fax. 963 11
Tel. 963 11 2213613 2221513

Centre for Forestry Genetic Resources
This Centre is being established (1995) in Lataquia in the north western part of the country. Its objectives are: Collection, Documentation, Conservation, Propagation and Use of forest genetic resources in afforestation, green belts and agricultural development.

Department of Minor Forest Products
This Department is responsible for the management and use of some plants collected in the forest and sold by the villagers. These include condiment plants like *Origanum*, *Thymus*, *Rhus*, *Laurus*, ornamental plants like *Myrtus, Nerium, Erica, Lavandula, Retama* and others, medicinal plants like *Matricaria, Ammi, Ribes, Salvia*, industrial plants like *Glycirrhiza* (liquorice industry), *Laurus*(soap industry), *Rhus* (leather tanning), different forest trees (charcoal industry). The activities of the Department are to develop permits for the villagers or merchants to make use of these products according to a specified tax. Recently, there has an effort done to propagate some of these plants and to distribute them to the farmers at cost price. This effort was done specially with trees and shrubs that were easily propagated in the forestry nurseries, without any consideration regarding genetic resources.

Directorate of the steppe and sheep Production:
Palmyra
Tel. (963 - 31) 910588/910855
Fax (963 - 31) 913025

There are 13 forage-shrub nurseries in the steppe producing about 9 million plants per year for rehabilitation of degraded range lands. Besides, fifty tons seed of such forage-shrubs are broadcast annually over an area of 2000 hectares of degraded range land for reseeding. There

have been a few sand dune fixation projects by the use of pasture and forage shrubs in the steppe region. In the effort of steppe development, 123 artesian wells were bored to provide water for the inhabitants and livestock in the steppe. The effort on conservation in the steppe established 28 range land reserves with a total area of about 200 000ha.

Ministry of Defence

Directorate of Production Projects:
This Directorate is concerned with medicinal herbs production and commercialisation. Some of the used herbs are local like *Matricaria, Ferula hermonium, Rosa damascena Pimpinella anisum, Althaea rosea, Nigella sativa, Origanum vulgare* and others. There have been some trials to cultivate these plants but with limited success.

At present many national drug factories produce and commercialise medicinal herbs for the treatment of some diseases. These depend on wild and imported herbs. There is only limited cultivation of medicinal plants.

Ministry of State for Environmental Affairs:
A Minister of State for Environmental Affairs was appointed in 1979 for the first time. The General Commission for Environmental Affairs (GCEA) was created in 1991 but this basic regulatory framework for environmental protection remains constrained by acute shortages in human, physical and financial resources. The Minister of State for Environmental Affairs has the power to prepare laws, orders and regulations relevant to addressing the country's environmental problems and this is achieved through the Supreme Council for Environmental Safety, which includes 12 Ministers and is headed by the Prime Minister. A Draft Environmental Protection Act was prepared, but it has not been adopted or ratified, nor the Draft National Strategy and Action Plan for the conservation of biological resources..

As regards the conservation of biodiversity, the National Biodiversity Unit was established in 1994 when a UNEP supported Country Study project was agreed. The Unit is a secretariat office for the National Biodiversity Co-ordinator who is responsible for the execution of the national study and its followup. At present the study is finished and has been submitted to UNEP. The Co-ordinator is aided by a Scientific Committee representing different universities and ministries concerned with biodiversity. The NBU has a databank on different components of biodiversity in Syria. It is built on Foxpro on Windows. The data covers taxonomic and geographic information compiled from available bibliographies.

Regional and International Organisations:

Centre for the Study of Arid Zones and Dry lands (ACSAD)
Dooma, P. O. Box 2440,
Fax 963 11 5323063
Tlx. ACSAD 412697 SY
Tel. 963 11 5323089/5323039

ACSAD is an intergovernamental autonomous organisation, established by the Arab League in 1971 with its headquarters in Damascus, Syria. It may open branch offices in other Arab countries. The main objectives include regional research programmes and studies related to natural resources in arid lands such as water, soil, plants and animal production, as well as training of Arab scientists, exchange of knowledge and experience among Arab States, co-operation with other Arab and International Organisations.

The head of the executive authority is the Director General. The Administrative Board is composed of country representatives, one from each participating Arab Country.

ACSAD is working on the use of Arab plant genetic resources in agricultural development in arid lands. The use of range and forage shrubs in rehabilitation of degraded range lands is a well established activity. *Atriplex* and *Salsola* species and other chenopods were collected, propagated and used in these programmes.

There is a special programme at ACSAD on genetic resources of almond, fig, olive, grapes and pistachio trees. A field gene bank with a few hundreds of accessions is maintained in Syria by ACSAD.

ACSAD has a databank on arid zone plants. It is built on ACCESS in Windows. It includes taxonomic, geographic, ecological and economic use data on 1300 plant species growing in the arid parts of the Arab countries. Plants with grazing value as well as medicinal plants are the best represented in this data bank. The data have been compiles from more than 408 references.

International Centre for Agricultural Research in Dry Areas, ICARDA.
P. O. Box 5466, Aleppo, Syria
Tlx. 331206 331208 331263
Tel. 963 21 213433/77 225112 225012
Fax. 963 21 213490 963 21 225105

Established in 1977, the International Centre for Agricultural Research in Dry Areas (ICARDA) is governed by an independent Board of Trustees. Based at Aleppo, Syria, it is one of the 18 centres supported by the Consultative Group on International Agricultural Research (CGIAR), which is an international group of representatives of donor agencies, eminent agricultural scientists, and institutional administrators from developed and developing countries who guide and support its work.

ICARDA focuses its research efforts on areas with dry summer and where precipitation in winter ranges from 200 to 600 mm. The Centre has a world responsibility for the improvement of barley, lentil, and faba bean, and a regional responsibility – in West Asia and North Africa – for the improvement of wheat, chickpea, and pasture and forage crops and the associated farming systems.

Genetic Resources Unit at ICARDA continue its efforts to acquire, characterise, document, conserve and distribute germplasm of the Centre's mandate crops. The gene bank harbours a few hundred thousands accessions of cereals, food and forage legumes. The data on these accessions are kept in a special databank in Dbase IV. It is linked to a simple GIS to plot the distribution on maps.

International Plant Genetic Resources Institute (IPGRI/WANA):
Syria is a member of WANANET, which was established in 1992 among the countries of West Asia and North Africa , FAO, ICARDA and IPGRI/WANA. The objectives of the network are:

- Co-ordination on plant genetic resources within each country (national committee and national co-ordinator).
- Implementation of national strategies through project proposals that are developed by national programme.
- Information exchange between and within the countries.

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APPENDIX 1: Important Plant families according to the number of species

Num. of Genera	Num. of Species	Family	
50	402	*Papilionaceae*	1
106	332	*Compositae*	2
104	227	*Graminae*	3
71	184	*Cruciferae*	4
31	180	*Labiatae*	5
74	154	*Umbelliferae*	6
24	142	*Liliaceae*	7
15	108	*Scrophulariaceae*	8
29	90	*Boraginaceae*	9
13	86	*Silenoideae*	10

Important Plant families and the presence of endemics in them

Endemism percentage	Endemics	Species	Genera	Family
S		S	G	
13	52	402	50	*Papilionaceae*
8	29	332	106	*Compositae*
15	27	180	31	*Labiatae*
17	25	142	24	*Liliaceae*
39	16	41	5	*Iridaceae*
7.8	12	154	24	*Umbelliferae*
9	10	108	15	*Scrophulariaceae*
33	7	21	11	*Caryophyllaceae*
3.8	7	184	21	*Crucifrae*
8	6	25	12	*Ranunculaceae*
9.8	5	51	5	*Euphorbraceae*
4	4	90	29	*Boraginaceae*
1.7	4	227	5	*Campanulaceae*
12	3	25	7	*Malvaceae*

APPENDIX 2: Genera with number of endemics in Syria

%	Endemics	Total number of species	Genus	Family
28	31	110	*Astragalus*	*Papilionaceae*
26	12	46	*Allium*	*Liliaceae*
38	12	23	*Iris*	*Iridaceae*
22	8	36	*Verbascum*	*Scrophyllariaceae*
26.6	10	45	*Centaurea*	*Compositae Papilionaceae*
13	7	53	*Trifolium*	*Papilionaceae*
11	5	45	*Euphorbia*	*Euphorbiaceae*
	4		*Campanula*	*Campanulaceae*
11	4	35	*Vicia*	*Papilionaceae*
13	4	30	*Salvia*	*Labiatae*

APPENDIX 3: Tentative list of food and non-food wild useful plants in Syria

A : Aromatic and fragrant palnts, B : Bee plants, C : Condiment, D : Dye plant, F: Foodand edible plants, M : Medicine, O /; Ornamental plants, P /; Poisonous plants, T : Tea plants

Latin name	Family	Plant part	Use
Narcissus tazetta	*Amaryllidaceae*	plant	Aromatic
Pancratium maritimum	*Amaryllidaceae*	flower	Aromatic
Pistacia lentiscus var. *chia*	*Anacardiaceae*	gum	Aromatic
Rhus coriaria	*Anacardiaceae*	fruit	Aromatic
Schinus molle	*Anacardiaceae*	fruit	Aromatic
Achillea millefolium	*Compositae*	herb	Aromatic
Artemisia dracunculus	*Compositae*	herb	A
Artemisia sp.	*Compositae*	herb	A
Helichrysum sp.	*Compositae*	flower	A
Matricaria chamomilla	*Compositae*	flower	A
Cheiranthus cheiri	*Cruciferae*	plant	A
Cuppessus sempervivens	*Cupressaceae*	cone	A
Coridothymus capitatus	*Labiatae*	herb	A
Lavandula angustifolia	*Labiatae*	stem (flowering)	A
Lavandula stoechas	*Labiatae*	stem (flowering)	A
Mentha sp.	*Labiatae*	herb	A
Nepeta caesarea	*Labiatae*	plant	A
Ocimum basilicum	*Labiatae*	herb	A
Origanum sp.	*Labiatae*	herb	A
Rosmarinus officinalis	*Labiatae*	leaf	A
Satureja cuneifolia	*Labiatae*	herb	A
Satureja thymbra	*Labiatae*	herb	A
Thymbra spicata	*Labiatae*	herb	A
Thymus pulegioides	*Labiatae*	herb	A
Ziziphora sp.	*Labiatae*	herb	A
Salvia sp.	*Labitae*	leaf	A
Laurus nobilis	*Lauraceae*	leaf	A
Spartium junceum	*Leguminosae*	flower	A
Trigonella foenumgraecum	*Leguminosae*	seed	A
Allium sativum	*Liliaceae*	bulb (cult.)	A
Hyacinthus orientalis	*Liliaceae*	plant	A
Lilium candidum	*Liliaceae*	plant	A
Myrtus communis	*Myrtaceae*	leaf	A
Syringa vulgaris	*Oleaceae*	plant	A
Rosa damascena	*Rosaceae*	flower	A
Ruta chalepensis	*Rutaceae*	herb	A
Anhriscus nemorosa	*Umbelliferae*	stem, herb	A
Carum carvi	*Umbelliferae*	fruit, herb	A
Coriandrum sativum	*Umbelliferae*	fruit	A
Cuminum cyminum	*Umbelliferae*	fruit	A
Echinophora tenuifolia subsp. *sibthorpiana*	*Umbelliferae*	herb	A
Foeniculum vulgare	*Umbelliferae*	fruit, leaf	A
Foeniculum vulgare subsp. *piperatum*	*Umbelliferae*	leaf	A
Pimpinella anisum	*Umbelliferae*	fruit	A
Juniperus foetidissima	*Cupressaceae*	wood	A furniture (chest)
Melissa officinalis	*Labiatae*	herb	A, Bee attractant
Pimpinella tragium	*Umbelliferae*	herb	A, broom
Cerasus mahaleb	*Rosaceae*	branch	A, cigarette holder
Nigella sativa	*Ranunculaceae*	seed	A, fixed oil
Cerasus mahaleb	*Rosaceae*	seed	A, food additive

Cedrus libani	*Pinaceae*	wood	A, tar
Nepeta caesarea	*Labiatae*	plant	B
Thymus pulegioides	*Labiatae*	herb	B
Juniperus drupacea	*Cupressaceae*	berry cone	beads
Prunus spinosa	*Rosaceae*	seed	beads
Viscum album	*Loranthaceae*	fruit	bird trap
Erica sp.	*Ericaceae*	branch	broom
Osyris alba	*Santalaceae*	branch	broom
Peganum harmala	*Zygophyllaceae*	fruit (dried)	burnt at home to ward off evil spirits
Rhus coriaria	*Anacardiaceae*	fruit	C
Schinus molle	*Anacardiaceae*	fruit	C
Artemisia dracunculus	*Compositae*	herb	C
Coridothymus capitatus	*Labiatae*	herb	C
Marrubium vulgare	*Labiatae*	herb	C
Mentha sp.	*Labiatae*	herb	C
Ocimum basilicum	*Labiatae*	herb	C
Origanum sp.	*Labiatae*	herb	C
Satureja cuneifolia	*Labiatae*	herb	C
Satureja thymbra	*Labiatae*	herb	C
Thymbra spicata	*Labiatae*	herb	C
Laurus nobilis	*Lauraceae*	leaf	C
Trigonella foenumgraecum	*Leguminosae*	seed	C
Allium sativum	*Liliaceae*	bulb (cult.)	C
Myrtus communis	*Myrtaceae*	leaf	C
Carum carvi	*Umbelliferae*	fruit, herb	C
Coriandrum sativum	*Umbelliferae*	fruit	C
Coriandrum sativum	*Umbelliferae*	leaf	C
Cuminum cyminum	*Umbelliferae*	fruit	C
Echinophora tenuifolia subsp. *sibthorpiana*	*Umbelliferae*	herb	C
Foeniculum vulgare	*Umbelliferae*	fruit, leaf	C
Foeniculum vulgare subsp. *piperatum*	*Umbelliferae*	leaf	C
Pimpinella anisum	*Umbelliferae*	fruit	C
Nigella sativa	*Ranunculaceae*	seed	C, fixed oil
Chondrilla juncea	*Compositae*	root latex	chewing gum
Smilax aspera	*Liliaceae*	seed coat	chewing gum softener
Smilax excelsa	*Liliaceae*	seed coat	chewing gum softener
Pistacia terebinthus subsp. *palaestina*	*Anacardiaceae*	leaf, branch	D
Juglans regia	*Juglandaceae*	leaf fruit peel	D
Salvia sp.	*Labiatae*	root	D
Melilotus officinalis	*Leguminosae*	flower	D
Phytolacca americana	*Phytolaccaceae*	fruit	D
Plumbago europea	*Plumbaginaceae*	plant	D
Polygonum aviculare	*Polygonaceae*	herb	D
Reseda luteola	*Resedaceae*	flower	D
Vitex agnus-castus	*Verbenaceae*	root	D
Rumex chalepensis	*Polygonaceae*	root	D (black)
Isatis tinctoria	*Cruciferae*	herb	D (blue)
Anthemis tinctoria var. *tinctoria*	*Compositae*	stem (flowering)	D (hair dye)
Rubia tinctorum	*Rubiaceae*	root	D (red)
Cotinus coggyria	*Anacardiaceae*	root	D (yellow)
Anthemis chia	*Compositae*	flower	D (yellow)
Inula viscosa	*Compositae*	flower	D (yellow)
Rhamnus petiolaris	*Rhamnaceae*	fruit	D (yellow)
Verbascum sp.	*Scrophulariaceae*	flower	D (yellow)
Carthamus tinctorius	*Compositae*	flower	D food dye
Pistacia terebinthus subsp. *palaestina*	*Anacardiaceae*	leaf, branch	D

Juglans regia	*Juglandaceae*	leaf fruit peel	D
Salvia sp.	*Labiatae*	root	D
Melilotus officinalis	*Leguminosae*	flower	D
Phytolacca americana	*Phytolaccaceae*	fruit	D
Plumbago europea	*Plumbaginaceae*	plant	D
Polygonum aviculare	*Polygonaceae*	herb	D
Reseda luteola	*Resedaceae*	flower	D
Vitex agnus-castus	*Verbenaceae*	root	D
Rumex chalepensis	*Polygonaceae*	root	D (black)
Isatis tinctoria	*Cruciferae*	herb	D (blue)
Anthemis tinctoria var. *tinctoria*	*Compositae*	stem (flowering)	D (hair dye)
Rubia tinctorum	*Rubiaceae*	root	D (red)
Cotinus coggyria	*Anacardiaceae*	root	D (yellow)
Anthemis chia	*Compositae*	flower	D (yellow)
Inula viscosa	*Compositae*	flower	D (yellow)
Rhamnus petiolaris	*Rhamnaceae*	fruit	D (yellow)
Verbascum sp.	*Scrophulariaceae*	flower	D (yellow)
Carthamus tinctorius	*Compositae*	flower	D food dye
Pistacia terebinthus subsp. *palaestina*	*Anacardiaceae*	leaf, branch	D
Juglans regia	*Juglandaceae*	leaf fruit peel	D
Salvia sp.	*Labitae*	root	D
Melilotus officinalis	*Leguminosae*	flower	D
Phytolacca americana	*Phytolaccaceae*	fruit	D
Plumbago europea	*Plumbaginaceae*	plant	D
Polygonum aviculare	*Polygonaceae*	herb	D
Reseda luteola	*Resedaceae*	flower	D
Vitex agnus-castus	*Verbenaceae*	root	D
Rumex chalepensis	*Polygonaceae*	root	D (black)
Isatis tinctoria	*Cruciferae*	herb	D (blue)
Anthemis tinctoria var. *tinctoria*	*Compositae*	stem (flowering)	D (hair dye)
Rubia tinctorum	*Rubiaceae*	root	D (red)
Cotinus coggyria	*Anacardiaceae*	root	D (yellow)
Anthemis chia	*Compositae*	flower	D (yellow)
Inula viscosa	*Compositae*	flower	D (yellow)
Rhamnus petiolaris	*Rhamnaceae*	fruit	D (yellow)
Verbascum sp.	*Scrophulariaceae*	flower	D (yellow)
Carthamus tinctorius	*Compositae*	flower	D food dye
Acanthus dioscoridis	*Acanthaceae*	flower (corolla)	F
Ixiolirion tataricum	*Amaryllidaceae*	flower	F
Pistacia atlantica	*Anacardiaceae*	shoot (young)	F
Pistacia lentiscus var. *chia*	*Anacardiaceae*	gum	F
Pistacia vera	*Anacardiaceae*	fruit	F
Arum dioscoridis	*Araceae*	leaf	F
Arum sp.	*Araceae*	leaf	F
Capparis ovata	*Capparidaceae*	flower bud	F
Capparis spinosa	*Capparidaceae*	flower bud	F
Sambucus ebulus	*Caprifoliaceae*	fruit	F
Sambucus nigra	*Caprifoliaceae*	fruit	F
Silene inflata	*Caryophyllaceae*	herb	F
Stellaria media	*Caryophyllaceae*	herb	F
Amaranthus albus	*Chenopodiaceae*	herb	F
Amaranthus blitoides	*Chenopodiaceae*	herb	F
Amaranthus lividus	*Chenopodiaceae*	stem (flowering)	F
Amaranthus retroflexus	*Chenopodiaceae*	herb	F
Beta vulgaris	*Chenopodiaceae*	leaf, root	F
Chenopodium album	*Chenopodiaceae*	herb	F
Arctium minus subsp. *pubens*	*Compositae*	stem, leaf	F
Bellis perennis	*Compositae*	herb	F
Carthamus tinctorius	*Compositae*	seed fixed-oil	F
Chondrilla juncea	*Compositae*	leaf	F

Chrysanthemum coronarium	*Compositae*	herb	F
Chrysanthemum segetum	*Compositae*	herb	F
Cichorium endivia	*Compositae*	leaf (rosette)	F
Cichorium intybus	*Compositae*	leaf (rosette)	F
Doronicum caucasicum	*Compositae*	root	F
Gundelia tournefortii	*Compositae*	shoot (young)	F
Lactuca aculeata	*Compositae*	leaf	F
Onopordum illyricum	*Compositae*	stem (peeled)	F
Scorzonera, Tragopogon	*Compositae*	root (young)	F
Scorzonera mollis	*Compositae*	rhizome (inner part)	F
Silybum marianum	*Compositae*	stem (peeled), shoot (young)	F
Sonchus asper subsp. *glaucescens*	*Compositae*	leaf (rosette)	F
Sonchus oleraceus	*Compositae*	leaf (rosette)	F
Taraxacum sp.	*Compositae*	leaf (rosette)	F
Convolvulus arvensis	*Convolvulaceae*	leaf	F
Cornus mas	*Cornaceae*	fruit	F
Coryllus avellana	*Corylaceae*	fruit (cultivated)	F
Eruca sativa	*Cruciferae*	leaf	F
Lepidium latifolium	*Cruciferae*	leaf	F
Lepidium sativum	*Cruciferae*	leaf	F
Lepidium sativum subsp. *sativum*	*Cruciferae*	leaf	F
Lepidium sativum subsp. *spiniscens*	*Cruciferae*	leaf	F
Medicago orbicularis	*Cruciferae*	fruit (young)	F
Nasturtium officinale	*Cruciferae*	leaf	F
Raphanus raphanistrum	*Cruciferae*	leaf, flower	F
Sinapis arvensis	*Cruciferae*	herb	F
Juniperus drupacea	*Cupressaceae*	fruit-conc. syrup	F
Cyperus rotundus	*Cyperaceae*	tuber	F
Tamus communis subsp. *cretica*	*Dioscoreaceae*	shoot (young)	F
Elaeagnus angustifolia	*Elaeagnaceae*	fruit	F
Castanea sativa	*Fagaceae*	fruit	F
Quercus sp.	*Fagaceae*	fruit	F
Geranium tuberosum subsp. *tuberosum*	*Geraniaceae*	tuber	F
Setaria italica	*Graminae*	fruit	F
Crocus sp. *(30* sp.*)*	*Iridaceae*	tuber	F
Juglans regia	*Juglandaceae*	seed	F
Phlomis bruguieri	*Labiatae*	flower (petal)	F
Ceratonia siliqua	*Leguminosae*	fruit	F
Cercis siliquastrum	*Leguminosae*	flower	F
Glycyrrhiza glabra	*Leguminosae*	root	F
Trifolium pratense	*Leguminosae*	flower	F
Vicia sativa	*Leguminosae*	seed	F
Allium sativum	*Liliaceae*	bulb (cult.)	F
Allium trifoliatum	*Liliaceae*	leaf	F
Asparagus acutifolius	*Liliaceae*	shoot (young)	F
Asparagus officinalis	*Liliaceae*	shoot (cult.)	F
Ornithogalum narbonense	*Liliaceae*	leaf	F
Puschkinia scilloides	*Liliaceae*	leaf	F
Ruscus aculeatus	*Liliaceae*	shoot	F
Smilax aspera	*Liliaceae*	shoot (young)	F
Smilax excelsa	*Liliaceae*	shoot (young)	F
Malva neglecta	*Malvaceae*	herb	F
Ficus carica	*Moraceae*	fruit	F
Morus alba	*Moraceae*	fruit	F
Morus nigra	*Moraceae*	fruit	F
Myrtus communis	*Myrtaceae*	fruit	F
Orchis, Ophrys, Platanthera, Dactylorhiza	*Orchidaceae*	tuber	F
Serapias sp.	*Orchidaceae*	tuber	F

Oxalis acetocella	*Oxalidaceae*	herb	F
Paeonia mascula	*Paeoniceae*	young leaf	F
Papaver dubium	*Papaveraceae*	leaf, flower	F
Papaver rhoeas	*Papaveraceae*	leaf, flower	F
Papaver somniferum	*Papaveraceae*	leaf	F
Pinus pinea	*Pinaceae*	seed	F
Plantago major	*Plantaginaceae*	leaf	F
Polygonum lapathifolium	*Polygonaceae*	stem (leafy)	F
Rheum ribes	*Polygonaceae*	stem (peeled)	F
Rumex acetosella	*Polygonaceae*	leaf	F
Rumex chalepensis	*Polygonaceae*	leaf	F
Rumex crispus	*Polygonaceae*	herb	F
Rumex tuberosus	*Polygonaceae*	leaf	F
Portulaca oleracea	*Portulacaceae*	herb	F
Cyclamen persicum	*Primulaceae*	leaf	F
Ranunculu ficaria	*Ranunculaceae*	tuber	F
Zizyphus jujuba	*Rhamnaceae*	fruit	F
Zizyphus lotus	*Rhamnaceae*	fruit	F
Amygdalus orientalis	*Rosaceae*	seed	F
Cerasus microcarpa	*Rosaceae*	fruit	F
Cotoneaster nummularia	*Rosaceae*	fruit	F
Cataegus aronia	*Rosaceae*	fruit	F
Eriolobus trilobatus	*Rosaceae*	fruit	F
Fragaria vesca	*Rosaceae*	fruit	F
Prunus spinosa	*Rosaceae*	fruit	F
Pyracantha coccinea	*Rosaceae*	fruit	F
Pyrus elaeagnifolia	*Rosaceae*	fruit	F
Rosa canina and other Rosa spp.	*Rosaceae*	fruit	F
Rosa damascena	*Rosaceae*	flower	F
Rubus sp.	*Rosaceae*	fruit	F
Solanum nigrum	*Solanaceae*	leaf	F
Celtis australis	*Ulmaceae*	fruit	F
Celtis tournefortii	*Ulmaceae*	fruit powder	F
Anhriscus nemorosa	*Umbelliferae*	stem, herb	F
Apium graveolens	*Umbelliferae*	leaf, root	F
Bunium ferulaceum	*Umbelliferae*	tuber	F
Coriandrum sativum	*Umbelliferae*	leaf	F
Malabaila secacul	*Umbelliferae*	root	F
Oenanthe pimpinelloides	*Umbelliferae*	leaf (rosette)	F
Opopanax hispidus	*Umbelliferae*	leaf	F
Scandix pecten-veneris	*Umbelliferae*	herb	F
Smyrnium connatum	*Umbelliferae*	root	F
Urtica dioica	*Urticaceae*	herb	F
Urtica pilulifera	*Urticaceae*	herb	F
Urtica urens	*Urticaceae*	herb	F
Pistacia terebinthus subsp. *palaestina*	*Anacardiaceae*	fruit	F (coffee)
Gypsophila sp.	*Caryophyllaceae*	root	F (helva ingredient)
Gundeia tournefortii	*Compositae*	fruit	F (roasted and ground to make coffee)
Ankyropetalum gypsophiloides	*Caryophyllaceae*	root	F (Siirt Helvasi)
Prosopis farcta	*Leguminosae*	fruit	F fodder
Ficus carica	*Moraceae*	fruit latex	F in Teleme
Lolium temulentum	*Graminae*	seed	F, (after boiled)
Pistacia khinjuk	*Anacardiaceae*	seed	F, fixed-oil used for making soap
Iris unguicularis	*Iridaceae*	rhizome	F, in Teleme
Amygdalus communis	*Rosaceae*	seed	F, oil
Cannabis sativa	*Cannabaceae*	stem	fibre

Verbascum sinuatum	*Scrophulariaceae*	seed	fish poison
Eruca cappadocica	*Cruciferae*	seed	fixed oil
Laurus nobilis	*Lauraceae*	seed	fixed oil
Linum usitatissimum	*Liliaceae*	seed	fixed oil
Cephalaria syriaca	*Dipsacaceae*	seed	fixed oil, flour added to bread dough
Pteridium aquilinum	*Hypolepidaceae*	herb	fodder
Coronilla varia	*Leguminosae*	plant	fodder
Medicago sativa	*Leguminosae*	herb	fodder
Trifolium repens	*Leguminosae*	herb (cult.)	fodder
Asphodeline tenuior	*Liliaceae*	root	glue
Gundeia tournefortii	*Compositae*	root latex	gum
Dipsacus laciniatus	*Dipsacaceae*	inflorescence (dried)	hair comb
Eryngium creticum	*Compositae*	herb	hung on door to ward off evilspirits
Adiantum capillus-veneris	*Adiantaceae*	herb	M
Hedera helix	*Araliaceae*	leaf	M
Asplenium adiantumnigrum	*Aspleniaceae*	herb	M
Ceterach officinarum	*Aspleniaceae*	herb	M
Achillea millefolium	*Compositae*	herb	M
Artemisia sp.	*Compositae*	herb	M
Centaurea cyanus	*Compositae*	stem (flowering)	M
Helichrysum sp.	*Compositae*	flower	M
Inula heterolepis	*Compositae*	plant	M
Matricaria chamomilla	*Compositae*	flower	M
Onopordum tauricum	*Compositae*	fruit	M
Convolvulus arvensis	*Convolvulaceae*	latex	M
Convolvulus scammonia	*Convolvulaceae*	root	M
Ipomoea stolonifera	*Convolvulaceae*	leaf	M
Cardaria draba	*Cruciferae*	herb	M
Cuppessus sempervivens	*Cupressaceae*	cone	M
Juniperus drupacea	*Cupressaceae*	fruit-conc. syrup	M
Juniperus drupacea	*Cupressaceae*	wood tar	M
Juniperus oxycedrus	*Cupressaceae*	wood tar	M
Juniperus oxycedrus	*Cupressaceae*	fruit	M
Scabiosa argentea	*Dipsacaceae*	herb	M
Ephedra campylopoda	*Ephedraceae*	branch	M
Euphorbia apios	*Euphorbiaceae*	tuber	M
Fumaria sp.	*Fumariaceae*	herb	M
Dryopteris filix-mas	*Hypolepidaceae*	rhizome	M
Ballota nigra	*Labiatae*	herb	M
Ballota saxatilis	*Labiatae*	herb	M
Lamium sp.	*Labiatae*	herb	M
Lavandula angustifolia	*Labiatae*	stem (flowering)	M
Lavandula stoechas	*Labiatae*	stem (flowering)	M
Mentha sp.	*Labiatae*	herb	M
Rosmarinus officinalis	*Labiatae*	leaf	M
Sideritis sp.	*Labiatae*	herb	M
Teucrium chamaedrys	*Labiatae*	herb	M
Teucrium polium	*Labiatae*	herb	M
Teucrium scordium	*Labiatae*	herb	M
Thymbra spicata	*Labiatae*	herb	M
Glycyrrhiza glabra	*Leguminosae*	root	M
Ononis spinosa	*Leguminosae*	root	M
Colchicum sp.	*Liliaceae*	bulb	M
Ruscus aculeatus	*Liliaceae*	root	M
Scilla hyacinthoides	*Liliaceae*	buld	M

Urginea maritima	*Liliaceae*	bulb	M
Lythrum salicaria	*Lythraceae*	leaf	M
Alcea setosa	*Malvaceae*	root, bud	M
Althaea officinalis	*Malvaceae*	root, flower, leaf	M
Osmunda regalis	*Osmundaceae*	root	M
Corydalis solida	*Papaveraceae*	tuber	M
Glaucinum corniculatum	*Papaveraceae*	plant	M
Glaucinum grandiflorum	*Papaveraceae*	fruit	M
Papaver somniferum	*Papaveraceae*	opium	M
Plantago psyllium	*Plantaginaceae*	seed	M
Rumex pulcher	*Polygonaceae*	root	M
Cyclamen sp.	*Primulaceae*	tuber	M
Primula sp.	*Primulaceae*	plant	M
Ranunculu ficaria	*Ranunculaceae*	tuber	M
Paliurus spina-christi	*Rhamnaceae*	fruit	M
Rhamnus alaternus	*Rhamnaceae*	fruit and bark	M
Geum urbanum	*Rosaceae*	root	M
Rubus sanctus	*Rosaceae*	root	M
Sarcopoterium spinosum	*Rosaceae*	root	M
Verbascum thapsus	*Scrophulariaceae*	flower	M
Datura stramonium	*Solanaceae*	flower	M
Hyoscyamus niger	*Solanaceae*	herb, seed	M
Taxus baccata	*Taxaceae*	plant	M
Ammi visnaga	*Tmbelliferae*	fruit	M
Pimpinella anisum	*Umbelliferae*	fruit	M
Parietaria judaica	*Urticaceae*	herb	M
Vitex agnus-castus	*Verbenaceae*	fruit	M
Gypsophila sp.	*Caryophyllaceae*	root	M (helva ingredient)
Verbascum sp.	*Scrophulariaceae*	flower	M (yellow)
Melissa officinalis	*Labiatae*	herb	M, Bee attractant
Aloe vera	*Liliaceae*	leaf juice	M, cosmetics
Ricinus communis	*Euphorbiaceae*	seed	M, fixed oil
Cannabis sativa	*Cannabaceae*	leaf	M, narcotic
Cotinus coggyria	*Anacardiaceae*	leaf	M, tanning material
Rhus coriaria	*Anacardiaceae*	leaf	M, tanning material
Cedrus libani	*Pinaceae*	wood	M, tar
Arundo donax	*Graminae*	stem	musical instruments (kaval, ney)
Datura stramonium	*Solanaceae*	seed	Narcotic
Galanthus sp.	*Amaryllidaceae*	plant	O
Narcissus tazetta	*Amaryllidaceae*	plant	O
Pancratium maritimum	*Amaryllidaceae*	plant	O
Sternbergia sp.	*Amaryllidaceae*	plant	O
Arum italicum	*Araceae*	plant	O
Phoenix canariensis	*Araceae*	plant	O
Lonicera japonica	*Caprifoliaceae*	plant	O
Viburnum tinus	*Caprifoliaceae*	plant	O
Dianthus barbata	*Caryophyllaceae*	plant	O
Cheiranthus cheiri	*Cruciferae*	plant	O
Gladiolus sp.	*Iridaceae*	plant	O
Iris sp.	*Iridaceae*	plant	O
Lavandula angustifolia	*Labiatae*	stem (flowering)	O
Acacia dealbata	*Leguminosae*	plant	O
Fritillaria persica	*Liliaceae*	plant	O
Hyacinthus orientalis	*Liliaceae*	plant	O
Lilium candidum	*Liliaceae*	plant	O

Tulipa sp.	*Liliaceae*	plant	O
Alcea rosea	*Malvaceae*	plant	O
Ficus elastica	*Moraceae*	tree	O
Nymphaea alba	*Nymphaeaceae*	plant	O
Syringa vulgaris	*Oleaceae*	plant	O
Phoenix dactylifera	*Palmae*	plant	O
Cyclamen sp.	*Primulaceae*	plant	O
Primula sp.	*Primulaceae*	plant	O
Anemone blanda	*Ranunculaceae*	plant	O
Anemone coronaria	*Ranunculaceae*	plant	O
Clematis sp.	*Ranunculaceae*	plant	O
Delphinium ajacis	*Ranunculaceae*	plant	O
Viola adorata	*Violaceae*	plant	O
Viola tricolor	*Violaceae*	plant	O
Smyrnium olusatrum	*Umbelliferae*	herb	O (used by florists)
Acanthus dioscoridis	*Acanthaceae*	flower (corolla)	T
Ocimum basilicum	*Labiatae*	herb	T
Origanum sp.	*Labiatae*	herb	T
Sideritis sp.	*Labiatae*	herb	T
Teucrium chamaedrys	*Labiatae*	herb	T
Thymus pulegioides	*Labiatae*	herb	T
Ziziphora sp.	*Labiatae*	herb	T
Salvia sp.	*Labitae*	leaf	T
Corydalis rutifolia	*Papaveraceae*	plant	T
Melissa officinalis	*Labiatae*	herb	T, Bee attractant
Anchonium elichrysifolium	*Cruciferae*	leaf	tobacco substitute, snuff
Nicotiana glauca	*Solanaceae*	leaf	tobacco substitute, snuff
Ammi visnaga	*Umbelliferae*	fruit stalk	tooth-pick
Dictamnus albus	*Rutaceae*	herb	toxic, photodermatitis
Orobanche minor	*Orobanchaceae*	plant	V
Cataegus monogyna	*Rosaceae*	branch	walking stick
Ferula communis	*Umbelliferae*	stem	walking stick

A: Aromatic, B: Bee attractant, C: Condiment, Spice, D: Dye, F: Food, Edible, M: Medicinal, O: Ornamental, P: Poisonous, T: Tea, V: Veterinary