

Guide to the path up to Albir Lighthouse

I'Alfàs del Pi

Guide to the path up to Albir Lighthouse: flora, wildlife, heritage, geology, paleontology and sea habitat





There are places on Earth that cause a strange enchantment that finally ensnares us. Serra Gelada, the only maritime-terrestrial park in the Valencian Community, is one of those prodigious places that manage to seduce those that visit.

Declared a Natural Park in 2005, it is a space of great environmental value, of beauty and complexity that abruptly hangs over the sea on a precipice over 400 meters high. A space with a great diversity of both sea and land ecosystems with the magic, majesty and singularity of a landscape that has made it become the most visited Natural Park in the Valencian Community.

On the north face of Serra Gelada we can find the Albir Lighthouse, built in 1863 (presently converted into an Interpretation Centre) and that you can visit by taking a peaceful walk. An easy, fun and educational route with views over Altea Bay, Peñon de Ifach, Puig Campana and Sierra Bernia. Sea and mountain within

2,5 km and with views of a tremendous beauty.

We are a reference of calmness and serenity, of a healthy destination with cultural, gastronomic and natural resources that appeal to our visitor's values such as authenticity and sustainability, definitively, we are a town with its own identity that deserves to be discovered and enjoyed.

L'Alfàs continues to move forward with firm steps towards being a sustainable and innovative tourist town, an accessible town for everyone, a healthy town that is a reference for all Europe.

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Serra Gelada

Would you like to learn stories and curious facts about Serra Gelada?

With this guide, we will help you enjoy the most outstanding elements of the path up to the l'Albir lighthouse, while you stroll along this spectacular landscape. Along its roughly 2,5 km (1,5 miles) itinerary you can find birds, plants and trees that are adapted to a very unique environment. You can also see the tracks of how, for centuries, women and men have taken advantage of the sierra's natural

resources to obtain food, minerals, esparto grass and medicinal remedies. Its value is so relevant that, since 2005, the mountain and the surrounding marine area is protected by its declaration as Serra Gelada Natural Park, the first maritime-terrestrial natural park in the Valencian Community, and is managed by the autonomous Councillorship for the Environment. A warning! If you leave the path, pick any plant or leave behind any rubbish, the forces of nature will fall upon you.

Enjoy the walk and collaborate actively in protecting this natural area.

FLORA

TREES



Carob (*Ceratonia siliqua*)

Spa. Algarrobo / Val. Garrofer

Description: Tree with perennial leaves that can reach a maximum height of 15 mts (height reached by the tallest carob tree in l'Alfàs del Pi), with an irregular and thick trunk and a flat, generally greyish coloured, bark. Its leaves are made of up to five pairs of elliptic, or almost circular, leaflets of a dark green colour and a clearer tone of green on its underside.

Flower: Small flowers without petals, greenish or reddish colour, that bloom in bunches of branches or trunks. Trees generally of a single sex, some are hermaphrodite.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: Its pod, known as a carob, is long, compact and tender, with a length between 10 and 25 cms. Firstly, it is green, in time turning a brownish red, eventually becoming almost black when it ripens towards the end of spring, beginning of summer. Its interior has 10 to 15 flat, brown seeds that are smooth and hard.

Notes: Carob pods have always been used to feed cattle. Presently, the flour made from these pods is used as a thickening agent in food products and cosmetics.



Aleppo Pine (*Pinus halepensis*)

Spa. Pino Carrasco / Val. Pi blanc

Description: It is the least robust of all iberian pine trees, reaching a maximum height of 20 mts. Its greyish trunk, with age, can crack into brown/reddish tones. Its leaves are a light green colour, shaped as a very fine needle (between 0,5 and 1 mm thick) and come in pairs.

Flower: Male flowers are gathered to form cones at the end of young branches while female flowers are oval and pine shaped

J F M A M J J A S O N D

Fruit: Its fruits are known as pine cones, shaped as an oval cone that inside has small seeds (5 to 7 mm.) known as pine nuts, covered in a membrane many times its size. The pine nuts mature towards the end of summer, starting from the second year of the tree.

Notes: Its a tree closely tied to the history of the town, officially included in its name of l'Alfàs del Pi when independence from Polop was declared in 1836.



Olive (*Olea europaea*)

Spa. Olivo / Val. Olivera

Description: Smaller tree with a round crown and thick trunk that, with age, becomes twisted with a tortured like appearance. On the contrary, the wild variety of the tree (*O. europaea*, var. *sylvestris*) is reduced to small bushes that do not exceed a height of 2 mts, with straight branches that can carry thorns on the lower levels. Its leaves are compact, hard and lanceolate, a greyish green along the sheaf and silvery on the underside.

Flower: Its flowers are small and white, blooming in small bouquets on the leave's axil.

J F M A M J J A S O N D

Fruit: One of the most known fruits around the world, the olive. Since ancient times it has been used to make oil. In latin it is called drupa (tender fruit and with a stone).

Notes: l'Alfàs del Pi has olive trees over 9 mts tall and more than 900 years old. Every part of this tree has been used in many ways, its most popular use is that of obtaining oil from its compressed fruit.



Mediterranean Hackberry (*Celtis australis*)

Spa. Almez / Val. Lledoner

Description: A robust, deciduous leaved tree with a smooth grey or soft white bark that grows to between 12 and 20 mts in height. Wide crown with many branches, lanceolate shaped leaves with a serrated edge and an alternate layout, the more tender leaves have hairs.

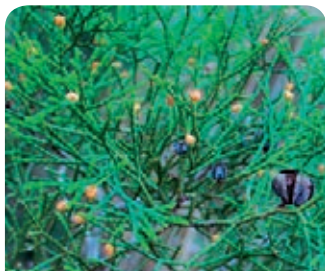
Flower: Flowers are unnoticed due to their small size and a lack of petals and can be hermaphrodite or male. They bloom on the leave's axil.

J F M A M J J A S O N D

Fruit: Known as lidón in Spanish (hackberries in English, just like the tree), it is a tender round drupe with a flat surface, slightly larger than a pea, that is initially green but then turns yellow and almost black when ripe.

Notes: Used a lot in gardening (from where the trees along the path come from), they are ornamental trees because of their beauty and leafiness, as well as fastening slopes and gullies. Also used in making pitchforks and handles for tools used in agriculture. Children have always eaten the fruit and played with the seeds using them as projectiles shot through reeds used as pea shooters.

TREES



Sictus/Araar (*Tetraclinis articulata*)

Spa. Ciprés de Cartagena / Val. Xiprer de quatre valves

Description: A small tree with a small bearing, usually between 3 mts and 5 mts in size although it can reach 20 mts in optimal conditions, with an oval or cone shaped crown. Its trunk is straight, with grey or greyish brown grooved bark. Its leaves are small, reduced to little scales of 1 to 5 mms in length, found in whorls of four.

Flower: Its flowers are called cones and both male and female varieties are present on the same plant.

J F M A M J J A S O N D

Fruit: The fruit is a woodlike cone formed by four triangular scales shaped like a heart with a pointy tip.

Notes: It is an Iberian – African endemic tree that only has natural populations in Murcia. Therefore, the specimens found on the way up to the lighthouse have been introduced as ornamental trees due to their resistance to drought.

SHRUBS



European Fan Palm
(*Chamaerops humilis*)

Spa. Palmito / Val. Margalló

Description: Perennial shrub that usually displays various specimens squatted together although, occasionally, it can be found as a small, individual palm tree that grows to over 4 mts in height when seeking a source of light (on vertical walls in ravines). Its cone shaped trunk is covered in grey fibres and the remains of old leaves that have dried out. The leaves are large and palm shaped, reminding us of a fan, with a leafstalk rimmed with strong thorns.

Flower: It is a dioecious species (individuals with separate sexes) and its flowers appear as inflorescences that spring from the top of the trunk, among the leaves.

J F M A M J J A S O N D

Fruit: Called a date, it is like a berry and measures up to 4 cms in length, with a reddish colour that blackens when ripening.

Notes: It is the only autochthonous palm plant of Europe. Different parts of the plant have their uses: its leaves for making brooms and other tools, its fruits as an astringent agent and its tender sprouts as a valued food source.



Rosemary (*Rosmarinus officinalis*)

Spa. Romero / Val. Romer

Description: A very aromatic perennial shrub with brown, stiff branches that can reach 2 mts in height. With many leaves, straight and almost cylindrical in shape as their edge turns backward, that usually measure between 3 and 4 cms in length and from 1 to 3 mms in width.

Flower: Blooming almost all year long, with flowers that appear in short bouquets, with two well defined lips that feature colours from white to violet, displaying different shades of blue..

J F M A M J J A S O N D

Fruit: Found at the bottom of the calyx, formed by four small, brownish nuts.

Notes: The name of this plant in latin, Rosmarinus, literally means "marine dew" for the fondness it has for coastal areas.

A honey plant par excellence whose honey is highly valued, such that the Valencian saying "mel de romer" is used to underline importance, quality or great value.



Lentisk (*Pistacia lentiscu*)



Black Hawthorn
(*Rhamnus lycioides subsp. lycioides*)



Kermes Oak (*Quercus coccifera*)

Spa. Lentisco / Val. Mata

Description: Generally, it is a 1 to 3 mts tall shrub although, if grown purposely and/or in good conditions, it can become a small tree between 5 to 6 mts in height. Its leaves are alternate, formed by pairing numbers (from 2 to 12) of hard and gleaming opposing folioles that are clearer on the underside.

Flower: Its flowers are small, lacking of petals and are unisexual (separate sexes), appearing at the base of the leaves.

J F M A M J J A S O N D

Fruit: A small and globular drupe with little meat, initially an intense red colour that later on is almost black. They ripen in autumn.

Notes: The plant's resin is used to make dental fillers, chewing its leaves strengthens gums and perfumes a person's breath, or great value.

Spa. Espino negro / Val. Espí negre, Arçot

Description: A thorny shrub of plentiful, greyish branches around 1,5 mts tall. Its green coloured leaves are small, linear and slim that sometimes widen at the tip to form a spatula shape.

Flower: Its flowers are very small, almost always hermaphrodite, either solitary or in small bunches at the end of its branches, with a green-yellowish coloured calyx.

J F M A M J J A S O N D

Fruit: Globular (drupe), initially green that turns black when beginning to ripen in August, with little meat and 2 or 3 seeds.

Notes: The plant's resin is used to make dental fillers, chewing its leaves strengthens gums and perfumes a person's breath, or great value.

Spa. Coscoja / Val. Coscolla

Description: Perennial leaved shrub of a small size (no more than 2 mts) with plenty of intricate branches sprouting from the base that, along with its hard and thorny leaves, make the bush impregnable.

Flower: Unattractive unisexual flowers, female flowers are solitary while male flowers grow in hanging inflorescences on the same plant, which allows for pollination through wind.

J F M A M J J A S O N D

Fruit: Its very sour tasting fruit is an acorn, an elongated "nut" with a hard and lustrous shell that is shielded at its base by a husk (dome or shell like cover).

Notes: In older times, purple colourant was obtained from its oak galls or apples. Presently, aniline colourants have substituted natural colourants.



Cade Juniper
(*Juniperus oxycedrus*)

Spa. Enebro de la miera / Val. Ginebrer

Description: Juniper is a perennial shrub that can become a tree and grow over 4 mts tall. With a thick and upright trunk, its leaves are acicular, forming bunches of three at the same level of the branch (whorl), with two white lines along the sheaf separated by a slimmer green line.

Flower: Dioecious shrub (separate sexes) on which female flowers are mis-

taken for its fruit because of its tender and spherical red appearance while male flowers bloom from the axil of lengthy leaves with scales.

J F M A M J J A S O N D

Fruit: Its fruit has a round shape, initially colour green that when ripe gains brown-reddish (copper) tones with three oval shaped seeds.

SHRUBS



Mediterranean Heath
(*Erica multiflora*)

Spa. Brezo / Val. Petorrera, petorri

Description: Perennial shrub, sturdy, with many stiff branches up to 1,5 to 2 mts tall. Its leaves are very dense and appear in whorls (three or more leaves that sprout from the same apparent node), with a dark green colour that can grow to 14 mm in length.

Flower: Numerous rosy colour flowers in terminal bouquets that form a small bell, from which dark red stamen protrudes.

J F M A M J J A S O N D

Fruit: Dry fruit of small size, shaped like a pod and with no hairs.

Notes: Bees are attracted by its flowers and produce a dark reddish honey with its pollen.



Mediterranean Buckthorn
(*Rhamnus alaternus*)

Spa. Aladierno / Val. Aladern

Description: Small, green all year round, tree or shrub with grey bark. Its leaves come in variable shapes and always alternate with a very leathery and glossy surface, their edges teathed at an angle pointing towards the tip.

Flower: Small unisexual flowers on different stems (there are male and female types) arranged in unattractive bouquets on the leaves' axil.

J F M A M J J A S O N D

Fruit: A spherical red or black drupe between 4 and 6 mms in size, with plenty of meat and three seeds inside.

Notes: Of all the various uses of this plant, one of the most known is the use of its bark to dye wool yellow.



Grey-leaved Cistus
(*Cistus albidus*)

Spa. Estepa / Val. Jara, Estepa blanca

Description: Upright shrub with many branches that can reach a height of a metre and a half. Its leaves are green, oval or elliptic shaped, arranged opposedly and covered in abundant layers of hair, with three main nerves that protrude on the underside.

Flower: Big and attractive flowers between 4 and 6 cms in size, with five wrinkled petals of a beautiful, rosy purple colour.

J F M A M J J A S O N D

Fruit: A oval shaped pod that opens into five valves with a large amount of seeds inside.

Notes: Its leaves have had various medicinal uses against cough or for treating abdominal pain. It was also used as a substitute for tobacco.



Fringed Lavender
(*Lavandula dentata*)

Spa. Cantueso dentado, lavanda / Val. Garlanda

Description: Bush full of ligneous and aromatic branches, with a grey coloured stem and green leaves that have edges shaped by rounded teeth, with an underside covered in small tangled hairs (termed "pubescent" in botany).

Flower: Violet tones inflorescence with 6 to 10 flowers in the shape of

a sprig on top of a stem, separating leaves and featuring a crest of transformed leaves on the tip that are called bracts.

E F M A M J J A S O N D

Fruit: Normally, its inflorescence only produces a small nut shaped fruit.

Notes: It is mainly cultivated as an ornamental plant from where perfume can be obtained.



Common Smilax (*Smilax aspera*)



African Sandalwood
(*Osiris lanceolata*)



Mediterranean Crownvetch
(*Coronilla juncea*)

Spa. Zarzaparilla / Val. Hedra del diable, aritjol

Description: Climber plant with perennial leaves that attaches itself to rocks, trees or other means of support through small needles that cover both its stem as well as its heart shaped leaves.

Flower: Its flowers are whitish and grow in bunches.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: When its fruit ripens in autumn it changes colours, with tones from intense red to dark purple.

Notes: A plant with numerous medicinal uses, its most known being as food. It was used to make a cola flavoured drink that was sold all over the country, rivaling big multinational companies in that sector.

Spa. Bayón / Val. Ginestó valencià

Description: Shrub of up to 3 mts in height with stiff and grooved grey coloured branches. Alternate leaves of 2 cms in size, hard and persistent, shaped like a lanceolate.

Flower: Its flowers are unisexual, small and colour yellow. Male flowers appear on the axil of leaves, female flowers from the end of small branches.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: The ovary transforms into a orange or purple red drupe (berry) with a small stem.

Notes: A plant with many uses, specially in gardening where it helps to preserve soil. As a curiosity, it is a hemiparasitic plant: it inserts its roots into other plants to take advantage of their sap.

Spa. Coronilla / Val. Coroneta

Description: Shrub with green reed-like stems, almost like grass with very long internodes. Small leaves made of two or three folioles (parts of a compound leaf) that are generally shorter than the internodes.

Flower: Yellow flowers that bloom from a same spot and that rise to an equal height by way of a stem. They form the shape of an umbrella, what is known in botany as umbel inflorescences.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: With the shape of a slightly arched, 1 to 5 cm long pod (legume) that is compressed among the seeds.



Wild Asparagus
(*Asparagus acutifolius*)

Spa. Esparraguera silvestre / Val. Esparraguera

Description: Shrub that looks like a climbing vine, densely covered by small flattened branches transformed into acicular, dark green thorns on where the leaves are very small and membranous.

Flower: Small greenish yellow or creamy yellow, hermaphrodite or unisexual flowers.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: Its fruit is a spherical, tender berry, colour dark blue or black, between 4 and 8 mms in size.

Notes: One of the best known plants that produces wild asparagus (they are its tender shoots), a delicacy when consumed as a vegetable.

SHRUBS



Esparto Grass (*Stipa tenacissima*)

Spa. Esparto / Val. Espart, Totxera

Description: Robust grassy plant, perennial with a large aspect, that forms compact bushes that can grow to over a metre and a half tall. It has plenty of leaves, rough to the touch, lineal, lengthy and flexible, that can be over a metre long.

Flower: Hermaphrodite flowers bunched into dense panicles (plumes) at the end of 60 – 70 cm long stalks.

J F M A M J J A S O N D

Fruit: : Dry caryopsis fruit, commonly called grain, that is typical for plants of the Gramineae family (like rice or wheat).

Notes: Since ancient times, this plant that has been used to make all kinds of objects, both for daily use as for agricultural or decorative uses. Along Serra Gelada's coastline, in the part belonging to the town of l'Alfàs del Pi, we can find the Cala de l'Amerador, a cove where cut esparto leaves were soaked in the sea (amerar in Valenciano) so they would soften and be easier to weave with.



Joint Pine (*Ephedra fragilis*)

Spa. Efedra, trompetera / Val. Candellers, trompera

Description: Upright branched plant, its superior branches are a greyish green colour that are articulated by nodes and can easily break. Smaller leaves that fuse together to form a pod, appearing opposite but at the level of the nodes and of no more than 2 mm in size.

Flower: Its flowers are unisexual and gathered in unattractive inflorescences. Male flowers with 4 to 8 pairs of axillar blooms and females with one (or rarely two) terminal flowers.

J F M A M J J A S O N D

Fruit: : Its a berry made of various carpels (leaves that are form the female part of the flower), joined together to make a more or less roundish, red coloured and compact shape.

Notes: Needing very little maintenance, it is commonly used in gardening in coastal and hot places. Used as a medicinal plant as it possess ephedrine, a central stimulant.

OTHER PLANTS



Common Thyme (*Thymus vulgaris*)

Spa. Tomillo / Val. Timonet, Timó

Description: Small, aromatic shrub (up to 50 cms tall), with woody stalks and various reddish or brown twigs. Small wholesome green leaves, lineal or somewhat round, with curled edges towards the underside (revolved margin).

Flower: Almost all year long, specially at the beginning of spring (subspecies *aestivus*) and in summer – autumn (subspecies *vulgaris*). Flowers are bilabial and colour white or pink, gathered together in a more or less globular mass (glomeruli).

J F M A M J J A S O N D

Notes: With multiple uses such as medicinal (as a great disinfectant), food (as a condiment for dressing olives or part of liquor) or as a mosquito repellent when grown next to windows.



Ifac Silene (*Silene hifacensis*)



Sweet Alyssum
(*Lobularia maritima*)



Germander (*Teucrium hifacense*)

Spa. Silene de Ifac / Val. Esclafidora major

Description: Robust plant with a ligneous 20 to 50 cms base, with large lanceolate shaped leaves forming a basal rosette.

Flower: Flowers are bunched into symmetrical inflorescences on opposite branches, with rosy petals and consistently bilobed.

Spa. Mastuerzo marino / Val. Caps blancs

Description: Small bush, perennial and ligneous along its base. Leaves are alternate, wholesome and covered in hairs, which give it a whitish aspect.

Flower: Many small white flowers, bunched into globular inflorescence (glomeruli) that cover the whole plant. It prefers to bloom in winter.

Spa. Teucro de ifac / Val. Polioli amarg de roca

Description: Small sized plant with tall and erect whitish stems, covered by simple and silky hairs, with oval leaves, their edges turned to the underside and a very visible central groove.

Flower: Inflorescence of pilous eryngos at the tip, with rose or cream coloured flowers.

J | F | M | A | M | J | J | A | S | O | N | D

J | F | M | A | M | J | J | A | S | O | N | D

J | F | M | A | M | J | J | A | S | O | N | D

Notes: The low numbers of its wild population and individual plants towards the late 20th century (5 locations with 27 plants left) established their need to be covered by various regulations for their protection, both internationally, nationally and autonomically. In 2008, the first decree for the recovery of a botanical species in the Valencian Community was approved by the Consell in Valencia.

Notes: We will always find it in wet and shady places where there is very little direct sunlight. It is used a lot in gardening for rock gardens or carpeting ground.

Notes: Always linked to fissures and cracks in rocky walls along the path, it is now protected by autonomic regulations.



Anthyllis (*Anthyllis cytisoides*)

Spa. Albada, Albaida / Val. Albaida, botja blanca

Description: A grey plant that can grow up to 90 cms tall, with various branches. Its leaves are elongated, oval shaped and trifoliate (divided into three) among the top branches.

Flower: Yellow flowers in a large inflorescence shaped like a sprig.

J | F | M | A | M | J | J | A | S | O | N | D

Notes: It is an oval shaped and pointy legume with a single seed.



Pale Stonecrop (*Sedum sediforme*)

Spa. Uña de gato / Val. Raimet de pastor

Description: Perennial, succulent grass up to 60 cms tall, with alternate leaves that are tender, spindle shaped, pointy tipped and with a greyish green colour.

Flower: Flowers are a yellowish green colour and appear in an inflorescence at the end of fertile stems.

J | F | M | A | M | J | J | A | S | O | N | D

Notes: Its leaves and tender sprouts have always been pickled with water, salt and vinegar (brine) to be eaten as an aperitif.



Mediterranean False Brome
(*Brachypodium retusum*)

Spa. Lastón / Val. Fenàs

Description: A grassy perennial plant with a ramified rhizome and a grass-like appearance. Its fine leaves spread in right angles to each side of the stem.

Flower: Flowers gather in a florescence similar to a sprig, with 1 to 9 alternate soft brome.

J | F | M | A | M | J | J | A | S | O | N | D

Notes: In abundance along the path, it grows under other plants, both trees and bushes.



Wild Madder (*Rubia peregrina*)

Spa. Carrasquilla / Val. Rogeta, herba raspasa

Description: Perennial climbing plant of cuadrangular stems with short prickles, its leaves are oval or lanceolate.

Flower: Small, yellowish green flowers.

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: Shaped like a dark, almost black, berry.

Observaciones: Along the path we can find it in shady and rocky places. It has been used for medicinal means as a diuretic remedy.



Friar's Cowl (*Arisarum vulgare*)

Spa. Capuchinos / Val. Apagallums

Descripción: Lively grass with a subterranean tuber that develops rhizomes and roots. Leaves with large stems that link them to the stalk (petiole), with a round or hearty shape.

Flower: Inflorescences with an exterior cover shaped like a hood, with between green and brown coloured longitudinal streaks. Its flowers, both male and female, are found on its

inside and sprout from the base of a curved, prominent structure inside the "hood".

J | F | M | A | M | J | J | A | S | O | N | D

Fruit: Frequent along the edges of the path, wherever it is shady and damp.



WILDLIFE

AMPHIBIANS



Natterjack Toad (*Epidalea calamita*)

Spa. Sapo corredor / Val. Gripau corredor

Description: An amphibian, robust animal between 4 and 8 cms in size with a small head and short snout. Its colours are variable with mostly green tones, irregular markings and a clearly visible dorsal stripe.

Activity: All year long although they hide on colder and hotter days.

Notes: Their activity is crepuscular or nocturnal, making them hard to see, although in mating periods (February – May and August – October) they move about during the day.

REPTILES



Ladder Snake
(*Rhinechis scalaris*)

Spa. Culebra de escalera / Val. Serp blanca

Description: A large snake that can reach 140 cms long. Yellowish, dark brown in colour and two characteristic dark stripes that go down its back.

Activity: Almost all year long as it tends to hibernate during the colder months of the year.

Notes: In spite of daytime activity it can also be active at night. Along the path to the lighthouse they have been seen close to the access down to the ochre mines.



Southern Smooth Snake
(*Coronella girondica*)

Spa. Culebra lisa meridional / Val. Serp lliisa meridional

Description: A small snake that barely grows to 75 cms long. Its slim and long body has a greyish or brown colour with small, darker transversal crossing bars. On its head it displays a distinctive black mask.

Activity: Depending on temperature, it can be active in winter.

Notes: With crepuscular activity, on cold days various specimens have been seen along the path down to the ochre mines.



Moorish Wall Gecko
(*Tarentola mauritanica*)

Spa. Salamanguesa común / Val. Adragó

Description: Reptile of the gecko family, its flattened body presents a back covered by very small granular scales. It has four legs with five fingers each that are spaced out distally, and big eyes with vertical pupils.

Activity: Inactive during the colder months.

Notes: A well known species for living in walls at home, where we can easily see them hunting insects on summer nights.



Algerian Psammmodromus
(*Psammmodromus algirus*)

Spa. Lagartija colilarga / Val. Sargantana cuallarga

Description: Reaching 30 cms long of which two thirds are its tail. Easily identifiable by the two white or yellowish streaks visible along the length of its brown coloured body.

Activity: It depends on ambient temperature but is mostly seen in summer.

Notes: It is the most common lizard of the peninsula and relatively easy to see along the path, in clearings among the plants.

BIRDS



Peregrine Falcon
(*Falco peregrinus*)

Spa. Halcón peregrino / Val. Falcó pelegrí

Description: Medium size bird of prey (38 to 51 cms in length) with a firm appearance, coloured slate grey on the back and clearer on the underpart with a fine, horizontal bar. Its head has a short but powerful beak and moustache like shades on its cheeks.

Status: Resident.

Notes: This bird is known as the fastest animal on Earth, diving at a speed over 300 kms/h. It is mostly seen near the lighthouse.



European Shag
(*Phalacrocorax aristotelis*)

Spa. Cormorán moñudo / Val. Corb marí emplomallat

Description: A medium to big seabird with a slim body and long neck, a dark toned colour with glimmering green highlights. During its breeding season (November to May) adults can present a plumed crest from where it gets its name in Spanish.

Status: Resident. Its population grows in summer with the arrival of more birds from the Balearic Islands.

Notes: From the path to the lighthouse, we can see them swimming in the coves or perched on any rock.



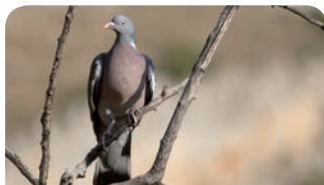
Yellow Legged Gull
(*Larus michahellis*)

Spa. Gaviota patiamarilla / Val. Gavi-not de potes grogues

Descripción: With the typical morphology of a seagull, a white head, neck and underpart and a grey back. The most distinguishable characteristic are its yellow coloured legs and beak. A big bird, up to 58 cms long and with a 140 cms wingspan.

Status: Resident.

Notes: We can see it all along the path, specially flying over the lighthouse. With a varied and opportunistic diet, it has been seen looking for scraps in the dustbins along the path.



Common Woodpigeon
(*Columba palumbus*)

Spa. Paloma torcaz / Val. Tudó

Descripción: This large, robust pigeon has a slate grey coloured body and a prominent rosy toned chest, with visible white stains on its wings and neck.

Status: Resident.

Notes: It is easy to see at the foot of the path, close to the pines trees, and has no trouble in living among the gardens of the houses close to the natural park.



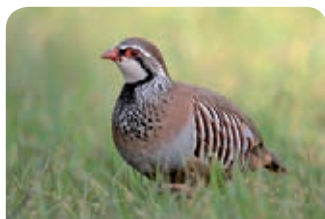
European Robin (*Erithacus rubecula*)

Spa. Petirrojo / Val. Reiet, pit roig

Descripción: A small, pudgy bird with an attractive, orange spot that extends along the feathers on its chest, throat and face. Males are indistinguishable from females.

Status: Migrants and over wintering in Spain.

Notes: We can see them moving among the vegetation between the park's entrance and up to the tunnel. They're harder to see pass the tunnel.



Red Legged Partridge (*Alectoris rufa*)

Spa. Perdiz roja / Val. Perdiu

Descripción: Short and podgy, medium sized bird. Its beak, eye ring and legs are red, with a white throat and prominent streaks of various colours located along its flanks. It has an orange belly, and brown and grey body.

Status: Resident.

Notes: Easy to see along the path as it can't be hunted in that area. Therefore, it is more tolerant with humans and can be closely approached.



Collared Dove (*Streptopelia decaocto*)

Spa. Tórtola turca / Val. Tortola aco-llarà, tótola

Descripción: Medium sized bird whose body is, almost completely, a pale cream colour, with white tail feathers that are black at the base below. Its name refers to the black stripe that can be seen around its neck.

Status: Resident.

Notes: Originally from Asia and the Middle East, it reached the peninsula during the sixties. Nowadays, it is a common species in both urban and rural environments, and can be found in parks and gardens close to Serra Gelada.



Common Blackbird (*Turdus merula*)

Spa. Mirlo común / Val. Merla

Descripción: A medium sized bird, males are fully black with an orange or yellow beak and eye ring while females are dark brown, with a yellowish or brownish grey beak.

Status: Resident.

Notes: A frequent bird that can be seen anywhere, it is easily spotted close to the entrance to the path and the picnic area.



Black Wheatear
(*Oenanthe leucura*)

Spa. Collalba negra / Val. Rabiblanç

Description: 18 cm long bird, unmistakable for its completely black (males) or dark brown (females) plumage, except for its rump and tail that are white.

Status: Resident.

Notes: We can only see it in the sunny and rocky areas of the path, such as cliffs or rocky precipices close to the lighthouse.



Great Tit (*Parus major*)

Spa. Carbonero común / Val. Capellà, totestiu

Description: Easily recognizable by the yellow plumage on the underpart of its body with a black stripe that reaches its head with white cheeks. Its wings and tail are blueish grey and its back has tones of green.

Status: Resident.

Notes: A common species found in all areas where there are trees, including parks, gardens and crops, thus it is easily spotted at the entrance and picnic area of the path.



Common Raven (*Corvus corax*)

Spa. Cuervo grande / Val. Corb carnisser

Description: A great, passerine bird that can grow to 67 cm in size. Its plumage is completely black with some gleaming highlights, its anatomy displays a powerful beak.

Status: Resident.

Notes: A pair of these birds nests along the rocky precipices of the path, getting to feed from the food left in rubbish bins.



Sardinian Warbler
(*Sylvia melanocephala*)

Spa. Curruca cabecinegra / Val. Xenot capnegre

Description: A grey, small bird with a black head in the case of males, dark grey in the case of females. If we look at it up close, we can see their intense red coloured eye ring.

Status: Resident.

Notes: Although we can find it all along the path, warblers are hard to see as they like to sing hidden among the bushes.



Long Tailed Tit (*Aegiphthalos caudatus*)

Spa. Mito / Val. Senyoreta

Description: Small, insect eating bird that looks like a ball of feathers, with a long, distinguishable tail (7 to 9 cm) that can be longer than its body; its back is brown or black in contrast with its red chest and has a remarkable, clear band on its head.

Status: Resident.

Notes: Although it can be seen in the pine trees close to the path all year long, it can be easily seen in winter when it moves around in familiar, bustling flocks.



European Serin (*Serinus serinus*)

Spa. Serín verdicillo / Val. Gafarronet

Description: A small bird with tones of yellow and green, a short beak and "V" shaped tail at its end. Males, when in heat, gain an intense, yellow plumage on their forehead, chest and throat.

Status: Resident.

Notes: Its reproductive season in Serra Gelada starts in winter, therefore, in late September, it is not hard to find males singing in the trees along the path.

MAMMALS

Guide to the path up to l'Albir Lighthouse



House Sparrow (*Passer domesticus*)

Spa. Gorrión común / Val. Teuladí

Description: A small bird with a grey and browned toned plumage, males have a black chest and beak, and a grey "beret", especially during their breeding season.

Status: Resident.

Notes: It has become one of the most known birds after having coexisted with humans for centuries. It can be regularly seen in the path's picnic area, eating from the food left behind by visitors.



European Rabbit
(*Oryctolagus cuniculus*)

Spa. Conejo común / Val. Conill

Description: Known worldwide, a rabbit is a medium size mammal with long ears and soft, greyish brown coloured fur and a very short white tail.

Activity: Mainly active at sunrise and sunset.

Notes: Although there aren't that many rabbits along the path to the lighthouse, you might get to see one around the old terraces or flattened areas where there are rocks.



Red Squirrel (*Sciurus vulgaris*)

Spa. Ardilla roja / Val. Esquirol

Description: With a unique appearance, short snout, slim body and long bushy tail. Its colours are reddish brown with a white underbody. In winter they have plumes of hair on the tips of their ears.

Activity: Active all day. Squirrels close to the coast don't tend to hibernate.

Notes: Having appeared recently in Serra Gelada, they probably came down from the mountain areas of the province where it is believed someone let them loose at the beginning of the 21st century.



European Greenfinch (*Chloris chloris*)

Spa. Vederón / Val. Verderol

Description: A small, sized bird with a stocky appearance, a big head and wide and strong beak. The female's plumage is pale green and brown while the male's body is mostly emerald green.

Activity: Resident.

Notes: Abundant in all wooded areas, it is frequently seen perched on phone and power lines close to the path's entrance.



Bottlenose Dolphin (*Turciops truncatus*)

Spa. Delfín mular / Val. Marroc, galfi

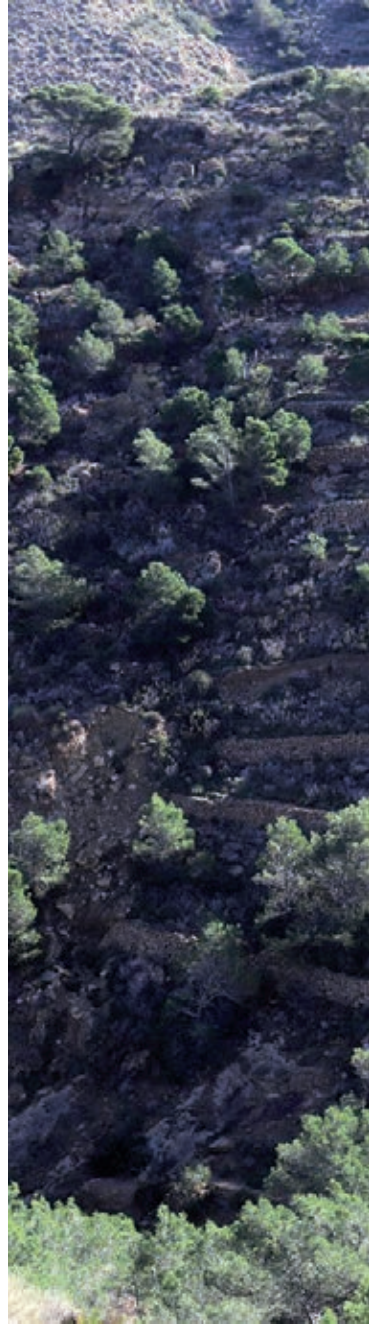
Description: A large sized dolphin, males can be over 3,5 mts long and weigh 600 kgs. Their colours vary but, generally, their dorsal area is covered by different tones of grey while their underbody's tones go from white to rosy colour.

Status: Present all year. Easier to observe in the morning.

Notes: If we are lucky enough to see them, it will be from the lighthouse while they swim along at a certain distance. We will possibly only get to see their dorsal fins although, sometimes, they jump out of the water.

CULTURAL HERITAGE

TERRACES



AGRICULTURE FOR SURVIVAL

The Mediterranean coast is an impoverished area for agriculture due to the lack of water, therefore any available land was used for farming, even Serra Gelada. The mountainside was terraced into flat surfaces of land by building simple walls made of piled rocks. This building method is called dry stone. If you notice, along the path you can see remains of the terraces with the old crops of almonds, carobs and *figues cametes*, a local variety of fig tree.

The pine trees that cover Serra Gelada were mostly planted during the 40s and 50s as part of a national plan to reforest. In those days most terraces along the sierra were abandoned due to their scarce productivity.

We have wanted to recover traditional crops in the area around the water tank, for that we have restored some stone walls and have planted almond trees, figues cametes and carob trees.

In 2018, UNESCO included the art of "dry stone wall building" in its Representative List of the Intangible Cultural Heritage of Humanity as these elements are part of rural landscapes since prehistory. These walls help to prevent soil erosion and landslides. Also, the dry stone building method is an example of integration between human activities and the natural world.



THE COLOURS OF THE MOUNTAIN

Ochre is a mixture of clay with iron oxides or hydroxides that has been used as a dye in many different ways since prehistoric times: to decorate ceramic, walls and even bodies in funeral rites. Its traditional name is *almagra* (red soil in Arabic) and, until recent years, was used to paint socles in houses.

The ruins that you are seeing in the gully are part of a small ochre mine that was running until the 19th century. In spite of its abandoned state of preservation, its distribution channels and foreman's shack are still standing. Wagons loaded with ochre would descend along the line of columns from the mine's entrance down to the shoreline. Once at the coast, the mineral would be transported by barges to a ship anchored in the bay that would then take it to Dénia port.

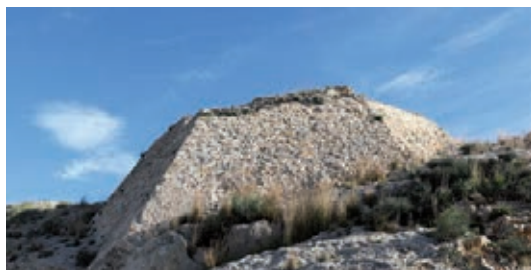
In the Cala del ti Ximo cove, on the further southern end of Serra Gelada, there was another mine like this one but that extracted limonite, a mineral similar to ochre but colour yellow. You can find other ochre mines like the one in l'Albir scattered among other towns of the province such as Aspe, Mutxamel and San Vicente del Raspeig.

These mining operations were licensed by the central government. A few businessmen obtained mining licenses and would employ foremen locally from the towns. L'Albir's ochre mine was run by Esperanza Devesa in the late 19th century. She was the forewoman while her husband, Miguel Soler, emigrated to Algeria for work. The descendants of Esperanza and Miguel still use the nickname *de la mina*.





Virtual reconstruction of the Bombarda tower. Patrimonio virtual (Alicante University)



THE SEA'S DEFENCE

In Modern Times, pirates would terrorize the towns along the Mediterranean coast. Their constant attacks made King Philip II build a system of coastal defenses based on watchtowers, outposts overlooking strategic locations from which to raise the alarm upon the arrival of enemies. If you take a route along the present day N-332 main road, you can observe these towers located upon mountainous elevations, marking the whole coast.

The Bombarda tower was built in the mid 16th century on the far north face of Serra Gelada. This same location was used 300 years later to build the lighthouse. In fact, the manual written on building lighthouses in the 19th century recommended using these old watchtower locations for building lighthouses thanks to their strategic emplacements. Santa Pola's lighthouse was also built next to an old, previous watchtower.

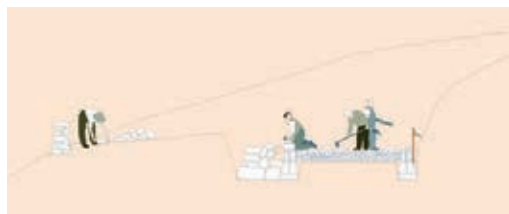
The tower you are visiting gets its name from a piece of artillery, the bombard. It's a firearm similar to a cannon but smaller. Presently, only the base of the tower is preserved as it was destroyed by cannonfire during the Peninsular War (1808 – 1814). In 2012, an archaeological exploration of its interior revealed that the superior part had been cylindrical. To enter this structure, soldiers would climb a wooden ladder that could be removed in case of attack, leaving enemies without access.

This watchtower looked over Altea's bay while its companion, the Caletes tower located on the extreme southern face of Serra Gelada, would look over Benidorm's bay. The three soldiers in charge of the Bombarda tower had to watch over Altea's bay, from the Peñon de Ifach rock up to Serra Gelada, while defending Albir beach. If they saw any enemy ship, first they would light a bonfire or beacon for every ship they saw, that way warning Altea's castle. After, two guards would approach the nearest towers to warn about the presence of enemies.

NECESSITY IS THE MOTHER OF INVENTION

Aljibes are subterranean water tanks that are used to store rainwater. These structures have been located all along the Mediterranean coast since prehistory.

The almost inexistence of rivers, the droughts and irregular periods of rain forced the designs for systems that could guarantee the harvest of water for human and industrial consumption: aqueducts, watermills, irrigation canals, washing sites, ice stores and dams are all part of the rich hydraulic heritage of our lands.

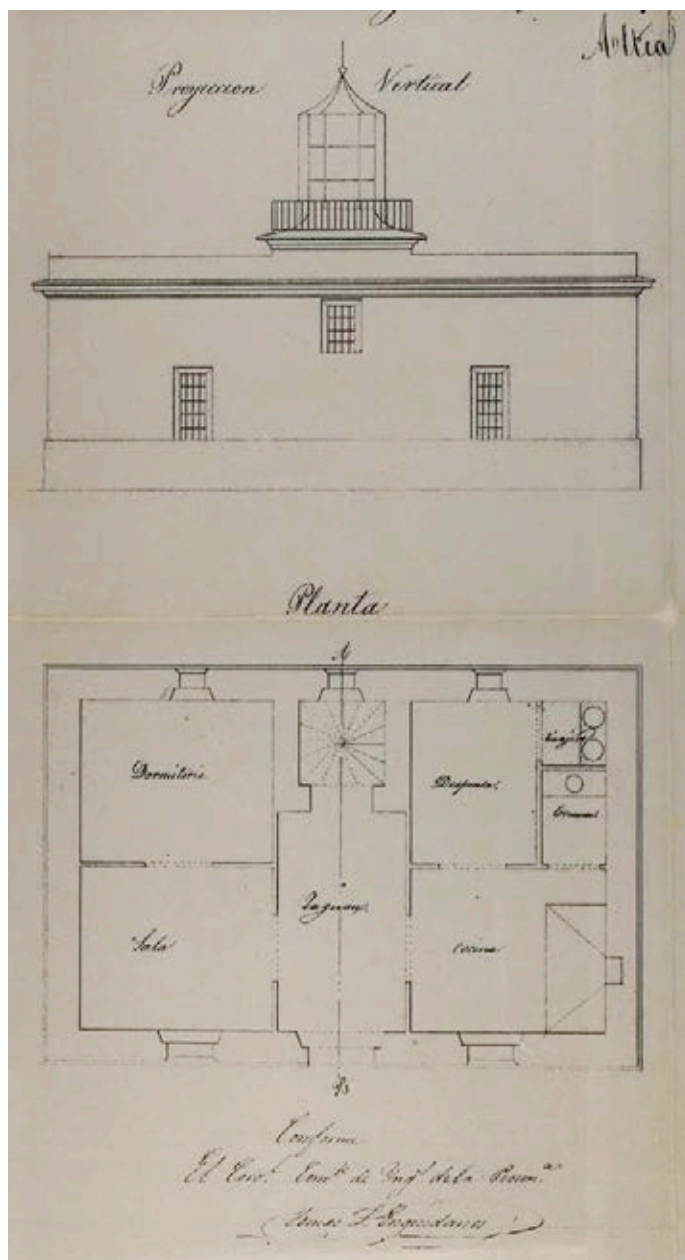


This aljibe is a good example of the need to collect water in dry environments: it is built at the end of a ravine so as to collect the maximum amount of water when it rains. Its capacity is of 58.000 litres and its interior is cover with a layer of mortar to avoid loss of water.

The tank was probably built for the soldiers inside the Bombarda tower sometime in the 16th century when, afterwards, the lighthouse keepers reused it and placed the parapet, the small structure from where buckets can be pulled up. The water from this tank was use for drinking and watering a small plot of land that the lighthouse's residents kept nearby.

Recreation of the aljibe's construction. Santiago Noain (end of year work for the specialization course in Heritage Virtualization at the University of Alicante)





THE SEA'S LIGHTS

L'Albir Lighthouse was first lit on the 30th April, 1863. The expansion of maritime commerce made necessary a precise marking of the coastline, therefore most Spanish lighthouses were built in this period following a national plan for maritime lighting in 1847.

The house is located 112 mts above sea level, on top of Punta Bombarda. It's purpose is to mark the extreme northern tip of the sierra and to guide the many ships that sail through Altea's bay, where there is an important fishing port. The lighthouse is still working and its management belongs to the port authority in Alicante.

Initially, the lamp would light up with olive oil. In time, other fuels were used until solar energy panels were installed in 1984, making its light visible 17.2 miles away.

Blueprint by the engineer Antonio Molina for the building project of l'Albir's lighthouse. 1855. Alicante Port Authority Archive.



Isabel Martínez and her husband, the lighthouse keeper Bernat Agulló, by the cliffs of Serra Gelada. Decade of the 1930s.



Workers building the path to the lighthouse, 1961

L'Albir lighthouse was one of the most isolated buildings in Alicante province. This is why the lighthouse keepers and their families lived in harsh conditions. The building was designed for two keepers, one in charge and his second in command, but generally there was only one technician residing. The job was to guarantee that the light was working, maintain the building, make reports on the weather and keep updated the registry books. The wives of the lighthouse keepers used to help in these chores aside from carrying out household activities, even though their work was never acknowledged.

The path to access the lighthouse you are walking upon was built in 1963 when there was no longer a permanent staff of technicians. The original path was very narrow and steep and, when it rained, was impassable. For this reason, some keepers had a small boat to sail along the coast. The paving of the path was a constant demand but was never achieved while the keepers and their families were living there.

Although the Spanish Corp of Lighthouse Keepers is already gone, the last keepers are still working, now called maritime signal technicians. They lived in l'Albir's lighthouse until 1960, when they were made redundant and were sent to Cabo de las Huertas in Alicante. The building then fell into a serious state of disrepair until 2011 when l'Alfàs del Pi Town Hall restored the lighthouse and opened it to the public as the Albir Lighthouse Interpretation Center. Today, it is the only lighthouse in the Valencian Community that can be visited.

If you want more information, visit the Albir Lighthouse Interpretation Center. You can also visit our youtube channel Ciplalfas and watch the documentary "El Faro de Punta Albir (1863-2013)" produced in 2013 on occasion of its 150th anniversary: <https://www.youtube.com/watch?v=MbRRDbvBg3M>



Antonio Hurtado, the last keeper that lived in Albir lighthouse. Decade of the 1950s.

MILLIONS OF YEARS LOOKING AT THE SEA

The pine forest that spreads up the sierra towards the skies, sinks its roots into the millions of years old stratum and rocks. The remains of organisms that lived in the past were trapped in the sediments of ancient seas, located hundreds of kilometres from here, creating fossils and rocks that we can see throughout the landscape today.

The ancient seabeds of Serra Gelada are preserved in stratum that slope towards dry land. As the path that climbs to l'Albir lighthouse is less inclined than the sierra's stratum, these are cut off along the way, allowing us to discover and understand the sea floors, comparing them with those today.

The Early Cretaceous period is an important part of the sierra. Forms from that period of time, between 145 and 100 million years ago, impose themselves upon us when observed from the sea but can also be seen in detail along the different landslides by the path.

GEOLOGY AND PALEONTOLOGY



Fossilized Noble Pen Shell

Another fundamental part of the path is limestone rock. This sedimentary rock was formed along the sea floor thanks to the “collaboration” of different organisms that made their skeletons from the calcium carbonate present in sea water: bivalves, gasteropods, corals and even other types of unicellular organisms such as protozoans and bacteria.

Take advantage of the higher parts of the sierra to read the landscape and think of the enormous forces (and time), from far off and submerged places, necessary to lift the massive mass of rock before us today.

Did you know that...? In the stratum of Serra Gelada, a new fossil has been found (*Ereipichnus geladensis*), of great importance for understanding the lifestyle and sedimentary environment of the seabed in the past. Please, help us preserve this heritage.

MARINE ENVIRONNEMENT

A vibrant underwater photograph showing a large, bright orange starfish resting on a rocky seabed covered in green algae and purple coral. A yellow and red striped fish swims in the upper right, while a smaller striped fish is visible on the left. The background is a clear blue sky.

MARINE ENVIRONMENT

It is impossible to separate Serra Gelada from the Mediterranean Sea for the sierra, as we know it today, has been molded mostly by the sea, specially the cliff face of Serra Gelada.

The existing, close relationship between land and sea can be seen in the wildlife and flora present in the sierra, where many of the wild species that can be observed here depend on the sea for survival while some of the plants also present in Serra Gelada are there thanks to their proximity to the water.

Submerged habitats

Marine erosion has been wearing away the relief, producing landslides of rock into the sea. This irregular appearance of the seabed allows for the presence of a great diversity of biological formations: scientifically, a total of 25 biological marine communities have been established along the coast of Serra Gelada.

The most outstanding biological community settled along the coast between Albir Beach and the lighthouse is the *Biocoenosis of Posidonia oceanica meadows*. The posidonia is a submarine, phanerogam plant (a plant with flowers) known locally as *alguers*. It is similar to a terrestrial plant, with a subterranean stem shaped like a rhizome from where roots and leaves grow, reaching up to one metre in length.

From l'Albir to the Algar River, the posidonia covers most of the seabed at a depth of around 15 to 25 metres, forming large meadows that are the most stable and settled biological community in the Mediterranean Sea. These meadows protect the coastline from erosion and are home to an enormous number of organisms that find food and shelter for their offspring in this habitat.

Living in these meadows, we can also find the Nacra (*Pinna nobilis*), a mollusc that is endangered. In 2018, the Spanish government created a work group to try and avoid its extinction while declaring this species to be *critically endangered*.

The meadows of posidonia are the best *bioindicators* for the quality of our coastal seawater.



Our relationship with the sea

Along the path to the lighthouse there are many place names that tell us of fishing activities that have traditionally thrived with the biological diversity of these waters.

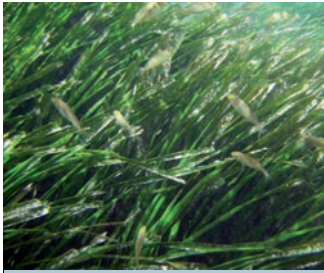
Just passing the tunnel along the way, we can find a small point called *Punta de l'Esparralló*, a place name that tells us, in Valenciano, that this was a good spot to fish for this species (*Diplodus annularis*), called raspallón in Spanish and seabream in English. A few metres on we can find the *Morro de la Llissera* that gets its name from a fishing technique that was used from this point.

With the passing of time, fishing activities have been updated, adding motors to boats, going from using natural fibres like hemp or esparto grass (that was also harvested in Serra Gelada) to using synthetic fibres such as nylon, from making ropes and nets manually to making them industrially.

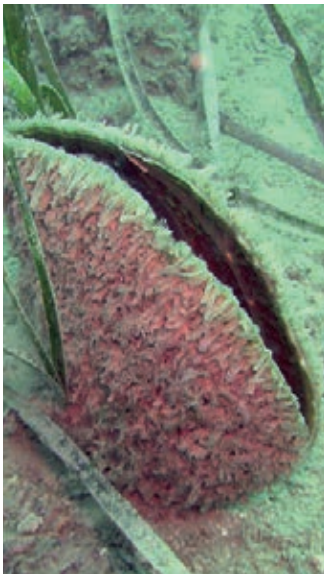
Of the present day fishing fleet moored in Altea, there are only four left that fish just off the coast of Serra Gelada, these are the so called *traditional fishing boats*, fishing with driftnets and octopus traps. Regulations ban trawling along seabeds that are within 1,5 miles of the shore and less than 50 mts in depth with the intention of protecting the meadows of posidonia.

In Altea's bay there are four sport marinas with many recreational fishing boats. This type of fishing has no commercial purpose and has specific regulations that determine which species can be fished and in what quotas. The most commonly used fishing techniques are surface trolling (curricán de superficie) for atlantic bonito (*Sarda sarda*) or mahi-mahi (*Coryphaena hippurus*) and jig fishing used to catch cephalopods such as squid (*Loligo vulgaris*) and cuttlefish (*Sepia sp.*).

These boats rarely drop their anchors unlike other recreational fishing vessels that do drop their anchors along the coast of l'Albir, endangering the meadows of posidonia below. To avoid damaging the posidonia, *environmental buoys* have been installed, mooring buoys tied to the seabed that don't use sunken dead weights.

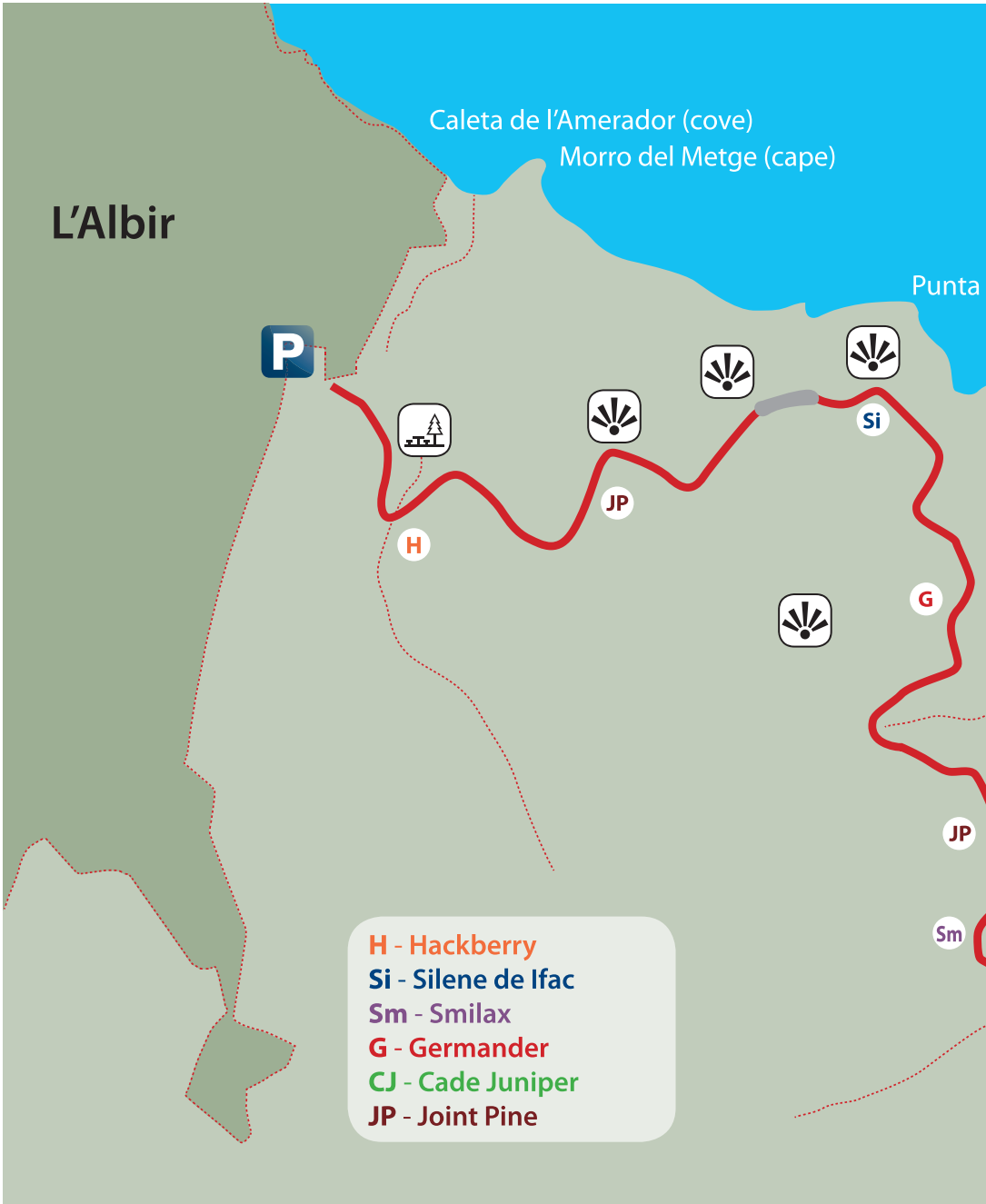


Posidonia oceanica



Noble Pen Shell
(*Pinna nobilis*)

ROUTE MAP

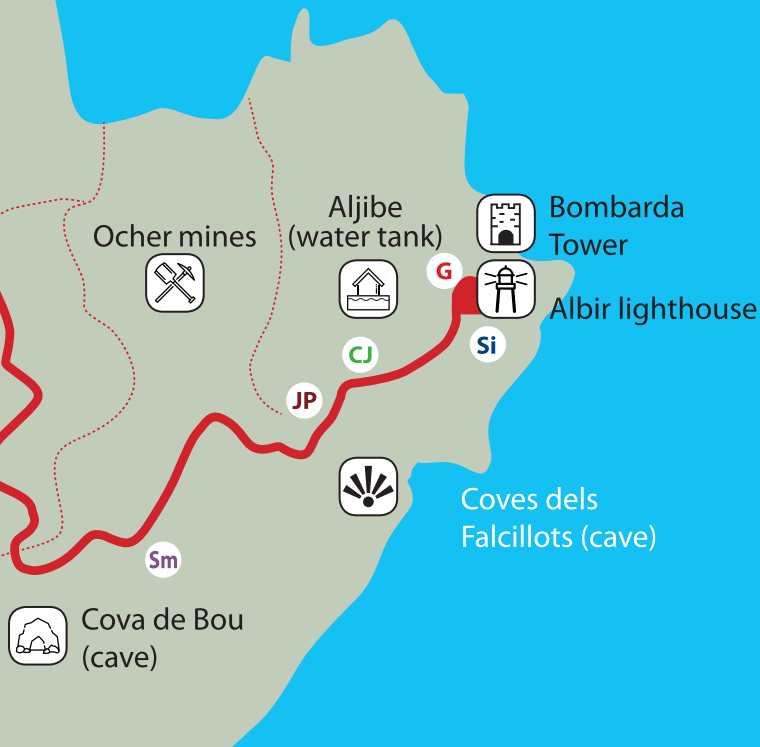


SERRA GELADA NATURAL PARK

de l'Esparralló (point)

Morro de la Llisera (cape)

Barreta de les Mines (barrier)





L'ALFÀS DEL PI
AJUNTAMENT

■ ■ ■ L'ALFÀS DEL PI
TERRITORI SALUDABLE

