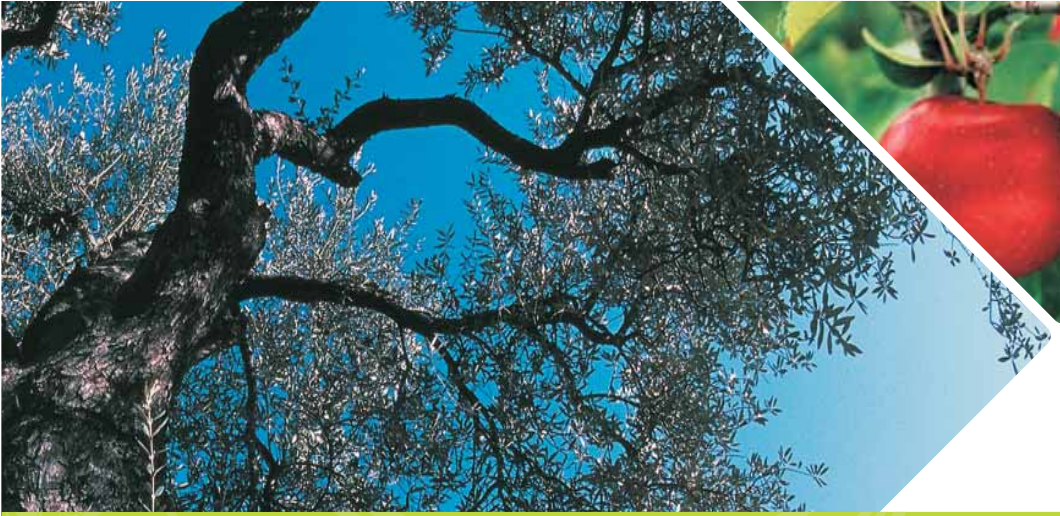

קרן קימת לישראל
KKL - JNF

TREES IN THE LAND OF THE BIBLE

Suggestions for Activities

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Youth & Education

קרן קימת לישראל
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Youth & Education

TREES IN THE LAND

OF THE BIBLE

Contents

קרן קימת לישראל
KKL - JNF

ÁÈ Youth & Education

Preface

Dear Educator, Dear Reader,

The Education and Youth Division of Keren Kayemeth LeIsrael - Jewish National Fund is pleased to be able to submit to you a unique set of pictures on the subject of “Trees in the Land of the Bible”.

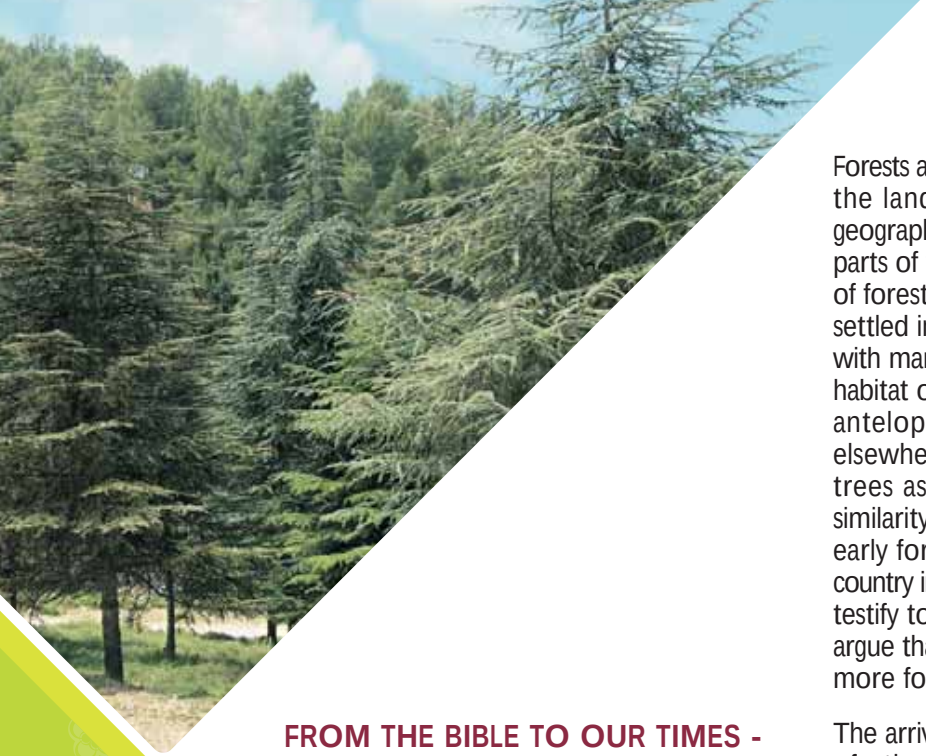
The kit contains a set of unique photographs of trees which beautify the landscape of the country and are mentioned in Jewish sources; a booklet with botanical, agricultural and cultural information about the trees; explanations and suggestions for activities suitable for a variety of age ranges.

The photographic kit and this booklet invite many varied uses, both for learning about nature and heritage and for use for activities on subjects such as: nature and tradition, plants and their uses, the Land of Israel and its fruits, Biblical stories and so on.

The unique pictures are, of course, suitable for decorating classrooms and schools.

Wishing you fruitful and enjoyable use of the material!

Keren Kayemeth LeIsrael - JNF, Education and Youth Division



Intro duction

FROM THE BIBLE TO OUR TIMES - THE HISTORY OF THE FOREST

Forests and forest trees have been dispersed throughout the landscapes of Israel since earliest times. The geographic position, natural conditions and the various parts of the country enabled development of a variety of forest and shrubland. Before the Children of Israel settled in the Land of Israel, the country was covered with many contiguous forest areas and these were the habitat of plants and wild animals, among them: boars, antelopes and deer. References in the Bible and elsewhere to forests, the names of settlements and trees as well as archaeological findings testify to a similarity between the composition and nature of the early forest and that currently being renewed in the country in terms of the tree population. Many researchers testify to the richness of the forest in the country and argue that, in the Biblical period, the Land of Israel was more forested than it is today.

The arrival in the country of the Children of Israel and of other tribes (around the twelfth century BCE), together with the natural growth of the population, increased over time the demand for land for settlement and farming purposes, resulting in deforestation. Initially, the land was deforested at the points of settlement but later forest trees in a more distant vicinity were cut down for construction purposes, furniture and heating.

The annals of the Land of Israel throughout history, its conquest many times and changes in the composition of its population led to ups and downs in the nature and condition of the forests. At times of war, many forests were cut down for destruction's sake, to preclude hiding places, defense and construction of fortifications. Gradually, over the years, the bald spots in the forests increased and the country's forests were destroyed.

At the time of the Arab Conquest (the sixth to tenth centuries CE), the forests suffered considerable damage. The conquest and the grazing habits of the Arabs were not good for the forests. The plant life of that period had the form of suppressed shrubland, low trees and bushes. Only in a few locations, mainly near holy places, were characteristic woodlands and trees preserved.

Significant damage and a further reduction in the size of the forests and woodlands of the Land of Israel characterized the Ottoman Period and the First World War (1516 - 1918). During this period, there was also increased use of trees to lay railroads and to fuel the trains.

It was only towards the end of the 19th Century, with the beginnings of Jewish settlement in the land, that a new spirit began to blow in relation to the forests. The main plantings in those years were, it is true, in gardens and settlement groves but members of the Jewish community of those times also started with larger scale plantings. These included plantings to dry out swamps (Hadera Forest).

There was a further improvement in the attitude to the forest during the period of British Mandatory rule (1918 - 1948). The British were concerned at the thinning of the forests and woodlands in the country and initiated organized actions to protect and nurture them. They stopped the large scale chopping and conducted a survey of distribution and estimate of the forests. They used legislative measures, forestation and prosyconiumnda, setting up tree nurseries and encouraging the residents to plant trees.

The forestation activities of Keren Kayemeth LeIsrael - JNF began towards the end of the Ottoman Period and were greatly increased from 1919 on, during and after the time of British rule. Initially, Keren Kayemeth LeIsrael engaged in the purchase of land for determination of the borders and settlement. So that the newly-acquired and vacant lands would not be taken from it, Keren Kayemeth LeIsrael had to ready them within three years for some use, settlement, agriculture or forestation. Furthermore, through extensive forestation activities, Keren Kayemeth LeIsrael - JNF ensured employment for the new immigrants and settlers who were engaged in security, planting, forest development and the setting up of tree nurseries.

After establishment of the State and the break-through to new, large settlement areas, the plantings and forests were enlarged. A central aim was to establish forests in large areas of the Negev, among them Yattir Forest and Lahav Forest; a large part of the Galilee was also earmarked for the planting of forests, as were the Carmel, the Judean Hills and the Jerusalem Corridor. For over a century, Keren Kayemeth LeIsrael - JNF staff have diligently protected and nurtured the environment. With time, the goals and needs developed and so the deployment and nature of the forests changed as did the trends in forestation. Know-how in the sphere of forestry grew and, consequently, so did the variety of the trees planted in the forests. Keren Kayemeth LeIsrael developed approaches and methods more suitable for the success of the plantings and also linked the public to the forests, pathways and delightful corners.

Over the years, Keren Kayemeth LeIsrael - JNF has planted more than 230 million trees on an area of a million dunams. It cares for and looks after some 400,000 dunams of natural woodland and a similar area of pasture land. In 1995, Keren Kayemeth LeIsrael completed the preparation of NMP 22, a national master plan for forests and forestry. The plan arranges, under the auspices of the Planning and Construction Law, the status of the forests in Israel, categorizes and specifies the different forms of forest and directs their preservation and integration within long-term planning frameworks.

Forests make an important contribution to the quality of the environment, both locally and across the planet, to the quality of life in built-up and industrial areas, to conservation of the many species of fauna and flora and are playing an increasingly more important role in leisure time and recreation.

It is with pleasure and satisfaction that we can see, in the green landscapes of the Land of Israel and the beautiful forests covering all parts of the State, the aspiration for a green and nurtured environment, as foreseen by the Prophet Isaiah: "I will plant in the wilderness the cedar, the acacia tree, and the myrtle, and the oil tree; I will set in the Arava the cypress, the maple, and the box tree together." (41: 19).

We hope that you will enjoy this unique kit and will find in it a door to a flourishing garden, rich and wonderful, a garden one has to know and protect so that it will serve us and the coming generations as a prominent and essential component in the ecology, our culture, the landscape and Zionist-environmental and educational values.

The Trees in the Kit

Aleppo Pine

Scientific name: Pinus halepensis

Family: Pinaceae

Botanical characteristics

An evergreen tree with needle-like leaves.

Florescence

The Aleppo Pine blossoms and flowers in the spring.

Seeds and fruit

Following pollination, seeds start to develop in a cone. It is only about a year later that the cone opens and the seeds are dispersed. The pine seeds are light and winged a fact which enables them to be distributed to great distances by the wind.

Longevity and renewal

Aleppo pines lives for an average of eighty years, but older pines, over a hundred years old, are known in the country. If cut down or burned, the Aleppo pine does not regrow from stumps, as other forest trees do, but only from seeds.

Aleppo Pine

Origin and distribution

There are over one hundred species of pine which are very common world wide, mainly in temperate regions of the northern hemisphere. Four pine species grow in Israel (Brutia, Pinea, Canary, Aleppo). In contradistinction to the other pine species growing in Israel, the Aleppo pine is the only one which grows wild and can multiply spontaneously. In the distant past, the wild pine grew in natural woodlands in the Land of Israel but wild populations can currently be found only in a very few spots, among them on the Carmel, in the Judean Hills, Mt. Meiron and the Sulam Ridge (in the area of Rosh Haniqra).

Unique characteristics

The pine landscape derives from the way they were planted in the area and their desire for light. When they grow in a planted formation, at a high density, they have tall, straight trunks. The Aleppo pine has a tendency to bifurcation.
The trunk is covered by gnarled bark which, on puncturing, gives off an aromatic and sticky resin, this being its means of protection against pests.
The Aleppo pine grows well in poor conditions, rocky or chalky soil. This is not its default option but a preference because such soils are good for it. Its growth is aided by mycorrhiza fungi (root fungi). Thanks to the harmonious life they share, the fungi supply the tree with water and essential minerals from the ground. Keren Kayemeth LeIsrael has planted most of the pine forests in Israel: in the Jerusalem Corridor, on the Carmel, in the Galilee, at Ben Shemen and on the desert boundaries; the Yatir forest and Lahav forest.

The pine tree in Jewish sources

Although the pine was common in the Land of Israel in ancient times, it is mentioned only once in the Bible, in the verse: "The carpenter … cuts down cedars for himself, and takes the cypress and the oak, which he strengthens for himself among the trees of the forest; he plants a pine tree, and the rain nourishes it." (Isaiah 44:13-14). If the researchers' surmise is correct that the pine was one of the most common trees in the country in those times, how is one to explain its sole mention in the Bible? One of the answers is that this verse should not be taken as referring to the pine tree as we know it today. Another possibility is that the pine is hiding behind the names of the cedar and cypress which occur more frequently in the Bible. Some researchers identify the "oil tree" with the pine, because of the sticky resin it produces.

Uses of the tree

Thanks to its straight limbs, the pine has been used in the past for construction and in the furniture industry. Nowadays, it is used for manufacturing barrels and crates. In earlier times, the seeds of the Aleppo pine, despite their small size, were used for food, and pine nuts are still eaten today, but only those of the Pinea. Pine needles contain vitamin C and so are used in natural medicine for treating those suffering from rheumatism, muscular pains and tiredness. A drink made from pine needles is considered efficacious against asthma and bronchitis. The extensive use of this tree in Israel is associated with the commonly-held opinion that it is a local tree which had covered extensive areas in the past; it grows rapidly, gives broad shade and it suitable for the local climate.
Importance of the tree: Pines are as a rule primary forest trees and those most cut down worldwide. They are used mainly for manufacturing, construction and the furniture industry but also for forestry and ornamental purposes.

Terebinth

Scientific name: Pistacia palaestina

Family: Anacardiaceae

Botanical characteristics

The terebinth is a winter deciduous tree, usually small in size with pointed pinnate or bipinnate leaves. The point at the end of the terebinth's leaflet constitutes a mark distinguishing it from the Pistacia atlantica which has leaves of very similar shape.

Florescence

The terebinth flowers in March - April and, immediately afterwards, or sometimes at the height of its flowering, the terebinth begins to blossom in colors of orange and red.

Seeds and fruit

Small round fruits, of a green-red color, develop on the tree in the summer season. When they ripen, in the autumn, they turn purplish. The seeds of the terebinth are dispersed efficiently by birds.

Longevity and renewal

The Pistacia atlantica are known for their ability to reach a great age but no elderly specimens of the Pistacia palaestina are known. They renew their growth after being cut or burned down.

Origin and distribution

The terebinth is common in the Mediterranean woodlands of the Land of Israel. It grows in a joint habitat with the Kermes Oak and the Pistacia lentiscus, in rocky areas and even penetrates to the edge of the desert.

Three species grow in the country: Pistacia atlantica, Pistacia palaestina and Pistacia lentiscus.

Unique characteristics

As other woodland trees, the Pistacia suffers damage at the hands of people and flocks. Consequently, we currently find the Pistacia mostly in the form of a small tree with several trunks. In such a case, its height will be between 3 and 10 meters.

Often, following the sting of a certain type of aphid, gallnuts are formed on the trees' branches, like wild growths. These, too, when on the tree, are an excellent identifying mark. On the Pistacia palaestina the gallnuts are banana shaped while on the Pistacia atlantica they are coral shaped.

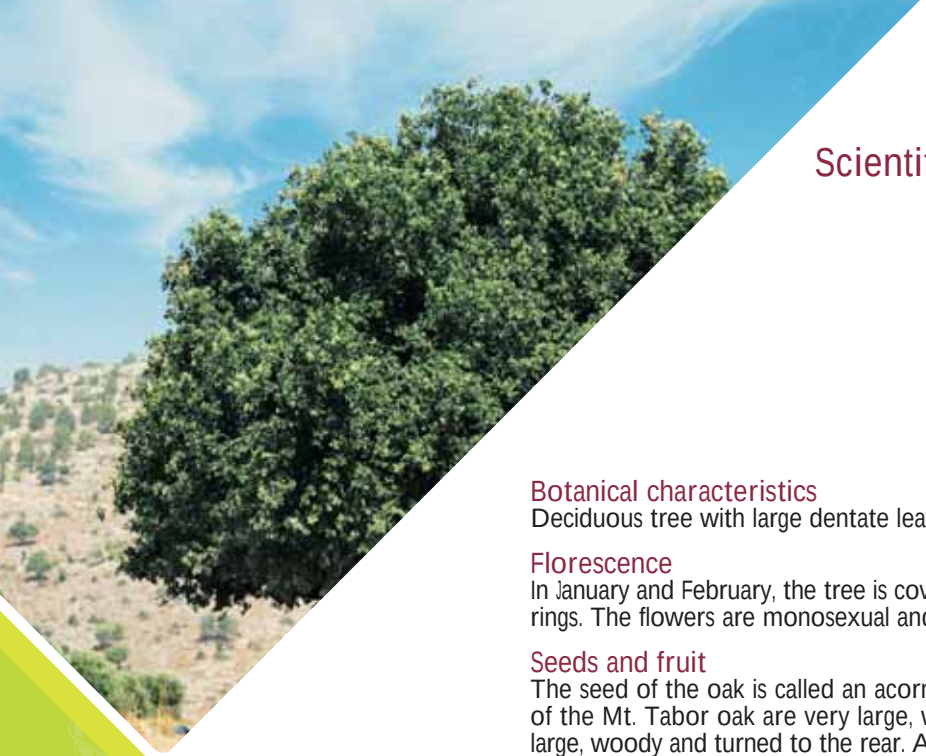
Keren Kayemeth LeIsrael is planting Pistacia trees today as part of the policy of mixed forestation in the country and restoration of the woodland landscape to its former glory.

The pine tree in Jewish sources

The Pistacia is mentioned many times in the Bible, sometimes together with the Oak. Its Hebrew name is derived from the word for G-d, thus signifying strength and power. Thanks to the ability of the Pistacia (mainly altantica) to reach large sizes and impressive shapes, if allowed to develop undisturbed, religious ceremonies used to be held in its shade in olden times. "And he went after the man of God, and found him sitting under an oak" (I Kings 13:14). Evidence of the size and strength of the tree can also be found in the verse: "And Absalom rode upon a mule, and the mule went under the thick boughs of a great oak, and his head caught hold of the oak, and he was taken up between the sky and the earth; and the mule that was under him went away." (I Samuel 18: 9).

Uses of the tree

In the past the Pistacia palaestina was used in a variety of ways: as raw material for the production of small wooden products, for the manufacture of handles and tools, in ancient medicine, its resin was used for brushing teeth, shining facial skin and treating dysentery. In contemporary natural medicine, the resin is used as a drug for encouraging bowel movement.



Mt. Tabor Oak

Scientific name: Quercus ithaburensis

Family: Fagacaccae

Botanical characteristics

Deciduous tree with large dentate leaves, sharply pointed at the tip.

Florescence

In January and February, the tree is covered with a green blossom and delicate flowering rings. The flowers are monosexual and their pollination is effected by the wind.

Seeds and fruit

The seed of the oak is called an acorn. It consists of a cupule and a nutlet. The acorns of the Mt. Tabor oak are very large, with wide cupules. The scales of the cupules are large, woody and turned to the rear. As the fruit ripens, in the winter period, it falls from the tree as the acorn is very sensitive to dryness and loses its vitality rapidly. For it to germinate, it has to be placed in the soil soon after it falls from the tree. Despite the fact that each tree produces a large number of acorns, only a few of them develop into shoots.

The flowers of the oak are pollinated by the wind. Its seeds, the acorns, however, are heavy and large and are not dispersed to great distances. They frequently shoot up, therefore, near the parent, alongside adult trees. In many other instances, animals, particularly the Eurasian Jay, distribute the seeds to greater distances of hundreds of meters from the parent tree and even bury them in the soil. The acorns of the oak serve as food for wild animals.

Longevity and renewal

Oak trees are long-lived but grow slowly and need many years before reaching their large dimensions. Ancient and impressive trees can be found, hundreds of years old, mainly near burial and ritual sites. The longevity of the oak trees is a sign of strength and power, hence the expression "as strong as an oak". The oaks are also known for their ability to renew grow after a fire or being cut down and can generate new secondary trunks.

Origin and distribution

The Mt. Tabor Oak is common only in the Middle East, from Israel to Turkey. In the Land of Israel, it can be found in the Sharon, throughout the Galilee, on the Golan Heights and in the Hula Valley.

Three species of oak grow in the Land of Israel, out of over 300 known worldwide, namely: the Kermes Oak (which is an evergreen), the Mt. Tabor Oak (which is deciduous) and the Cyprus Oak (also deciduous). Two other species of oak grow in the country, but only on Mt. Hermon, namely: Lebanon Oak and European Turkey Oak.

Unique characteristics

The main occurrence of the Mt. Tabor Oak is in the form of open park forest, with relatively large spaces between the trees. The tree has a main trunk with a wide, rounded top.

The tree in Jewish sources

The oak tree is mentioned a number of times in the Bible, sometimes as a symbol of strength and power. "And I destroyed the Amorite before them, whose height was like the height of the cedars, and who was strong like the oaks…" (Amos 2:9). And, at other times, in the context of its use as raw material in shipbuilding: "Of the oaks of Bashan have they made your oars…" (Ezekiel 27:6).

Uses of the tree

The timber from the Mt. Tabor Oak is good and strong for construction and handicrafts. In olden times, therefore, it was used for the construction of ships and boats, for making oars and even for preparing statues. The tree was also used in the past as choice fuel for heating and cooking. Because of these qualities, the oak was cut down recklessly over the generations. Oak wood improves the taste of wine and today, therefore, many use it to make barrels for storage of wine.

There are many written testimonies that the acorns of the Mt. Tabor Oak were eaten by humans, despite their very bitter taste. The situation with the oaks could be similar to that of the almonds, where there is a low percentage of sweet specimens and, if they are reproduced by grafting, a sweet plantation can be obtained. Some claim that the taste of those sweet specimens of Mt. Tabor oak is like that of chestnuts. Since time immemorial, the cupules of the oaks has been used in children's games.

Cedar of Lebanon

Scientific name: Cedrus libani

Family: Pinaceae

Botanical characteristics

An evergreen with short, needle-like leaves.

Florescence

The tree blossoms at the end of the spring season and flowers in May. The cedar has male and female flowers arranged in small, separate cones but both grow on the same tree.

Seeds and fruit

After pollination, the female cones grow and the seeds develop inside them. This process takes two to three years. Subsequently, the cones open and the seeds, which have a membranous wing, are released and carried by the wind.

Longevity and renewal

The age of cedar trees which have been investigated and documented is stated in some hundreds of years. Cedars grow very slowly and do not renew their growth after being cut or burnt down.

Cedar of Lebanon

Origin and distribution

The Cedar of Lebanon is considered to be an ancient tree that, in the past, had dominated extensive areas of the northern hemisphere. According to historical testimonies, cedar forests were common over large areas but were cut down and traded in all parts of the Middle East. The Cedar of Lebanon grew wild in the Lebanese mountains and southern Turkey. Its distribution almost matches the northern border of Israel but it does not grow in the Land of Israel. Here, we find the same tree but only if planted by man - in the forests of Biriya, Jerusalem, Mt. Meiron and elsewhere. Three or four species of cedar are known in the world: the Cedar of Lebanon, Atlantic Cedar, Diadora-Himalayas Cedar and a fourth species which grew only in Pakistan but it is possible that this is an additional strain of the same species, the Cedar of Lebanon.

Unique characteristics

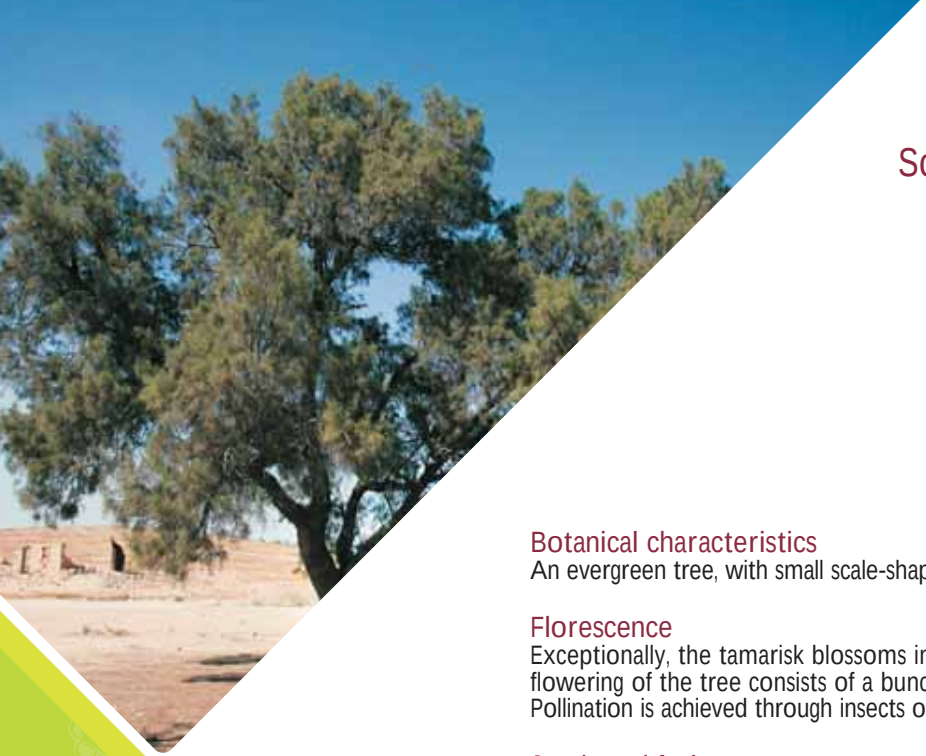
Cedar trees can attain a great height. Their top recalls the shape of a cone. The branches spread to the sides horizontally and create the shape of tiled roofs.

The tree in Jewish sources

Cedar trees are mentioned in the Bible over 70 times but the researchers are not agreed that the reference in all cases is to the Cedar of Lebanon. Some claim that wherever the name "cedar" appears rather than "Cedar of Lebanon", the reference is to a pine tree. The Cedar of Lebanon is mentioned in the Bible in the context of the construction of the Temple, from which it is deduced that it is good for building and furniture. "And Solomon built the house, and finished it. And he built the walls of the house inside with boards of cedar, both the floor of the house, and the walls of the ceiling…" (I Kings 6:14-15).

Uses of the tree

The tree is outstanding for the high quality of its timber which withstands rotting and insects and has a pleasant aroma. Because of these qualities and thanks to its splendid appearance, the cedar was used in ancient times for the construction of palaces, public buildings and ships.



Tamarisk

Scientific name: Tamarix aphylla

Family: Tamaricaceae

Botanical characteristics

An evergreen tree, with small scale-shaped leaves.

Florescence

Exceptionally, the tamarisk blossoms in the summer, during August and September. The flowering of the tree consists of a bunch of small, nectar-less flowers, white-pink in color. Pollination is achieved through insects or the wind

Seeds and fruit

The fruit of the tamarisk is a capsule with seeds inside it. The tamarisk's seeds can travel to great distances because they are wrapped in a sort of cotton wool which increases their volume but they remain as light as a feather.

Longevity and renewal

The seeds of the tamarisk are small and are distributed by the wind but, despite their high capability to germinate, their growth is very slow. The main reproduction of the tamarisk in the country is achieved through cuttings. The tamarisk is long-lived and can attain a hundred and fifty years or more.

Origin and distribution

There are many tamarisk species (some 90 are known in the world). The natural origin of the tamarisk is in North Africa and the Near East. In Israel, it can be found in the Lowlands, Negev, Jordan Valley and the Arava. It is very common in the country as a planted tree but most rare in the wild.

Unique characteristics

The tamarisk is considered to be a tree which can "get by" in particularly harsh habitats. All tamarisk species are capable of secreting excess salts absorbed from the soil through salt glands on their leaves. The tamarisk can, therefore, grow in very saline soils, such as around the Dead Sea and in the Arava. The Tamarix aphylla is one of the largest of all tamarisk species and the only one used for timber, for creating shade, for wind breakers and for marking boundaries of land plots.

Keren Kayemeth LeIsrael used tamarisks as forest trees in the area of the Negev mitzpim (outposts) which were established in 1942-1943.

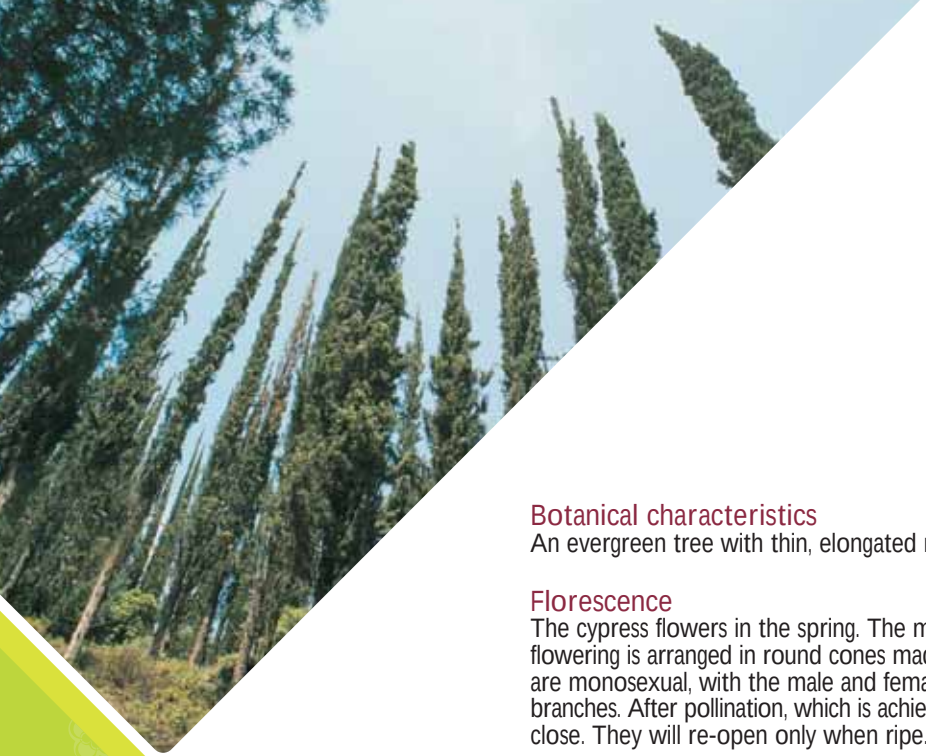
The tree in Jewish sources

Although the tamarisk is common and characteristic of the desert landscapes of the country, it is mentioned in the Bible just three times. Furthermore, there is no certainty that the reference in those sources is to the Tamarix aphylla rather than some other large tree. The term used ("eshel") could have served in the Biblical period as a generic term for various types of tree. Only in one place in the Bible is the tamarisk mentioned in its typical habitat: "And Abraham planted a tamarisk tree in Beersheba, and called there on the name of the Lord, the everlasting God." (Genesis 21:33).

Uses of the tree

In ancient times, the population used tamarisk trees in construction - for foundations and supports. Other household uses were also found, such as utensils for food.

Because it grows rapidly and withstands the harshest climatic and soil conditions, among them saline soil and dry regions, the tendency nowadays is to plant it in arid areas where it serves for providing shade and as a wind breaker. Keren Kayemeth LeIsrael uses it as a forest tree in the sandy areas of the Negev, on the banks of the Jordan and by the Dead Sea. The tree is effective in stabilizing moving sand dunes and also prevents fires in area where it grows. This is because of its very low combustibility and because it suppresses the leafy vegetation in its vicinity and is a factor in salination of the soil.



Cypress

Scientific name:
Cupressus sempervirens
Family: Cupressaceae

Botanical characteristics
An evergreen tree with thin, elongated needle-like leaves.

Florescence
The cypress flowers in the spring. The male flowers are arranged on spikes while the female flowering is arranged in round cones made of scales and containing many ovules. The flowers are monosexual, with the male and female being separate, on the same tree but on different branches. After pollination, which is achieved through the wind, the scales grow and the cones close. They will re-open only when ripe.

Seeds and fruit
The cypress has a round, hard cone containing the seeds. It opens after ripening, in the autumn season, about eighteen months after pollination. After dispersal of the seeds, the open cones remain on the tree.

Longevity and renewal
The Cupressus sempervirens can reach a great age of hundreds of years. The cypress has an advantage over other conifers in that it grows again after being cut down and develops a new trunk and branches. The tree reproduces from seeds.

Cypress

Origin and distribution

The Cupressus sempervirens is common in all the countries of the Mediterranean basin. Wild cypresses can be found in Cyprus and in Jordan. In Israel there would appear to be only a few wild specimens.

Unique characteristics

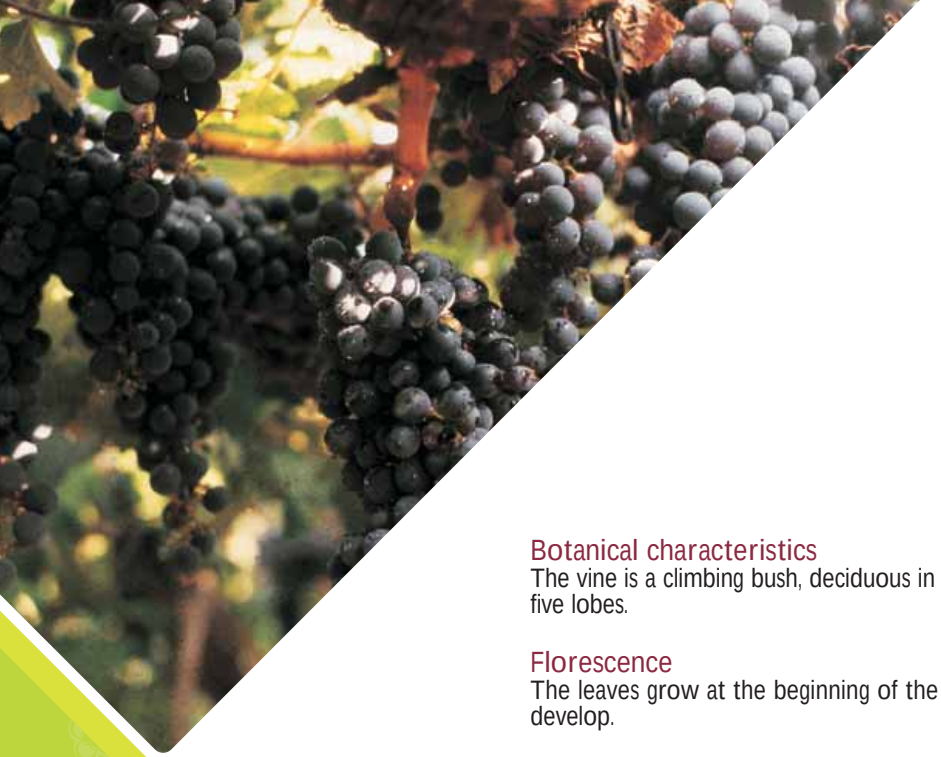
The cypress is an important forest tree in the country, perhaps the most important after the pine. Its shape recalls a cone and it has a prominent appearance. It grows well and quickly in most soil types.
There are two variants of Cupressus sempervirens: one is horizontal, which is also the wild form, in which the trunk is erect and the branches spread out to the sides. The other is pyramid shaped and is the cultured species with the branches close to the trunk and a candle-like shape.

The tree in Jewish sources

The name "cypress" occurs a number of times in the Bible and once in the Mishnah but its identification with the cypress we know today is uncertain. It is possible that the tree which is termed "brosh" in the Bible is actually another tree which grows in Lebanon while our "cypress" appears in the sources under the name "te'ashur" in the sources. It is also possible that, in Biblical times, the name "brosh" included a number of trees, among them the juniper or box tree, "te'ashur" and the fir which grow wild in Lebanon.
Since the cypresses are impressive and beautify the Lebanese hill country, the Prophet Isaiah views them as "the glory of Lebanon": "The glory of Lebanon shall come to you, the cypress, the maple, and the box tree, together, to beautify the place of my sanctuary; and I will make the place of my feet glorious." (Isaiah 60:13). In another verse, the Prophet expresses his aspiration to see the invigorating green of Lebanon spread throughout the Land of Israel: "I will plant in the wilderness the cedar, the acacia tree, and the myrtle, and the oil tree; I will set in the Arava the cypress, the maple, and the box tree together." (Isaiah 41: 19).

Uses of the tree

The cypress is mentioned in the Bible in contexts testifying to its uses in building work, furniture and various industries. It is one of the trees which were brought to Jerusalem at the time of King Solomon for the construction of the Temple. The hard timber, which does not rot, made it suitable for the building of ships and coffins.
Nowadays, the cypress serves as an important forest and ornamental tree. In agricultural areas, it is used as wind breaker, providing protection and delineating boundaries. In the wood industry, the cypress is used for making packing crates and for manufacturing columns and supports in agriculture.



Grape Vine

Scientific name: Vitis vinifera

Family: Vitaceae

Botanical characteristics

The vine is a climbing bush, deciduous in the winter, with large leaves, divided into three to five lobes.

Florescence

The leaves grow at the beginning of the spring. Later on, small, green bunches of flowers develop.

Seeds and fruit

In the summer months (between May and October, depending on the strain). The ripe fruit is called “grape”. The grapes are arranged on the branch in dense bunches. The color and size of the fruit depends on the type of the vine.

Longevity and renewal

A cultured vine can live a long life, reaching a hundred years and more. The reproduction of the vine is from cuttings of a strain which is resistant to their main pest in the country (the phylloxera) and a graft on it of the desirable type from a consumer point of view.

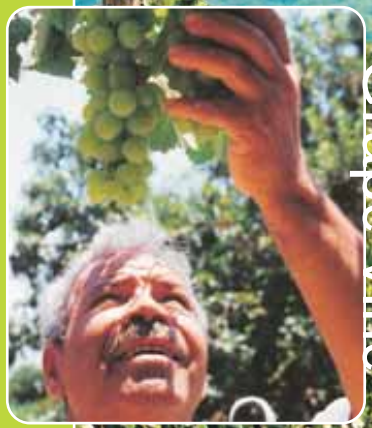
Grape Vine

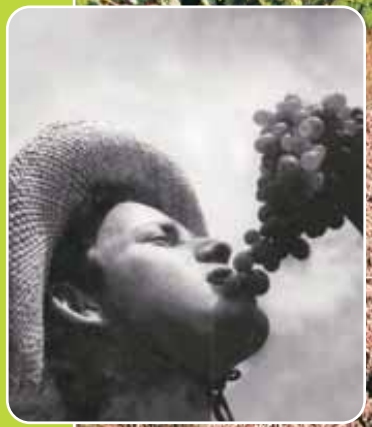
Origin and distribution
The vine is one of the earliest cultured crops in the world. The origin of our wild vine could be Antalya or Greece but some hold that it is a local species.

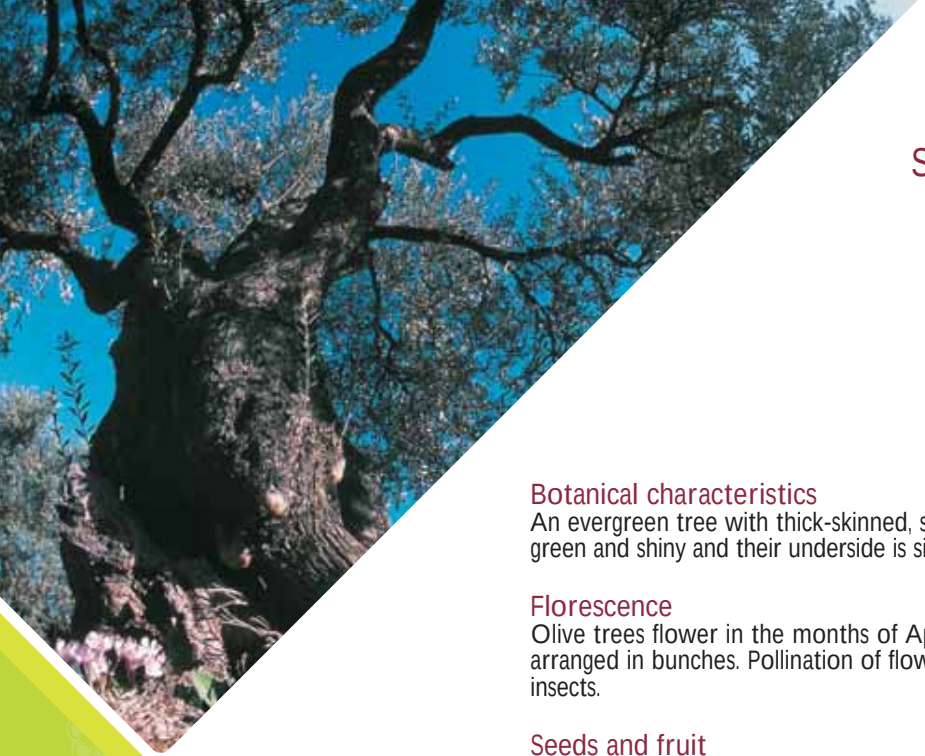
Unique characteristics
The vine branches are equipped with tendrils (which assist climbing and are spring shaped) which wrap themselves around plants, trees or around supporting stakes.

The tree in Jewish sources
The vine is one of the seven species for which the Land of Israel is known. The typical product of the vine is grape juice, which is one of the three things representing the goodness of the land: "… a land of grain, wine and oil…" (Deuteronomy 28:51). The Bible is full of descriptions of the vine and its produce which testify to the large part it played in the agriculture and economy of the land in Biblical times. The word for wine, for example, is mentioned 141 times in the Bible. Thanks to its importance, wine merits a blessing of its own "who creates the fruit of the vine". In symbolic terms, the vine served in the Biblical period as an expression of fertility, growth and economic prosperity.

Uses of the tree
The fruits of the vine - the grapes - are used for the production of wine, raisins and fresh edible grapes. "Wine gladdens the heart of man" (Psalms 104:15) and was both used in the past and is still used today for religious purposes and for various blessings. Wine was and is a source of uninterrupted inspiration for artists from different disciplines. Even the IDF chose a vine leaf as a symbol for its officer corps, from the rank of major and up.







Olive

Scientific name: Olea europaea

Family: Oleaceae

Botanical characteristics

An evergreen tree with thick-skinned, small and extended leaves. Their upper side is dark green and shiny and their underside is silver colored.

Florescence

Olive trees flower in the months of April and May. The flowers are small and white and arranged in bunches. Pollination of flowers is achieved through the wind but also through insects.

Seeds and fruit

During the summer months and until December, the olive fruit grows and ripens and, during this process, its color changes from green to purple and to black.

Longevity and renewal

Olive trees live for a very long time and can attain an age of hundreds of years. The ancient olive trunks are hollow. Very old olives can be found at Gethsemane in Jerusalem. Reproduction of the olive trees is done through cuttings (part of the plant is buried in the soil and puts out roots). As a rule, the branches are used as cuttings but, in the case of olive trees, the preference is for shoots (a protrusion of the trunk that looks like a wart and takes root well).

Origin and distribution

The European Olive is typical of the whole Mediterranean region. Wild trees grow in the Western Galilee and on the Carmel.

Unique characteristics

The olive is one of the first fruit trees to have been domesticated by man. The top of the tree is usually wide and the trunk thick and twisted. The sole difference between the wild types of the olive and the cultured olive is expressed in the ratio of pit to flesh of the fruit. In the cultured olive, the size of the pit in relation to the flesh is small.

Olives used to be harvested manually – by pulling the branches down or knocking the branches until the fruit falls. Nowadays, machines are used in the main which shake the fruit from the tree.

The tree in Jewish sources

The olive is mentioned many times in the Bible and is one of the seven species for which the Land of Israel is known. The Land of Israel was termed in the Torah as "A land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of olive oil, and honey" (Deuteronomy 8:8). In the story of Noah's ark, the branch of an olive tree symbolizes the quiet after the storm: "And the dove came in to him in the evening; and, lo, in her mouth was an olive leaf plucked off; so Noah knew that the waters were abated from off the earth." (Genesis 8:11). In our times, too, the branch of the olive tree symbolizes the hope for peace and quiet. The emblem of the State and that of the Israel Defense Forces are adorned with olive branches.

Uses of the tree

The olive is one of the most important agricultural branches in the Land of Israel. The main economic value of the olive lies in its fruits which contain a high percentage of oil. Oil used to be extracted from them for lighting, edible oil and olives, medicinal oil and for oiling the body, etc. In our times, too, olive oil is one of the important basic products in the country.

In popular medicine, drinking a spoon of olive oil constitutes a remedy for heart problems and for reducing blood pressure, is good for headaches, digestive problems and also eases coughs and chest pains.

Sycamore

Scientific name: Ficus sycomorus

Family: Moraceae

Botanical characteristics

The basic characteristics of the Ficus sycomorus are those of an evergreen but, in Israel, its loses its leaves in the autumn, depending on the weather conditions, since it is cold for it (it was originally used to a higher temperature). The sycamore leaves are thick-skinned and rounded.

Florescence

The sycamore flowers at the end of the summer into the autumn with a ball-shaped inflorescence, typical of the various species of Ficus, called “syconium” (or nascent, as-yet unripe, fruit). The shape of the syconium does not recall that of a flower but rather of a ball inside which are hundreds of flowers.

Seeds and fruit

The fruit of the sycamore - the nascent fruit - grows on the trunk in the shape of a bunch of round flowers. At first, the fruit is green and, in the summer, as it ripens, it turns pink. Since there are no pollinating hornets in Israel, the nascent fruit develop into unfertilized and seedless fruit, ripened through caprification.

Sycamore

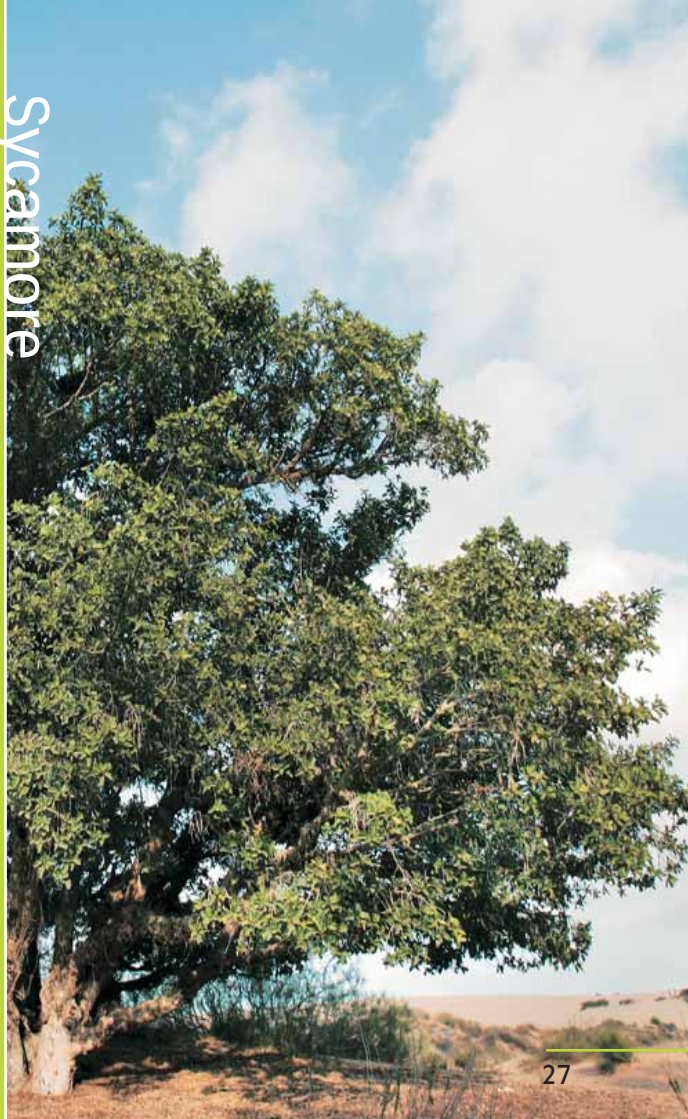
Longevity and renewal
Sycamore trees are long-lived. Since the pollinating hornet of the Ficus sycomorus does not live in the Land of Israel, the tree cannot reproduce spontaneously. Reproduction of the sycamore in Israel is, therefore, achieved through cuttings.

Origin and distribution
The natural source of the sycamore is in the Sudanese part of Africa. The tree is common in Israel, Lebanon, Cyprus and North Africa only as a result of plantings. Nowadays, the number of sycamores in Israel is fewer. Their fruit is hardly eaten at all and many of them have been uprooted from streets of the cities, among them Tel Aviv and Netanya.

Unique characteristics
The Ficus sycomorus is a very large tree, with a wide, branching trunk.

The tree in Jewish sources
The sycamore is mentioned in the Bible, Mishnah and Talmud. The tree seems to have been common in Biblical times. "And the king made silver as common in Jerusalem as stones, and cedar as common as the sycamore trees that are in the lowland, because of their abundance." (I Kings 10:27).
"… But I was a herdsman, and a dresser of sycamore trees" (Amos 7:14).

Uses of the tree
The main use of the sycamore, from Biblical days until now, has for construction. In the past the tree's fruit had some economic importance, mainly in the Nile Valley, but this importance was less outside Egypt.



Fig

Scientific name: Ficus carica

Family: Moraceae

Botanical characteristics

The Ficus carica is a winter deciduous tree with large leaves divided into hand-shaped lobes, of which there are five.

Florescence

The fig blossoms in March-April. Its flowering begins in the spring and continues until the autumn. The flowers of the fig tree grow in groups, with an infloresence of nascent fruit. Within it, on a fleshy bed, are hundreds of small flowers, lacking color and smell. Pollination is by hornets which enter the nascent fruit and lay their eggs in some of the flowers, thus pollinating the other flowers.

Seeds and fruit

The fruit - the figs - are a development of the fertilized nascent fruit (a dense round inflorescence of tens of minuscule flowers). In effect, the fig is many fruits with their envelope. The fruit ripens towards the end of the summer, in August-September.

Longevity and renewal

Fig trees live for decades. They can regrow after being cut or burned down. Figs germinate excellently and can thus be found growing wild by springs, rivers and near caves.

Origin and distribution

Fig trees originate from the hills of Iran, Iraq and Turkey but were known in the Land of Israel in Biblical times. Fig trees grow almost everywhere in the Land of Israel, apart from blatantly desert areas.

Unique characteristics

As a rule, fig trees are medium sized, attaining a height of 6-8 meters. Their tops are round and they give much shade in the summer. The leaves, trunk and branches give off a burning, milky resin.

The tree in Jewish sources

The fig is mentioned many times. It is the first tree mentioned by name in the Bible, in the story of Adam and Eve: "And the eyes of them both were opened, and they knew that they were naked; and they sewed fig leaves together, and made themselves aprons." (Genesis 3:7).

The fig has been an integral part of the landscape and agriculture of the country from earliest times and is considered to be one of the seven species for which the Land of Israel is known. In those days, farmers used to invite guests to sit under the fig tree and doing so became a symbol of a life of peace and contentment: "On that day, says the Lord of hosts, everyone of you shall invite his neighbor under his vine and under his fig tree." (Zechariah 3:10).

Already in Biblical times, great medical value was attributed to the fig. Dried figs were used as a remedy for boils, as can be learned from the treatment given by Isaiah to King Hezekiah: "And Isaiah said, Take a cake of figs. And they took and laid it on the boil, and he recovered." (II Kings 20:7).

Uses of the tree

The fig was known in farming culture in olden times and, until recent generations, was among the important fruit trees of the land. The fruit is eaten fresh or dried. Dried figs have a high nutritional value; they can be kept for a long time and it is easy to take them from one place to another.

From a medical point of view, the fig is considered efficacious for the treatment of constipation and diseases of the digestive organs, as a medicine against colds and coughs. Fig milk, which causes serious skin irritations, is used as a remedy for skin tumors and hard warts.

Fig

Pomegranate

Scientific name: Punica granatum

Family: Punicaceae

Botanical characteristics

A bush or low tree, usually deciduous but it can also behave as an evergreen, depending on the conditions of its habitat. The shape of the pomegranate's leaves is a elongated ellipse.

Florescence

The pomegranate blossoms in orange-red at the beginning of the spring and flowers at the beginning of the summer, in May and June.

Seeds and fruit

The pomegranate fruit is very large and contains seeds with a juicy coating. The fruit grows during the summer and, towards winter, turns red and ripens.

Longevity and renewal

Pomegranates reproduce well from seeds. Intentional reproduction is usually done through cuttings (a section of the plant, usually a branch, implanted in the soil).

Pomegranate

Origin and distribution

The pomegranate has been commonly found in all the countries of the Mediterranean Basin as a cultivated crop for some 4,000 years. It is mostly found in the Land of Israel in abandoned orchards or current agricultural undertakings.

Unique characteristics

The Punica granatum has a number of strains, identified by the taste between sweet to slightly sour as well as according to the color of the seeds, which vary from red to pink to white. The ends of the tree branches are barbed.

The tree in Jewish sources

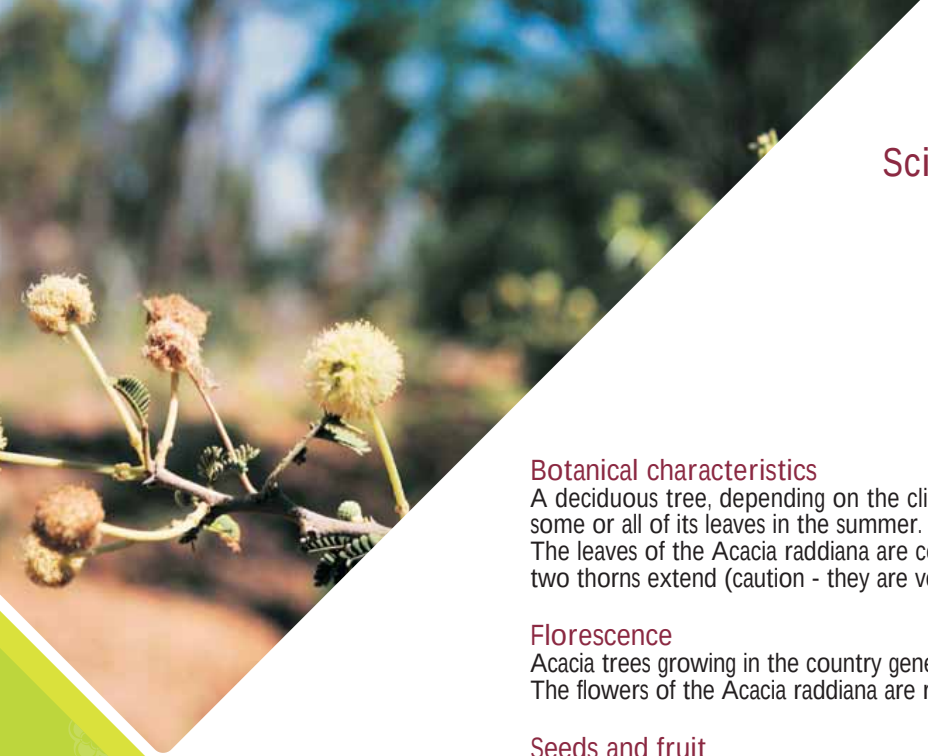
The pomegranate appears a number of times in our sources. It is among the seven species for which the Land of Israel is known. Its reddish blossom has always been a symbol for a loss of the sense of reality and for love. The tree and its beautiful fruit star in the greatest love song in the world, the Biblical Song of Songs: "Your lips are like a thread of scarlet, and your mouth is comely; your cheeks are like a piece of a pomegranate behind your veil." (Song of Songs, 4:3).

The shape and decorations of the pomegranate beautified the Temple and its utensils, ornamented mosaics, columns and coins. The many seeds of the pomegranate were a symbol of fertility, knowledge and wisdom. The pomegranate as a symbol is well entrenched in Jewish tradition to such an extent that it is even held that it has 613 seeds, paralleling the 613 precepts given on Mt. Sinai.

On the Jewish New Year, we ask "that our merits be many as the seeds of the pomegranate".

Uses of the tree

The pomegranate was used for food and preparation of wine. In the past, materials extracted from the peel of the pomegranate were also used in the leather processing and coloring industry.



Acacia

Scientific name: Acacia raddiana

Family: Mimosaceae

Botanical characteristics

A deciduous tree, depending on the climate in its habitat. In hot, dry areas, the tree loses some or all of its leaves in the summer. In cold areas, the leaves are dropped in the winter. The leaves of the Acacia raddiana are compound and bipinnate. From the base of the leaf, two thorns extend (caution - they are very sharp).

Florescence

Acacia trees growing in the country generally have a flowering season in August-September. The flowers of the Acacia raddiana are rounded, of cream or yellow color.

Seeds and fruit

The fruit of the Acacia raddiana is a long, smooth and curly pod. The fruit, which contains a number of seeds, ripens at the beginning of the summer.

Longevity and renewal

The reproduction of the acacia is through seeds, mainly those that have passed through the digestive systems of herbivorous animals. The seeds in the fruit have a good germination capacity but the hard shell of the seed prevents this. Herbivorous animals eat the pods and excrete the seeds, now available for germination. Seeds which have not passed through the digestive systems of herbivorous animals but remain in their hard shells which do not permit germination could stay in the ground for many years. With time, the shell breaks up in the soil and the seed can germinate.

Acacia

Origin and distribution

There are a number of species of acacia, all of which have a tropical origin and all of which like a hot climate. The Acacia raddiana originated in East Africa. In Israel, the Acacia raddiana grows in the northern Negev, the Judean Wilderness and in the Arava, to the northernmost boundary of its distribution, in Jericho.

Unique characteristics

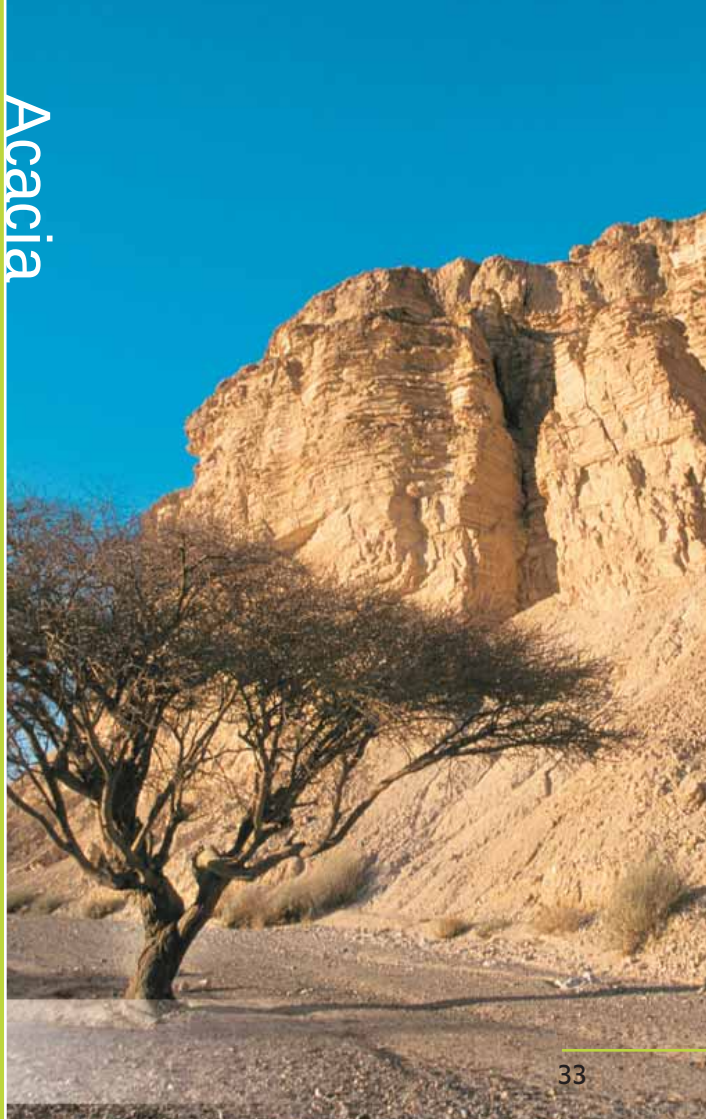
The Acacia raddiana has a main trunk, from the upper part of which thick, prickly branches divide up. The shade of the tree covers a fairly wide area.

The tree in Jewish sources

The acacia tree is mentioned many times in the Bible and was apparently used by the Children of Israel for the construction of the Tabernacle, the Tabernacle utensils and the altar: "And you shall make upright boards for the tabernacle of acacia wood." (Exodus 26:15).
Acacia wood seemingly provided most of the needs of the population in the desert which would explain why the Children of Israel took it with them, as a valuable item: "And they came, both men and women, as many as were willing hearted, and brought bracelets, and ear rings, and rings, and bracelets, … and every man, with whom was found acacia wood for any work of the service, brought it." (Exodus 35:22-25).

Uses of the tree

In the desert, the acacia tree provides the Bedouin with timber for building and for heating and fodder for the camels and goats. The young foliage and the flowering and the fruit pods are used as essential and good quality animal feed for the flocks. In folkloristic Bedouin medicine, the acacia is used to strength teeth and to treat bleeding of the gums. In modern medicine, the resin is used to protect against excessive secretions of the stomach and intestine and for mollifying the action of strong medications.



Almond

Scientific name:
Amygdalus communis
Family: Rosaceae

Botanical characteristics

The Amygdalus communis is a winter deciduous tree with serrated and elongated leaves.

Florescence

The almond flowers precede the foliage which comes with the end of the flowering. The early flowering of the almond, before other fruit trees, presages the arrival of spring. The flowers have a pleasant smell and nectar which attracts many insects, mainly bees.

Seeds and fruit

The edible part of the almond is the seed which is placed inside a hard shell. The tree might flower early but it is not in a hurry to ripen the fruit. Some five to six months elapse from the flowering until the fruit is ripe. Almond fruit has great nutritional value and contains about 60% oil. In wild almonds, the percentage of sweet fruit is low.

Longevity and renewal

The almond tree renews itself after being cut down but, because it is a combination of two species (to obtain a sweet tasting almond, a sweet almond has to be grafted onto a bitter almond), the taste of its fruit after being cut down depends on the place where it was cut. If the cut was made above the site of the grafting, then the fruit of the tree will continue to be sweet and, if below, then it will be bitter.

Origin and distribution

The origin of the Amygdalus communis is the Antalya Heights. It is grown throughout the region, from the eastern Mediterranean Sea to western Iran. The Amygdalus communis is one of the species most common in the wild in Mediterranean woodlands in the country, in the Galilee, the Golan, the Carmel, Samaria and the Judean Hills. Man domesticated the wild almond which produces bitter fruit and derived a number of sub-species from it, the fruit of which is large and tasty. Retention of the desirable characteristics of the cultured almond is done by graftings.

The tree in Jewish sources

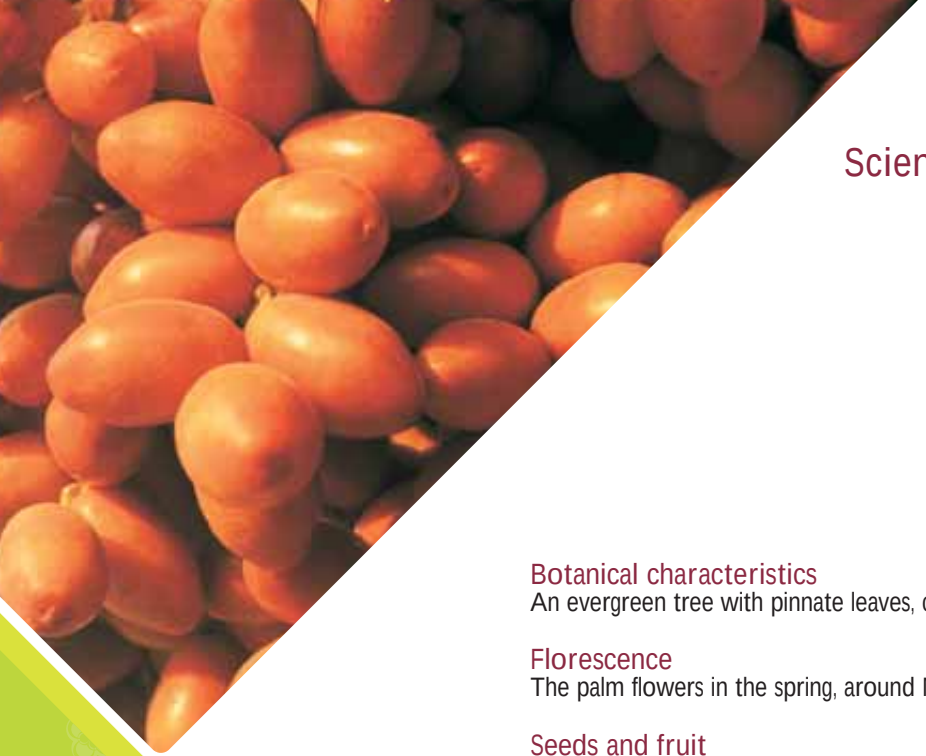
The almond takes an important place in early and current culture although it is not among the seven species for which the Land of Israel is known. The reference to it in the sources is as to one of the fruits by which our land was blessed. In the Bible, it is first mentioned in the conversation between Jacob and his sons before their second visit to buy food in Egypt, where they had met their brother Joseph albeit without yet knowing that he was their lost brother: "And their father Israel said to them, If it must be so now, do this; take of the best fruits in the land in your utensils, and carry down a present to the man, a little balm, and a little honey, spices, and myrrh, nuts, and almonds." (Genesis 43:11).

Jeremiah mentions the almond in the context of things soon to happen: "Moreover the word of the Lord came to me, saying, Jeremiah, what do you see? And I said, I see a rod of an almond tree. Then said the Lord to me, You have seen well; for I will hasten my word to perform it." (Jeremiah 1,11-12).

Uses of the tree

Sweet and bitter, green, dry almonds were used in ancient times for food and industry. The bitter almonds were eaten while still soft, before the bitter substance in them, the amygdalin, increased.

Nowadays, almonds are put to various uses but the main consumption is of the sweet and ripe kernel as a fresh food and for industry. Popular medicine uses the fruit of the almond tree for the production of oil for the treatment of ear ache, head and throat aches and coughs, as well as for the treatment of lung and kidney diseases and skin problems. Almonds are also considered efficacious in the treatment of heartburn.



Date palm

Scientific name: Phoenix dactylifera

Family: Palmaceae (palmae)

Botanical characteristics

An evergreen tree with pinnate leaves, called palm fronds.

Florescence

The palm flowers in the spring, around March-April.

Seeds and fruit

The fruit of the date palm is an elongated berry containing one seed. The fruit ripens in the summer, in August and September. The different palm sub-species determine how the fruit is to be eaten, dry or damp, fresh or stored.

Longevity and renewal

The palm tree is long-lived. In nature, the palms reproduce from seeds and so there are many male and female trees. In plantations, there are mainly female trees for the fruit crop, usually reproduced from shoots.

Origin and distribution

The growing of date palms was common in the country back in Biblical times. The origin of the palm seems to have been from our region although some researchers hold that it originated in Africa or India. Wild palm trees, cultural refugees, grow in Israel alongside springs and rivulets in the Jordan Valley, the Dead Sea basin and desert oases.

Unique characteristics

The tree is very tall and straight and can reach twenty meters or more in height. The width of its trunk is of uniform diameter, a fact deriving from its being a monocotyledon.

The tree in Jewish sources

The Jewish People were commanded to observe the Festival of Succoth with the precept of the lulav with branches of palm trees: "And you shall take on the first day the boughs of goodly trees, branches of palm trees, and the boughs of thick trees, and willows of the brook; and you shall rejoice before the Lord your God seven days." (Leviticus 23:40).

The people liked the welcome qualities of the date palm and its pleasant appearance: "The righteous person flourishes like the palm tree; he grows like a cedar in Lebanon." (Psalms 92:13).

Importance of the tree

In the class of "date palm" are some thirty species, the most important of which is the common date palm which is grown primarily for its fruit. The date palm was domesticated thousands of years ago and, throughout history, was an important economic factor in the country. In our times, too, the date palm is an important crop for the agricultural economy, mainly in the Jordan Valley, the Dead Sea Valley, the Beit Shean Valley and in the Arava. The tree and its fruit have been used as artistic motifs on coins, in mosaics and early reliefs in Israel.

Uses of the tree

The trunk of the tree was used to make construction beams and pillars. The palm leaves are braided into baskets, mats, ropes, brooms and more. The fruit of the date palm is used in many ways, among them: fresh or dried food, spread, honey, jams and coffee substitutes.

Apple

Scientific name: Malus sylvestris

Family: Rosaceae

Botanical characteristics

A winter deciduous tree, with hard, thick-skinned leaves which have a serrated edge.

Florescence

As many of the Rosaceae family, the Malus sylvestris flowers before blossoming. Its flowering begins in the spring and, immediately thereafter, the tree starts to blossom. The color of the flowers is pink-white.

Seeds and fruit

The fruit of the tree, the apples, ripen in the summer and some of them even in the autumn. The exact date of the ripening varies according to the type. The color of the fruit also depends on the type and can vary between yellow, green and red. The “real” fruit is inside the apple, between the partitions, where the seeds (the pips) are found.

Longevity and renewal

Apple trees regrow after being cut or burned down. In nature, herbivorous mammals eat the fruit and disperse the seeds. In plantations, reproduction is through saplings and graftings.

Origin and distribution

Over twenty species are contained in the class “apple”. There is no complete agreement as to its origin but it has been growing as a domesticated crop in the country for thousands of years. It likes the cold and can, therefore, be found in Israel mainly in the north, on Mt. Hermon, the heights of the Golan and in the Upper Galilee in agricultural plantations.

The tree in Jewish sources

The apple tree is mentioned many times in the Bible and many times in the Talmud. The tree was commonly found in the company of the Mediterranean shrubland and its fruit looked like small apples: “Like the apple tree among the trees of the wood, so is my beloved among young men. I sat down under his shadow with great delight, and his fruit was sweet to my taste.” (Song of Songs 2:3).

Uses of the tree

The apple is an important fruit tree, whose fruits - fresh or dried - people enjoy. It is used in the juice industry, for jams, puree, vinegar, sugared peels, wine and so on.

Apple

Suggestions for Activities

This section of the booklet suggests for you a variety of activities associated with the topic of “Trees in the Land of the Bible”.
The activities are graded according to the following age groups: kindergarten, primary school, junior high and high schools, going from the youngest to the oldest. The activities are in a flexible format so that you, the users, can adapt them - with only slight changes - to the relevant age group.

We hope you will find great enjoyment with the activities.

Activity 1:
Tree,
i love you

Activity Number 1:
TREE, I LOVE YOU

Activity goal:
a. To discover the points of connection between children and trees.
b. To enrich the children with knowledge about the importance of trees for people, animals and the environment.

Activity type:
Integrated.

Age group:
Kindergarten.

Time:
According to the children's age.

Place:
Inside or outside.

Aids:
Pictures of "Trees in the Land of the Bible", pine cones, leaves and branches, fruit for preparation of a salad (see Supplementary Activity 1).

Basket of terms:
Ornamental trees, fruit, shade, trees and the oxygen cycle, trees and animal life, use of wood for building, heating, paper and so on.

THE ACTIVITY

Preparation

Sitting in a group circle, with the pictures and aids scattered in the middle.

Stages

a. Discussion and talk. Each child is asked to chose a picture or object and tell why he picked it. While conversing with the children, questions can be posed for discussion: Why are trees important for us? Why do we love them? What would the world look like without trees? What gifts do trees give to people? And so on. The discussion can be summed up with a reading from "The Giving Tree" by S. Silberstein and the question: "What do we humans give to trees? (We plant more and more trees which host the animals the trees need to disperse their seeds; we provide the trees with care: water, fertilizer, good soil; we distribute their seeds when we eat and play with their fruits and protect them through the passing of laws.)

b. Play: For this activity, any game is suitable through which the importance of trees for the children can be noted. For example:

   1. Tree tag (/catch) (one cannot tag someone who is touching a tree or standing and saying the name of a tree).
   2. One can see how many children are needed to embrace a tree.
   3. True or false. The kindergarten teacher makes a statement such as "Trees are living things which grow as children do" (true) or "Trees can be made in a factory" (false). The children who agree with the statement have to get up and change places.

Supplementary Activity 1: Fruit Salad

A number of fruit trees with which the children are familiar and which they love feature in the "Trees in the Land of the Bible" kit. It is recommended that the fruit be laid out prominently and that the children be allowed to try and match the fruit to the picture of the tree. Children having difficulty with this can be guided by playing "hot-cold", warmer" as they approach the right picture and "colder" as they move away from it. After practicing with the fruit and the pictures, a tasty and nourishing fruit salad can gladly be prepared. Olives can also be used to make pizza so the olive can be added to the meal.

The fruit trees featured in the kit are: fig, pomegranate, almond, date, vine, apple and olive. The fruit of the sycamore is also good to eat but hard to obtain.

Supplementary Activity 2: Creative Activity

1. Making a statue from branches and pine cones. The child paints a cardboard base and, after it dries, glues to it pieces of branch and cones in shapes and patterns of his choice. The finished creation is coated with plastic glue to harden the structure.
2. Leaf prints: Leaves are dipped in a little gouache and used as a paper stamp.
3. Nature mobile: The structure can be tied in a balanced way to create a mobile: a long upper leaf below which two branches are attached, one at each end and the pine cones are attached to the lower branches.

Activity 2:
The secret mission

Activity Number 2:
THE SECRET MISSION

Activity goal:
a. To introduce the children to the trees in the immediate vicinity.
b. To develop an ability to observe the variety nature grants to us.

Activity type:
Investigative.

Age group:
Young primary.

Time:
45 minutes.

Place:
Immediate environment of the school or in a park of forest.

Aids:
Envelopes, task cards, writing utensils, sheets of paper. It is recommended that a handbook of trees with pictures be brought.

Basket of terms:
Fruit trees, fruitlessness, deciduous / evergreen, family, habitat, description of flowers, flowering season, shape of leaves, shape of fruit, fruit ripening season.

THE ACTIVITY

Preparation

Task cards are to be prepared according to the number of groups we wish to create. The cards should be placed in an envelope.

Stages

a. The children are told that they have been selected by the municipality / KKL-JNF to conduct a survey of plant life near their school, in a forest or grove. The survey is very important for collection of data for conservation and nurturing of the existing trees.
b. The children are divided into groups and each group is given a closed envelope in which is a task (which is known only to the group which receives it).
c. Spheres of activity, the meeting point and the amount of time for the activity (15 minutes is a reasonable time) are defined for the group.
d. Each group has to complete its task and return to the meeting point on time.
e. At the meeting point, the children sit in a large circle. Each group in turn presents the results of the task it performed but does not reveal what the secret task was. The others have to guess, according to what the group collected and presented, what the task of the group was.
f. It is recommended that the activity end with a summary and discussion about the reciprocal benefits of trees and people (see details in "Tree, I Love You").

Possible tasks: Collect and bring: At least five leaves of different types and different shapes, five testimonies of the season of the year in which the activity is being held, five branches each with more than one leaf, five fruits of plants, five testimonies of the presence of man there.

Supplementary Activity 1: Identity Certificate

a. The children have to prepare an identity certificate for a tree. First they prepare an identity certificate for themselves and then they fill in the particulars of the tree. This will encourage the children to identify with the tree and have a positive attitude towards it.
b. The identity certificate should contain personal particulars, such as: name, physical description, place of residence, estimated age, country of origin (sabra or immigrant); family particulars: family name, characteristics and sensitivities (for example, the tree tends to shed its leaves in the autumn for deciduous trees; develops rapidly – for pine trees which grow fast in the direction of light, the season of flowering, and so on.

Supplementary Activity 2: 21 Questions

The class is divided into groups. Each group receives a number of information sheets from the booklet in the "Trees in the Land of the Bible" kit. The groups are given about ten minutes to learn about the trees and then the sheets are collected up. One volunteer child is selected from each group and given a hat to wear to which a card is pinned with the name of the tree from "Trees in the Land of the Bible" in large letters. The child asks the members of his group leading questions to guess the identity of the tree. Members of the group can answer only "yes" or "no". The child has to try and guess the name of the tree with just 21 questions. The winning group is the one which succeeded in identifying most trees with least questions.

Activity 3:
The hidden expression

Activity Number 3:
THE HIDDEN EXPRESSION

Activity goal:
To introduce the children to the importance of trees in Jewish culture through songs and sayings.

Activity type:
Competitive.

Age group:
Primary.

Time:
45 minutes.

Place:
Outside or inside.

Aids:
List of sayings about trees, blackboard and felt-tipped pens.

THE ACTIVITY

Preparation

A separate slip of paper should be prepared for each saying or name of a song. A line from a song can also be picked (assistance can be obtained from the riddles “Trees in songs” from the Schnitzel - Borsht game, below).

Stages

a. The class is divided into two groups and each, in turn, sends a representative to receive a saying or the name of a song. The representative has to think how to draw the saying.
b. He then has to draw the saying on the blackboard. He can help the group with a charade but he must not speak. The aim is to guess the saying from the drawing.
c. The winning group is the one which guessed most sayings / songs.

List of sample sayings

- They shall sit every man under his vine and under his fig tree.
- The apple doesn’t fall far from the tree.
- Not see the forest for the trees.
- The righteous person flourishes like the palm tree; he grows like a cedar in Lebanon.
- Painted himself into a corner.
- Like talking to a brick wall.
- To cite an authority.
- Hard nut to crack

Activity Number 4:
TRUE OR FALSE

Activity goal:
a. To get to know the trees in the "Trees in the Land of the Bible" kit.
b. To encourage individual study of the topic.

Activity type:
Quiz competition between groups.

Age group:
Any age.

Time:
45 minutes.

Place:
Inside or outside.

Aids:
Teacher's list of questions, see appendix. Information page / photocopies from the booklet in the "Trees in the Land of the Bible" kit. Class board or large sheet of paper and felt-tipped pens.

THE ACTIVITY

Preparation

The game board (of 3 by 3 or 5 by 5 squares) is drawn on the blackboard. The class is divided into two rival groups. An identical quantity of information sheets about trees (photocopies from the booklet in the kit) is prepared for each group.

Stages

a. Each of the two groups is sub-divided into smaller groups (just for learning and reading). Each group is given a number of information sheets from the booklet in the "Trees in the Land of the Bible" kit. A time is set for individual learning.
b. When the time is up, the sheets are collected. The class is physically divided into the two groups which were determined in advance. Each group occupies a different corner of the classroom.
c. The game is explained: The teacher reads out two definitions for each tree, one right and one wrong. Each group in turn has to decide (through consultation) which is the correct answer and so advise (through a representative). If the group is right, it may chose where to place its mark on the board. If it is wrong, the other group has a turn.
d. The opening question is for both groups and the one giving the fuller and better argued answer is the one which goes first in the game.
e. Marking the board: On a 3 by 3 board, play noughts and crosses (tick-tack-toe) with the goal being to be the first to fill in a horizontal, vertical or diagonal row. The game is short, enabling a number of rounds.
On a 5 by 5 board, the game is like "Blockbusters". One group has to advance horizontally and the other vertically to form a continuous line from side to side. Any two touching squares (even diagonally) are continuous. The first group to complete the squares from side to side (horizontally or vertically) is the winner. Each group uses a mark of a different color.

Note

The true or false questions below can be used. They can also be asked without giving the name of the tree and the children can try and guess the name as a separate quiz.
The questions in the appendix to the Schnitzel – Borsht game (below) can also be used.

See the true or false questions in the following appendix.

Appendix

Questions for the "true or false" game

Jerusalem Pine
True: I am an important forest tree in Israel. I grow quickly because I try to reach the light and that is also the origin of my name. I do not grow again after a fire.
False: I am the most important planted tree in Israel. I am grown mainly because of my quick growth and also thanks to my seeds (pine nuts) which are used for food and medicine.

Palestine Oak
True: If man and herds had not damaged me, I could have been a large tree. Towards winter, I turn orange color and, in the winter, stand naked. My name is from the Bible and testifies to my glorious past.
False: I am an evergreen and only the color of my fruit changes with the seasons from green to red and then to purple. I am similar to my twin sister and only the shape of my gall [an abnormal swelling of plant tissue caused by insects, micro-organisms, or external injury] differentiates between us.

Tavor Oak
True: I grow again after being cut down. My fruits, which consist of a small nut and a cupule, are much liked by forest animals: jays, boars and cattle and they help spread them.
False: I am a particularly strong evergreen. My fruit is encased in a hard shell with large scales. The wild boar is the main spreader of my seeds.

Cedar of Lebanon
True: I am a member of the pine family: tall and special, growing in Israel only as a planted tree in a few forests, among them: Biriya and Jerusalem. I am mentioned in the Bible as a tree imported for the building of the Temple.
False: It is true that I am an ancient tree but I am common also nowadays. I can be found mainly in the high mountains. The top of the branches spreading out to the sides is reminiscent of a tiled roof.

Tamarisk
True: I am a tree originating in Africa and I like the Negev and the desert. My small flowers are surprising particularly in the hot summer months. I have been used as a forest tree in the mitzpim areas of the Negev.
False: I grow quickly and manage anywhere in the world. I prefer saline soils to others and mycorrhiza fungi grow near my roots and depend on me.

Cypress
True: On the same tree, you will find me male and female. The male fruit looks like elongated ears of corn and the female like round cones. In contradistinction to my relatives, I do renew growth from stumps.
False: I am a quick growing conifer and you use me as a wind breaker and marker of land plots. My seeds are spread mainly by birds and I do not grow again after a fire.

Vine
True: I am a symbol and blessing for fertility, blossoming and prosperity. One of the seven species for which the Land of Israel is known, strong in juices, equipped with tendrils and if you are driving by car be very careful with me.
False: It is true that I was not included among the seven species for which the Land of Israel is known but it is over the produce of my fruit that you say the blessings for Shabbat and festival. My fruit is arranged in clusters on the branch and are called bunches.

European Olive
True: I am long-lived and have been grown in the land for

thousands of years. Sometimes my trunk is hollow with gnarled protrusions. My fruit changes color with time from green to black.
False: I am old, with twisted trunk. I am harvested by hand or machine and multiply mainly from seeds. The difference between the wild and cultured species is mainly in the taste of the fruit (bitter or sweet).

Sycamore

True: I am an impressive, broad-trunked tree. I shed my leaves in the autumn in the Land of Israel because it is colder here than in the Sudan. My fruit is called syconium or green and I am still waiting for a good friend called "hornet".
False: In the Biblical period, it was of course the Queen of Sheba who brought me from the Sudan to King Solomon. Since then, I have been used for building but not only for that. My fruit is much liked here; it is sweet and tasty and pink inside.

Fig Tree

True: I am a tree of the seven species for which the Land of Israel is known. Although I myself stand in the autumn, I served as protective cover for two very well-known people. My fruit is unripe or green, consisting of hundreds of flowerlets.
False: I am known because of my great beauty and my leaves are hand-shaped. The resin I exude can be injurious. My fruit is dry and so not suitable for eating.

Pomegranate

True: The shape of my fruit is very special. Artists have decorated and adorned the Temple building, coins and other treasures with my image. My fruit is good for making choice wine and for production of color.
False: I am both evergreen and barbed. My fruit has 613 seeds. I multiply only from cuttings. I am eaten either dry or fresh, depending on the diners.

Acacia

True: I am a desert tree and also thorny. I was used by the Children of Israel to build the Tabernacle and the altar. I provided most of the needs in the Wilderness and so was considered of great value.
False: I am a thorny tree which gives a little shade in the hot desert. Everyone eats my round-shaped fruit. The Bedouin use me for heating and construction.

Almond

True: I produce flowers first and only then leaves. I symbolize the coming of the spring. My seed is usually eaten when it is sweet although in most of the wild trees my taste is bitter.
False: My fruit has both pit and skin. Both are edible and nutritious. They are also used for the preparation of chocolate and marzipan. My flowers have a pleasant smell and a color which attracts insects.

Date

True: My leaves are giants and my fruit has to be picked. In nature, there are many males and females of my species but in plantations you will find mainly females because of the fruit.
False: I have a narrow, tall trunk. Therefore, my leaves are called "lulav" I multiply mainly from seeds, also in plantations, and reach a great age.

Apple

True: I am a deciduous fruit tree of the rose family and my real fruit is where the seeds are. I like cold and so you will find me on Mt. Hermon and in the Upper Galilee.
False: An evergreen fruit-tree, one of the seven species. Also belongs to the rose family and the flowers have a rosy white color to them and a pleasant smell. The fruit attracts insects.

Activity Number 5:
SCHNITZEL BORSHT

Activity goal:
a. To learn concepts concerning the trees of the Bible and the other trees of the country.
b. To enjoy a competitive activity.

Activity type:
Tasks game.

Age group:
Primary, junior high and high school.

Time:
45 minutes.

Place:
Inside and/or outside.

Aids:
Writing utensils, task sheets. Blank sheet for the points table. Answer sheets. Hanging or photocopied copies of the "Trees in the Land of the Bible" kit which the children can peruse during the quiz. Bibles.

THE ACTIVITY

Preparation

Tasks are chosen that are suitable for the ages of the children and work sheets are prepared – one for each group. Each group should also have blank sheets of paper for writing down the answers, and a copy of the Bible.

The children sit in activity groups around a table.

It is decided how many will be on the judges' panel and the judges sit at a table facing the class and are responsible for adding up the points at the end of each task.

A points table is prepared on the blackboard with the names of the groups and the names of the tasks

Stages

a. The children are divided into groups. Each group picks a name connected to trees and receives a task schedule with a blank sheet of paper for writing down the answers – turned over, facing down.
b. The judges' panel takes its seat and receives points tables and lists of answers. They write the names of the groups on the board.
c. When the signal is given, each group tries to solve the tasks on its sheet as fast as possible (between 4 and 10 minutes, depending on the age of the children). The solutions are written on the blank answer sheets. Each group writes its name at the top of the sheet and the name of the task it had to perform.
d. When the set time is up, a representative of each group hands in the answer sheets to the judges' panel, takes the tasks sheet from the group to his right and places it face down on the table.
e. When the signal is given again, a new round starts. During this time, the judges check the answer sheets submitted to them and record the final mark of each group on the blank points sheet. The teacher summarizes the answers on the blackboard.
f. When all the rounds are complete, the number of points accrued by each group is totaled and the winning group announced.

Notes

It is important that the questions and their quantity be adjusted to the age of the children and the level of their knowledge. The teacher must assess in advance how much time is needed for the tasks (between 4 and 10 minutes each) and the number of tasks given to the groups. A reasonable time for the tasks activity is between 20 and 30 minutes, with the rest of the time being used for preparations and the summation.

see the questions for the schnitzel borsht game in the following appendix

appendix

questions for the schnitzel borsht game

Mark "true" or "false" against each of the following sentences:

1. The cedar tree is featured on the flags of Lebanon and Canada.
2. There are male and female date trees.
3. The "comb" grove near Jerusalem is so called because of the shape of the pine crowns.
4. The difference between black olives and green olives is the type of tree on which they grow.
5. The pine tree is mentioned eleven times in the Bible.
6. The pomegranate has no smell.
7. A "lulav" is the top leaf above the branch that has not yet opened.
8. Tamarisk trees grow in rainy places.
9. The almond, plum and peach are all from the same family.

Match the Plant to the Sentence

1. I have curling tendrils which help me grip and climb.
2. I am a fruit tree of the rose family and, therefore, very significant in the western world.
3. My fruit ripens at the end of the summer, towards Rosh Hashanah, for the blessing.
4. My dried fruit is referred to as a "cake".
5. The seeds found in my cones are called "nuts".
6. I am unable to produce seeds and so need my friend the pollinating hornet.
7. We were brought from Lebanon for the building of the Temple.
8. I am in the dove's beak and a symbol of (military) officers.
9. I am found frequently throughout the Negev. Abraham planted me in Beersheba.
10. My seed is well protected, perhaps excessively so, with a hard shell. Goats help me begin the germination process.
11. I am the king of the grove. My leaves are pointed and my fruit has a crown with thorns.

Trees in the stories of the Bible (quiz with open Bibles)

1. About which tiller of the soil is it related that he planted a vineyard? (Genesis 9:20).
2. Which city is called the "city of palm trees"? (Deuteronomy 34:1-3).
3. About whom is it related that he "planted a tamarisk tree in Beersheba"? (Genesis 21:33).
4. In the period of which king is it stated: "And Judah and Israel dwelt safely, every man under his vine and under his fig-tree"? (I Kings 5:5).
5. Who was the first to plant in the Bible? (Genesis 2:8).
6. Who said: "And in her mouth a freshly-plucked olive leaf" (Genesis 8:11).
7. About whom is it related: "And she sat under the palm tree" (Judges 4:5).
8. About whom is it related: "And she was buried below Beth-el under the oak and the name of it was called 'Alon Bakhut' (Genesis 35:8).
9. With whom did the trees converse in the parable of Yotham? (Judges 9:9).
10. Who "shall flourish like the palm tree and grow like a cedar in Lebanon"? (Psalms 92:13).

Answers to the Schnitzel Borsht Game

Answers to "true" or "false"

1. False. The Canadian flag has a maple leaf.
2. True.
3. True.
4. False. Black olives ripen later on the same tree.
5. False. It is mentioned only once in the Bible.
6. True. The intention of the poet, Yitzchak Orland, is unclear.
7. True.
8. False. This is specifically a desert tree.
9. True. The rose family.

Answers to the Match the Plant to the Sentence Game

1. Vine.
2. Apple.
3. Pomegranate.
4. Fig.
5. Pine.
6. Sycamore.
7. Cedars of Lebanon.
8. Olive.
9. Tamarisk.
10. Acacia.
11. Tavor Oak.

Answers to Trees in the Stories of the Bible

1. About Noah.
2. Jericho.
3. Abraham.
4. At the time of King Solomon.
5. G-d planted a garden in Eden.
6. Noah in the story of the Flood.
7. About the Prophetess Deborah.
8. Deborah weaned Rebecca.
9. With the fig.
10. The righteous person.

Activity 6:
Elections in the forest

Activity Number 6:
ELECTIONS IN THE FOREST

Activity goal:
a. To arouse an interest in self-learning about the trees of the Bible.
b. To get to know the variety of trees and their different characteristics.
c. To understand and appreciate the importance of the variety.

Activity type:
Campaign promotion.

Age group:
Primary, junior high and high school.

Time:
The activity could be spread over two-three lessons.

Place:
Classroom or outside.

Basket of terms:
Fruit trees, barren trees, landscape and shade, trees and the oxygen cycle, climate improve-ment, reduction of air pollution. Soil fertilization, stopping erosion. Trees and animal life. Use of trees for food, building, crafts, heating, paper, rope, pharma-ceutical industry, rubber and more.

THE ACTIVITY

Preparation

The class is divided into activity groups and each group is given a space for activity and discussion. The aids needed for running the campaign are given out to the group.

Stages

Preparatory activity

a. Some background for the activity is given: In a certain forest, the trees decide that they want to be responsible for their fate. There are many important matters which have to be attended to in the forest, the problem of the garbage and noise of vacationers, diseases which attack the trees, fires which break out from time to time and other problems. It was decided to elect democratically a representative tree council. Each tree which was interested in doing so could establish a party or join an existing party and persuade the other trees in the forest that it was the party with the most talent.
b. Each group has to form an "election team" containing a number of suitable trees. The most successful party forms a team of trees with a large variety of qualities, for example, trees which can contribute fruit for the animals of the forest and for visitors, trees whose branches can be used for building, trees representing values (in the Biblical spirit) and which have a family tradition.
c. After the team is formed, the leading tree "the party leader" and its deputy are elected. A name is chosen for the party and an election platform. The platform should emphasize the reasons for which the party was founded, e.g., help for weak population groups of trees and animals, encouragement of tourism to the forest, improving the forest visually.

Running the campaign

d. At the end of the learning and preparation stage, the children put together a real campaign, including an advertising poster, a jingle and election broadcast.

Election activity

e. The children move from one campaign to the next and form impressions of them.
f. Each group in turn presents its election campaign: the leading candidates, the platform, jingle and election broadcast.
g. The activity ends with actual elections in the classroom - every child puts into the ballot box a slip of paper on which he notes the name of the party he has chosen.
h. In summary, the importance of variety should be emphasized and both what we received from the trees and what we give back to them.

Activity 7:
Forest court

Activity Number 7:
FOREST COURT

Activity goal:
a. To broaden the knowledge of the importance of trees for people.
b. To hold an in-depth discussion in the class about the daily dilemmas of harming trees.

Activity type:
Court room debate.

Age group:
Junior high and high schools.

Time:
A lesson or two.

Place:
Classroom.

Basket of terms:
Fruit trees, barren trees, landscape and shade, trees and the oxygen cycle, climate improvement, reduction of air pollution, reducing the greenhouse effect. Soil fertilization, stopping erosion. Trees and animal life. Use of trees for food, building, crafts, heating, paper, rope, pharmaceutical industry, rubber and more.
List of complaints on trial

THE ACTIVITY

Preparation

The activity requires the collection of material and prior study of the subject by the teacher and the students. The activity can be preceded by a preparatory class, learning through play or collection of materials by the students at home.

Stages:

Following is a list of complaints about possible injuries man can cause to trees. Your role is to hold a proper trial process: issue an indictment of the accused, put them on trial with a panel of judges. The identity of the prosecutors will be determined in accordance with the type of trial. The accused is entitled to proper representative by an attorney on his behalf. Expert witnesses can be called to the trial.

At the end of the legal discussion, the verdict will be given.

a. The neighbor complained that he is suffering because of the tree which hides the sunlight. He took a saw and cut down over half the tree.
b. A contractor is building in the neighborhood and cuts down trees which he feels are "unfashionable". He promises to plant other "more prestigious" trees.
c. The municipality is planning to destroy a grove of trees in the town center in favor of a large construction project.
d. A plan for the construction of a new road threatens diminishing forest areas. Alternative plans exist.
e. You have decided to join the fight against the cutting down of the rain forests. You enter a plea at the international court against the companies and countries responsible for systematic destruction of the rain forests.

Chose the scenario for the trial

Possibility A: The class selects one complaint which most concerns it and deals thoroughly with it.

Possibility B: The group is sub-divided into different activity groups. Each takes upon itself submission of a different complaint.

a. The teams are divided into prosecution and defense. The judicial composition is determined and also has to prepare well for the trial.
b. Each team is given time to prepare the statement of claim and statement of defense. Attorneys are appointed and the list drawn up of expert witnesses to be called.
c. Before the trial, the teacher defines in advance how much time each side will have to make its case.
d. It is important that the trial be conducted in a respectful and serious manner to prevent any lack of respect for the matters on trial.
e. When both sides have completed presentation of their cases, the judges retire to consider the trial material and then return to read the verdict.

Notes

The level of preparation for the debate will determine the standard of the debate.

Acknowledgements

Bibliography

Livshitz N., Biger G.,)8991(Ki Haadam Etz Hasadeh (For Man is as the Tree of the Field), Jerusalem, publ. Ariel.
Schmida A., Darom D., (2002) Madrikh Haetzim Vehasichim Be-Israel (Guide to the Trees and Bushes of Israel), Jerusalem, publ. Keter.
Efron Y.,)7991(Atzei Eretz Israel (The Trees of the Land of Israel), publ. Keren Kayemeth LeIsrael.
Kaplan M. (1999) National Master Plan for Forests and Forestation (The Policy of Keren Kayemeth LeIsrael).

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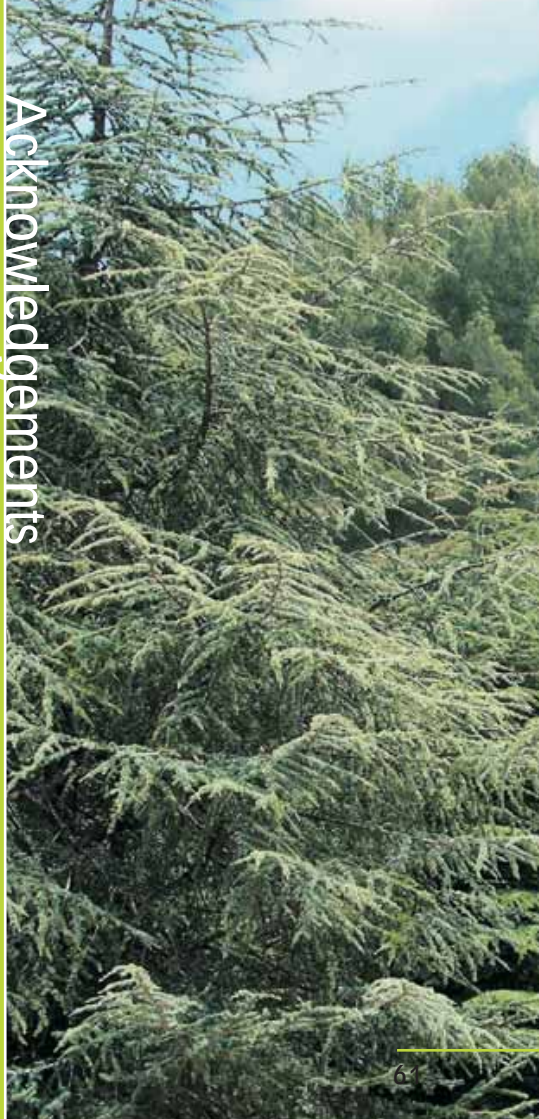

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- has planted more than 230 million trees on an area of about a million dunams and continues to plant some 20,000 dunams of forest each year.
- cares for and looks after some 400,000 dunams of natural woodland.
- has fenced off and arranged some 400,000 dunams of pasture land.
- expands the national water supplies with the building of 192 reservoirs and dams throughout the country to store excess flow and flash floods and to recycle waste water to the tune of more than 160 million cubic meters of water.
- restores Israel's polluted rivers and brings them back to life.
- has fitted out over 800 picnic spots throughout the country, including active recreation areas and regional parks in which tens of thousands of visitors spend time.
- interests the public in the forests through a variety of tours and recreational activities in the heart of nature for the public at large and for KKL Friends - "On the Green Path", in which thousands of families are members.
- contributes to the quality of the environment in the whole country, rolling back the boundaries of the desert and creating shaded, green corners in military camps and the settlements of the south.
- has reclaimed land for about a thousand settlements throughout the country.
- has reclaimed about a million dunams of land for farming.
- has purchased some 2.6 million dunams for settlement purposes.
- has broken through some 7,000 kilometers of roads and forest roads.
- maintains the bond of Jewish youth in Israel and overseas with the soil of the homeland through a wide variety of educational activities, action and information, and assists with the social absorption of the children of new immigrants.

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