

The Gamla Nature Reserve

The Gamla Nature Reserve is located in the center of the Golan Heights, approximately 20 km south of Katsrin and 2 km north of the Daliyot junction, near road 808. The reserve contains a powerful waterfall – at 51 m high, it is the highest in Israel. It also contains archaeological sites including the remains of ancient Gamla and dolmens, and the largest Griffon vulture nesting colony in the country. Visitors can easily spend from one hour to a whole day in the reserve. A path in the reserve is paved and wheelchair-accessible.

Streams in the Gamla Reserve

The Gamla Stream

The Gamla Stream begins at the Peham and Tanuriya springs north of Mount Peres and flows southwest. It joins the Daliyot Stream, which originates in the eastern part of the Golan Heights. At its source the water flows into a wide, shallow, natural canal called a *masil*. This part of the stream ends at the 51-m-high Gamla Waterfall. Approximately 300 m farther south along the stream is another waterfall that is 21 m high. From the waterfall the Gamla Stream forms a deep, winding canyon surrounded by very steep cliffs.

The Daliyot Stream

The sources of the Daliyot Stream – the springs of Bardela, Um-a-Dananir, Sha'abaniya and Mantsura – are located at the

foot of Mount Peres. From there, the stream flows westward, creating a deep, meandering canyon. The difference in the consistency of the basalt layers creates the waterfalls in the streambed. You can also see white limestone at the bottom of the cliffs in the deepest part of the canyon.

Layers of reddish soil, which can be seen between the layers of basalt, accumulated there millions of years ago. They were baked by the intense heat of the lava that flowed over them and became water-resistant, forming small springs as a result. These springs give away their location by the presence of common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*) growing in the water.

Approximately 5 km west of the confluence of the Daliyot and Gamla streams, the Daliyot widens and becomes shallower as it flows into the Sea of Galilee.

Most of the water of the Daliyot Stream is impounded upstream for agriculture. The streambed receives only a minimum amount of water to preserve its ecosystem.

- Do not enter the water in the reserve; microorganisms, small animals and aquatic plants can be severely damaged if trodden on.
- Do not drink the water – the streams have been contaminated by cattle.



Trails in the Gamla Reserve

Daliyot Falls Trail (1504)

Length – 3.5 km (approximately 4 hours round-trip or 2 hours in each direction). If you want to walk only in one direction, you should begin at the Daliyot parking lot.

Degree of difficulty – easy; mostly level.

The trail, which is lined with beautiful flowers in the spring, begins at the Daliyot parking lot, crosses the Daliyot and Bazelet streams and continues to the lookout above the Bazelet Falls. The trail continues along the banks of the Daliyot Stream and then crosses a paved road (do not walk on the road!) and descends toward ancient Gamla. Near the end of this trail you will pass a memorial to victims of terror and fallen soldiers. The memorial is located on an impressive cliff above ancient Gamla. The trail ends near the parking lot. We recommend that from there you take another of the reserve's trails.

- Do not drink the water.
- We recommend you take this trail only during winter and spring.
- At the end of the trail, please go to the office and pay the entrance fee to the reserve.

The Dolmen Trail to the Gamla Falls (1503)*

Length – 1.5 km (approximately 1.5 hours round trip)

Degree of difficulty – easy; level.

From the parking lot, the trail leads northward and passes through the dolmen field. About 1 km farther on, the trail crosses the Gamla Stream above the high waterfall and continues for another 400 m until it reaches a lookout. From there you can enjoy a splendid view of the waterfall and raptors nesting in the cliffs. Take the same path to return to your starting point.

- Do not enter the water at any point.
- Going beyond the end of the trail will disturb the raptors.
- Do not venture beyond the end of the trail due to the presence of an army firing range.

The Vulture Trail – Gamla Lookout, Vulture Lookout and Deir Qeruh

Length – 600 m round trip on a loop trail (approximately 30 minutes).

Degree of difficulty – easy; paved path suitable for wheelchairs.

The trail leads westward from the parking lot. After 200 m it reaches a lookout from which you can see the hill of Gamla, shaped like a camel's hump (*gamal* in Hebrew means camel, giving the site its name, Gamla) and a splendid view in the distance. From there you can also see the tower, the wall and the synagogue of the ancient city of Gamla built on the southern slope of the hill. (You can continue from there to the antiquities using an ancient trail that is recommended for fit walkers only.) The path continues to the vulture observatory overlooking the Gamla Stream canyon and nesting colonies of raptors. An olive press dating to the Byzantine period is located east of the observatory near the path. The press contains crushing stone and a base for the press.

From there the path continues to the remains of the village of Deir Qeruh, including remains of an impressive Byzantine-era church. From there the path leads back to the parking lot.

- Deir Qeruh has shaded picnic tables and drinking water.
- PLEASE NOTE! Portions of this trail overlook raptor nesting sites. Please do not make noise!

The Ancient Trail to Gamla (1502)*

Length – approximately 1 km (approximately 2 hours round trip).

Degree of difficulty – for fit walkers only; steep path.

The path leads westward from the parking lot. After approximately 200 m it reaches the lookout on the hill of Gamla (This part of the trail is the same as the Vulture Trail.) From there, an ancient switchback trail leads down steeply toward the remnants of Gamla that were uncovered in archaeological excavations. Metal plaques along the trail contain quotations from the book of Josephus Flavius describing the battles that took place at Gamla.

In front of the city wall are models of two types of catapult used by the Romans who besieged the city. One was used to shoot arrows and the other to hurl ballista balls.

The entrance to the city today is located at the point where the Romans originally breached the city wall. The trail continues alongside dwellings and reaches the famous synagogue and the ritual bath (*miqveh*) that was built nearby. From there the trail continues to the residential quarter that dates back to the Hasmonean period and to the round tower that rises from the upper corner of the city wall.

On the western side of the city are remnants of a large and splendid olive press equipped with two pressing installations and a ritual bath (*miqveh*). The olive-oil press was located in an industrial district near a luxurious residential quarter.

* Trail number on the SPNI Trail Map

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Gamla

Nature Reserve

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Flora

Many different species of trees, bushes and shrubs grace the reserve. The most common are the Mt. Tabor oak (*Quercus ithaburensis*) and the Atlantic pistachio (*Pistacia atlantica*). These deciduous trees are scattered across the high plateaus.

Mt. Tabor oak – This species has serrated leaves. Its fruit, an acorn nestled in a cup with twisted scales, is edible when roasted and can be used as a substitute for coffee.



Atlantic pistachio – has reddish gallnuts, shaped like coral.

The spiny hawthorne (*Crataegus aronia*), Christ's thorn jujube (*Ziziphus spina-christi*) and officinal storax (*Styrax officinalis*) are usually found together around the Mt. Tabor oak and the Atlantic pistachio.



Judas tree (*Cercis siliquastrum*) – This species is famous for its lilac-hued flowers. It flourishes on the slopes along with the almond, another beautiful sight when in bloom.



Giant fennel (*Ferula communis*) – The inflorescence of this plant grows on a stalk that can reach as high as 2 m.

Common fennel (*Foeniculum vulgare*) – This species

resembles the giant fennel and has an anise-like fragrance. Fennel roots and seeds are used in food, as spices and in folk medicine.

Tall viper's bugloss (*Echium glomeratum*) – This plant is known for its rough leaves and inflorescence of tightly clustered pink flowers that bloom in spring on a stalk as high as 2 m.

Woody spurge (*Euphorbia hierosolymitana*) – This bush, with prominent yellow blossoms, reaches a height of approximately 30 cm and grows densely in rocky areas. The spurge excretes a bitter and poisonous milky liquid. It is adapted to the Mediterranean climate, blooming in the winter and shedding its leaves in the summer.

Senna Bladdera (*Colutea istria*) – This bush, whose seeds rattle in its swollen pod, can be found on the slopes of the hill of Gamla. It can grow as high as 2 m and has bright yellow flowers in the spring. The slopes of Gamla are the northernmost area in the world where this shrub exists.

Streambeds are a natural environment for plants that thrive in water and moist surroundings, such as:

Willow (*Salix acmophylla*) – a tree with sharp pointed leaves, growing high as 3–5 m. Its seeds are shaggy and scatter in the wind.

Oleander (*Nerium oleander*) – a tropical plant with large, pink flowers. The plant excretes a milky liquid and all parts of it are poisonous.



In the streambed alongside the willow and the oleander, you can find holy bramble (*Rubus sanguineus*), horsemint (*Mentha longifolia*) hoary willow-herb (*Epilobium parviflorum*) purple loosestrife (*Lythium salicaria*) and other aquatic plants that typically bloom in the summer.

In late winter and spring the reserve is covered with carpets of spring flowers with myriad colors and intoxicating fragrances. They include mountain star-of-Bethlehem (*Ornithogalum montanum*). Several shades of crown anemone (*Anemone coronaria*), common narcissus (*Narcissus tazetta*) and Persian cyclamen (*Cyclamen persicum*) grow here in the winter. In the spring plants emerge like spring groundsel (*Senecio vernalis*), Italian valerian (*Valeriana dioscoridis*), blue lupin (*Lupinus pilosus*) and various kinds of vetchlings (*Lathyrus*) and trefoils (*Trifolium*).



Fauna

Many animals find refuge in the reserve. Often visitors do not see them because they are either nocturnal or blend into the flora.

Wild boar (*Sus scrofa*) – This is the largest mammal in the reserve. It leaves clumps of masticated grass on the path, which it spits out after chewing out all the fluids. Since the boar is not a ruminant, it cannot digest the cellulose that the grass contains.

Mountain gazelle (*Gazella gazella*) – Also called the hart, this animal is a biblical symbol of beauty:

"Be thou, my beloved, like a roe or a young hart on the mountains of Betar

(Song of Songs 2:17).



Gazelles live in distinct herds of "bachelors," of mothers and their young and of territorial, older males. The males mark their territory by leaving clumps of dung and urine that carry their own special scent. These droppings can sometimes reach a diameter of more than a meter.



Indian crested porcupine (*Hystric indica*) – This is the largest rodent in Israel. A nocturnal creature, its dung is shaped like peanuts and its quills are often found on the trails of the reserve.



Palestine mole rat (*Nannospalax ehrenbergi*) – This rodent lives mostly underground, with rows of small mounds of freshly turned soil sometimes the only evidence of its presence.

Syrian rock hyrax (*Procavia capensis syriaca*) – These animals can often be seen standing atop the rocks. They live in herds of families or in groups of "bachelors." Within their unique social structure the females take turn in caring for the young.

Other mammals that can occasionally be seen in the reserve include jackals (*Canus aureus*), red foxes (*Vulpes vulpes*), wildcats (*Felis silvestris*) and caracals (*Felis caracal*).

While strolling along the paths of the reserve, visitors sometimes come across two species of reptile, the common agama and the fan-footed gecko.

Common agama (*Agama agama*) – A grayish-black lizard, about 30 cm long. The male lizard usually stands guard from a high position over his territory, which usually covers about 10 m in diameter. Up to four females and their young can inhabit this area.

Fan-footed gecko (*Ptyodactylus oudrii*) – A black or gray gecko with small white spots, this lizard is about 15 cm long. It gets its name from its unique, fan-shaped feet that enable it to cling to rocks and even walk upside down under them.

Birds

Many species of birds can be found year-round in the Gamla reserve, such as the European goldfinch (*Carduelis carduelis*), crested lark (*Galerida cristata*), rock dove (*Columbia livia*), Palestine sunbird (*Cinnyris osea*) and blue rock thrush (*Monticola solitarius*). In the winter, other species migrate here from more northern climes, including the white wagtail (*Motacilla alba*), black redstart (*Phoenicurus ochruros*), stone chat (*Saxicola torquata*), and European robin (*Erithacus rubecula*). In the spring, the winter birds leave, making way for the summer birds, including the Spanish sparrow (*Passer hispaniolensis*), Rufous warbler, woodchat shrike (*Lanius senator*), black-eared wheatear (*Oenanthe hispanica*) and little swift (*Apus affinis*). The summer birds nest in Gamla and then return to Africa in the winter.

During migration season you may see flocks of common cranes (*Grus grus*), white and black storks (*Ciconia ciconia* and *Ciconia nigra*), common redstarts (*Phoenicurus phoenicurus*), whinchats (*Saxicola rubetra*), finches and wheatears.

The Raptor Colony

Gamla Nature Reserve is home to Israel's largest nesting colony of raptors. It is also the most varied population and the most dense. The abundance of food and the many nesting sites enable the existence of such a crowded population, the remnant of a much larger population that lived and nested here at the beginning of the twentieth century. Over 40 pairs of Griffon vultures nest in the Gamla Stream cliffs – most of the Griffon vultures in Israel.

A few pairs of Egyptian vultures, a pair of Bonelli's eagles and a pair of eagle owls (*Bubo bubo*) live in the cliffs of the Gamla Stream.

Raptors in the Reserve

Egyptian vultures (*Neophron percnopterus*) – This species arrives at its nesting grounds in Israel around February and leave around September–October for its winter quarters in Africa. Its wingspan can reach 180 cm and it feeds on carcasses and live prey. It nests on ledges in the cliffs above the streams in the reserve, and usually lays 2–3 eggs.

Short-toed eagle (*Circaetus gallicus*) – These birds arrive at their nesting grounds in Israel around February and leave in October to winter in Africa. It has a wingspan of approximately 190 cm. It preys mainly on reptiles and usually builds its nest in the trees, laying one egg.

Long-legged buzzard (*Buteo rufinus*) – Part of this buzzard population is resident but some just pass through Israel on their way to and from points south. It has a wingspan of 150 cm. Its diet is diverse, feeding on small mammals, birds, reptiles and at times, carcasses. It builds its nest on the ledges of the cliff and lays 3–4 eggs, usually in March.

Bonelli's eagle (*Hieraetus fasciatus*) – A rare resident bird, this raptor has a wingspan of 180 cm. It feeds mostly on birds, which it hunts in flight thanks to its speed and agility. It nests on cliff edges and lays 2–3 eggs, usually in January.

Griffon vulture (*Gyps fulvus*) – One of the largest and most impressive raptors in Israel, this bird can reach as much as 1.1 m in length with a maximum wingspan of 2.7 m. This species is the one most frequently mentioned in the Bible



(28 times) due to its great strength and size, which impressed our biblical ancestors. Since it feeds only on carcasses, it is known as "nature's janitor," because it cleans the environment of dead animals, thus preventing the spread of disease. This makes Griffon vultures very important in balancing the ecosystem. Griffon vultures are social birds. They seek food in large colonies that can cover up to 100 km a day, soaring and gliding on air currents without moving their wings. Griffon vultures find food in open areas – carcasses of cattle, sheep, wild boars, gazelles and other hoofed animals. Griffon vultures require high, protected areas like the Gamla cliffs to roost and nest.

Griffon vultures were once numerous in our region. Nineteenth-century scholars and travelers describe nesting colonies consisting of hundreds of these birds. However, they have become almost extinct due to poaching, electrocution by high-tension wires, careless hikers and low-flying aircraft. Other causes include lack of food (particularly in the Negev and the Judean Desert after most of the Bedouins' flocks were removed from the region) and secondary poisoning from agricultural pesticides in the 1950s and 1960s.

Over the past few years, only 60 pairs of Griffon vultures have been observed breeding in Israel. The reduction in their numbers means these birds face extinction unless steps are taken to reverse the situation.

Since 1994 a survey of the vulture population has been underway, with intensive observation of their nests in order to alert rangers to potential harm from poisoning, low-flying aircraft, careless hikers, lack of food, etc. This project is helping to save the Griffon vulture from extinction in the Gamla reserve in particular and throughout Israel.

The Griffon vulture survey and protection project is being carried out with the cooperation of the Israel Electric Corporation; the Golan Heights Regional Council; the Society for the Protection of Nature in Israel; the Environmental Protection Ministry; the International Birdwatching and Research Center in Eilat; and the Israel Nature and Parks Authority.

The Golan Heights Memorial

The Gamla Nature Reserve is home to a unique monument, situated on a breathtaking cliff overlooking ancient Gamla, the Daliyot Stream and the Sea of Galilee. The site commemorates residents of the Golan Heights who were the victims of terror or fell in the line of duty during their military service. The names of the fallen are inscribed on the rock face situated on the lower level of the site. The upper level features a quotation from the Roman-Jewish historian Josephus Flavius, who described Gamla's location. The site symbolizes the link between the people who lived at Gamla during the Second Temple period and today's inhabitants of the Golan Heights.

Ancient Gamla

Gamla is described in the Talmud as a walled city dating from the time of Joshua. It is assumed the Talmud depicts it this way because a fortified settlement, later destroyed, existed here during the Early Bronze Age. The ruined city was resettled during the Hellenistic period (the mid-second century BCE).

According to Josephus, the city was built on the slope of a very steep hill surrounded by cliffs. It could only be reached from one side, from the eastern plateau, and only by one trail, the same trail that leads there today.

"For it was situated upon a rough ridge of a high mountain, with a kind of neck in the middle; where it begins to ascend, it lengthens itself and declines as much downward before as behind, insomuch that it is like a camel in figure..."

(The Jewish War, VI, 1)

Gamla joined the revolt against the Romans in 66 CE. Just before the revolt, the inhabitants, led by Josephus, who had commanded the revolt in the Galilee, quickly fortified the city walls.



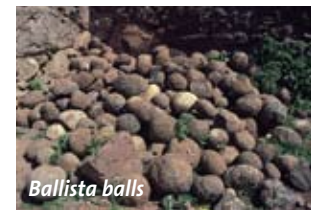
The wall was built on the eastern side of the city. It started at the round tower at the top of the hill and ended above the Daliyot Stream. The easternmost houses of the city and the outer eastern wall of the synagogue were made part of the city wall. King Agrippa II besieged the rebellious city but was forced to retreat after seven months. The Romans, however, did not give up. Vespasian, who hastened to Judea at the head of three Roman legions and reinforcements, besieged the city again. One month later, the Romans breached the walls for the first time and penetrated Gamla. However the Jewish defenders succeeded in turning this into a painful and disgraceful defeat for their enemy, killing most of the Roman soldiers.

"By this means a vast number of the Romans perished..."

(The Jewish War, VI, 4).

It was only during the second attempt to breach the walls, a few days later, that the Romans were able to overwhelm the defenders. According to Josephus, the Roman victory cost the lives of 9,000 Jews – inhabitants of the city and of the surrounding villages who had sought refuge in Gamla during the revolt.

After the Romans destroyed Gamla in 67 CE, it was never rebuilt and was then forgotten for 1,900 years. In 1968, Gamla was rediscovered by Yitzhaki Gal, who participated in the survey of the Golan Heights carried out by the Jewish Agency and the then-Nature Reserves Authority. Gal suggested that the lost city of Gamla might have existed on this spot and he collected a few finds to support his theory. As a result, the archaeologist Shmaryahu Guttman began excavating the site, confirming the city's identification and revealing amazing discoveries, such as remnants of the wall dating back to the period of the revolt and an impressive synagogue and residential quarter. Evidence of a furious battle was also found in the form of hundreds of ballista balls, thousands of arrowheads and iron nails.



The remains of Gamla's synagogue are particularly outstanding. It is a magnificent building situated at the edge of the city and was apparently built in the early first century CE, during the time of the Second Temple. It is one of the oldest synagogues ever discovered in Israel.



Many ballista balls and arrowheads were found inside the synagogue, testifying to the fact that the battle with the Romans had taken place there as well. Signs were also found in the synagogue hall indicating that refugees had lived there during the siege. A ritual bath (*miqveh*) used by the inhabitants at that time was found near the synagogue.

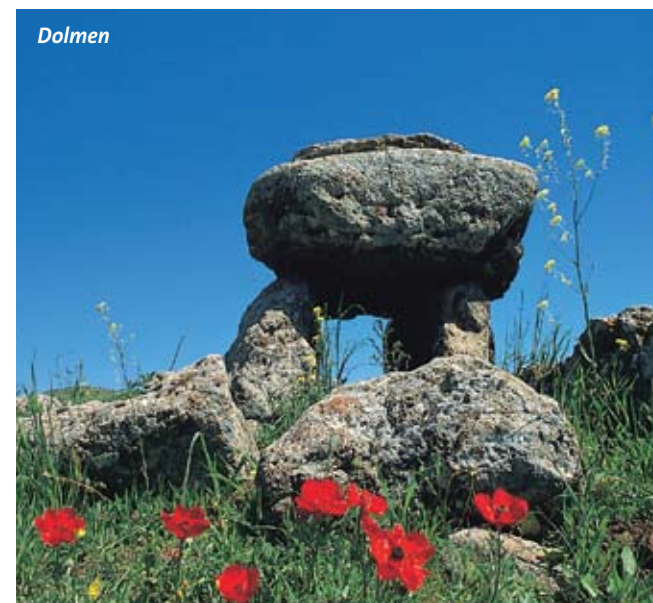
Remnants of luxurious buildings were found on the western side of Gamla, where a wealthy residential neighborhood had apparently been located. Two impressive buildings from this area are noteworthy: an olive-oil press, whose stone ceiling was supported by two great arches that have now been restored, and a large public building whose function is still not clear. There are signs that during the revolt refugees also occupied this building.

An audiovisual presentation on Gamla can be seen at the Golan Heights Archaeological Museum in Katsrin.



Deir Qeruh

The remains of this Byzantine village are located west of the parking lot. Whole buildings remain only in the northeastern corner of the village. The word "Deir," which means monastery, indicates that the village had been Christian. In the village are also remains of a Byzantine monastery dating back 1,500 years, the key structure in which was a church. North of the church is a courtyard paved with stone slabs. The eastern wall of the courtyard bears a Greek inscription: "the god of Gregorius saves and takes pity, amen." The church is unique in that the apse is square instead of round as are the apses of most of the churches found in Israel. However, it resembles churches found in the basalt regions of Jordan and Syria.



Dolmens

Dolmens are 4,000-year-old structures consisting of immense stone slabs laid over two upright slabs. The word "dolmen" means stone table in ancient Breton (*dol* = table and *men* = stone). Approximately 700 dolmens have been found around Gamla. In addition, thousands of larger, more elaborate dolmens can be found elsewhere in the Golan Heights, some of which are covered with rocks. It seems that the dolmens were burial edifices for nomadic tribes that roamed the Golan Heights during the Intermediate Bronze Age.

Safety Instructions for Visitors

The trails in the reserve are famous for their variety of flora and fauna, landscapes, archaeological sites and exciting geological phenomena. The beauty of these wild landscapes often causes visitors to forget basic safety rules instituted for their protection. For your pleasure and safety, please obey the following rules:

Read and follow all signposted instructions. Pedestrians and vehicles are permitted only on marked trails. **"Marked trails" means those marked on the ground with signs and arrows and on maps by the Israel Trails Authority.**

- Do not approach or descend cliffs. Cliff-climbing and rappelling are strictly forbidden.
- Do not throw rocks or any other objects into the canyon so as not to harm nesting raptors or visitors.
- Do not climb the walls or enter buildings marked as out of bounds.
- Wear suitable walking shoes and a head-covering against the sun.
- Do not depend on natural water sources for drinking. Each visitor should carry 3 liters of water.
- Floods and mudslides are a danger in winter, spring and fall. Do not walk in or cross riverbeds when it might rain. Check weather conditions in advance.
- When the weather is very hot or rainy, chose an appropriate trail or cancel your walk altogether.
- Watch out for poisonous snakes and scorpions.
- Avoid unnecessary noise that might disturb animals or chase them away. Do not shout, whistle or play music in the reserve, which could severely disturb nesting raptors.
- Do not light fires in the reserve. Smoking on the trails is forbidden.
- Do not bring dogs or other pets into the reserve. They leave traces that disturb the ecosystem and the wild animals that live here. Pets can be left in spacious enclosures near the office.
- Do not bring food into the reserve. Eating is permitted only in the designated areas in the picnic area.
- Help keep the reserve clean; Take your garbage out with you. Do not bury or burn garbage within the reserve.
- Please report any hazards you notice in the reserve by calling 02-5005444.
- Violators of safety rules and other regulations will be prosecuted.

Please note:

Please feel free to ask the rangers any questions – we will be happy to answer.
Binoculars can be rented at the cashier's office.

Opening hours of the reserve:

Summer: 08:00–17:00

Winter: 08:00–16:00

On Fridays and holiday eves the reserve closes one hour earlier than on weekdays.

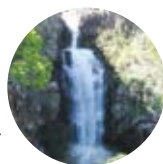
Last entrance: one hour before the above closing times.

Phone: 04-6822282; fax 04-6822285

We hope you enjoy your visit to the Gamla Nature Reserve

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Nearby Sites:



Yehudiya Nature Reserve
⌚ about 20 minutes' drive



Korsi Nature Reserve
⌚ about 20 minutes' drive



Betiha (Magrasa) Nature Reserve
⌚ about 15 minutes' drive