



# BEAR-SMART COMMUNITY BEST-PRACTICE MANUAL



The brown bear has featured in human culture since time immemorial, through rituals, myths, legend and folk tales. Humans have pictured bears as gods, heroes, friends, foes, and even devils. Some consider bears dangerous, others a very special animal!

There are some bear species that can be dangerous for humans, for instance the grizzly bear, but this lives in North America! The Marsican brown bear of Abruzzo however is not dangerous if respected and left alone.

Before becoming a protected species, it was the object of ruthless hunting which has led to its near-extinction. Despite this persecution, the cases in which a bear has been cornered or wounded by hunters and then reacted to defend itself, can be counted on the fingers of one hand.

The Marsican bear is a shy animal, but it can occasionally be encountered on our mountains, and the most typical behaviour of the bear in this situation is to flee or stand on its hind legs to gain a better view, and then leave.

False or bluff attacks are extremely rare but possible, these can happen in the case of a close encounter with a female with cubs, where the female, feeling threatened by our presence, would try to scare us away by feigning an attack, but without actually physically injuring anyone.

Seeing the bear is the dream of many! It is a symbol of courage, strength and even affection. Words that appear to be a contradiction, but that are also complementary and perfectly describe this animal. Think of the female bear, maternal and caring of her cubs and at the same time so strong and fearless when needing to protect them from other animals.

The bear is a fascinating and mysterious animal, the incarnation of wilderness. For some, however, the sight of them in inhabited areas or the loss and damage of crops or livestock is not a pleasure. Therefore, we should neither sanctify it, nor demonise it, but we should understand that co-habitation with bears is possible by following few simple rules and adopting the best practices summarised in this short manual.





**Marsican brown bear**

## Who is the Marsican brown bear?

The population of **brown bears of the central Apennines** was classified as a subspecies with the name of *Ursu sarctos marsicanus* by Giuseppe Altobello in 1921. He was a naturalist and native of the Molise region.

Male Marsican bears usually reach a body weight of between 130 and 200 kg, and a height of 180-190 metres when standing up, while the females are smaller and rarely exceed 120 kg.

The average life span of the Marsican bear is 20 years and it is the largest Italian carnivore. Despite being taxonomically in the order *Carnivora* it is in fact an omnivore, and its diet includes over 80% fruit (acorns, beechnuts, berries, apples and pears), and herbaceous plants, which the animals incorporate with insects and meat. This is primarily obtained from carcasses of ungulates (red deer, roe deer and boars) that have been predated upon by wolves or died from other causes.

The habitat types occupied by the bears vary depending on the season. In spring the bears tend to frequent woodland areas intermixed with open pastures at a lower elevation (where they feed on herbaceous plants and ants); in summer they mostly frequent the alpine meadows at a higher elevation (where they feed on berries); in autumn they are found in woodland areas at a lower elevation and also in the valleys (feeding on beechnuts, acorns, apples and pears).

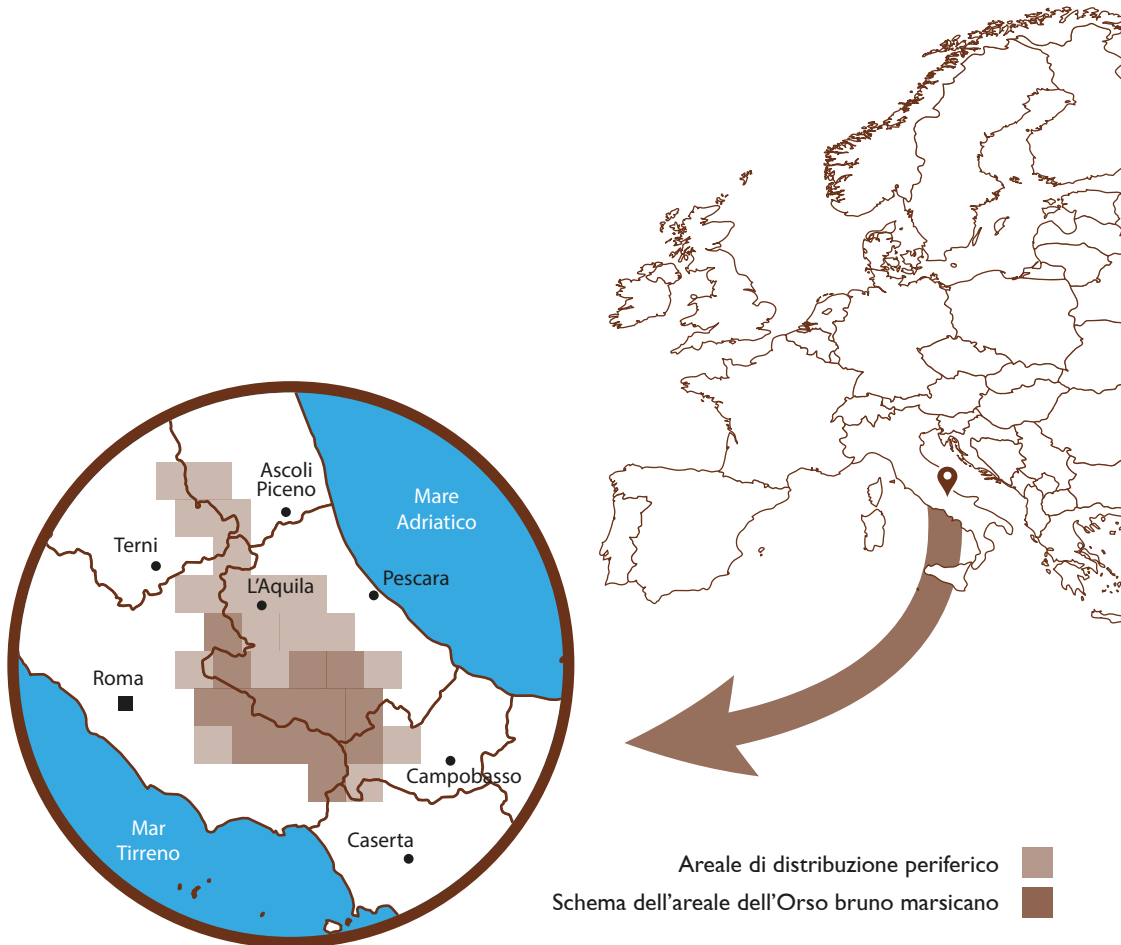
The mating season starts in spring. During summer and autumn, the animals feed intensively (a behaviour termed hyperphagia), to accumulate the fat necessary to overwinter in hibernation. In the case of mature females, the animals have to store extra fat to increase the chances of a successful pregnancy in the following season.

During hibernation, which can last up to 5 months, the bears do not normally feed themselves and choose a den in inaccessible and quiet locations. However, especially during bumper crops of beechnuts, the bears can interrupt their “sleep” and make short excursions to forage and take advantage of the large availability of food during winter.

In the den, between January and February, the females give birth to between 1 and 3 cubs, which will weigh between 200 and 500 grams. The high calorie content of the female’s milk allows for a rapid growth of the cubs, who start

to feed autonomously in spring, despite this, weaning does not occur until Autumn. The cubs remain with the mother for one and a half years, until their second spring. The females normally reproduce every 3-4 years and sexual maturity of the female begins at 4-5 years old.

The Marsican brown bear can only be found in a restricted area of the Central Apennines, and there are no more than 60 individuals. It is therefore classified as “**Critically Endangered**” by the International Union for Conservation of Nature (IUCN). For these reasons it is protected by Italian and European legislation. The primary factors threatening Marsican bears are human-induced mortality, habitat loss, infectious diseases transmitted by domestic animals, deaths on roads and railways, and of course the reduced population size which can cause inbreeding depression, leading to lower fertility and higher vulnerability to disease.



Seeing bears or signs of their presence in our mountains is certainly a special event. However, it is important to be prepared for encounters by following simple rules. This will avoid turning a special occasion into a stressful or dangerous situation for both the animal and the observer.

## Signs of presence

When walking in our mountains it might be possible to find signs of bear presence such as excrement, tufts of hair, tracks in mud or snow, and scratches on tree trunks.

You must not follow the tracks, to avoid "stalking" the animal, thereby creating disturbance and fright. If you find bear or any other animal droppings, never remove them. It is also important not to touch them because they can contain spores or bacteria harmful to our body. Tufts of hair, which can be found on barbed wire fences or tree trunks and shrubs, should also not be touched.







It is instead much more important and interesting, if at all possible, to take photographs of any evidence and to obtain information on which areas are frequented by the bears and how many there are. To understand the size of the bear we need to know the distance between the footprints, therefore, it is useful to place a ruler or an object of a known size in the photo next to the footprints, for calculation purposes.

In these instances, it is also useful to report them to the staff of the Parks, Reserves and the Carabinieri Forestali (contacts below), including, if possible, GPS coordinates (easy to calculate with a smartphone). Reports can also be submitted for our attention and we will forward them to the relevant authorities.

## Direct encounters

The Marsican brown bear is extremely wary of human presence and generally avoids confrontation; however, it is still a wild animal and if threatened, will react accordingly, especially if it is a female with cubs, wounded, disturbed, feeding or even a trapped animal.

In the case of a bear encounter, you must keep calm and have a respectful attitude, refraining from sudden movements, making loud noises or screaming, as this may prompt the bear to feel threatened and it may react aggressively.

-  In case the animal is unaware of your presence and is at a distance of more than 100 metres away, you can continue to enjoy observing by keeping still and silent.
-  In case of a sighting of less than 100 metres, if the bear is not aware of your presence, it is advisable to walk back calmly and discreetly so as not to disturb the animal. If the bear is aware of your presence, it may rise on its hind legs to see and smell better in your direction – it is not a threatening gesture, but merely curiosity – after which it should walk away. If this does not happen, it is recommended that you slowly walk back or divert away from the trail without rushing, observing the bear at a distance, but avoid staring at the bear so that it does not feel threatened.
-  If you encounter a bear at a very close distance, always remember to remain calm, make it aware of your presence by gently moving your arms. Speak out in a calm voice. If you hold a rucksack or something similar, lay it on the ground to divert the bear's attention away from you and walk back without rushing or any sudden movements. To avoid close encounters with a bear, you have to make it aware of your presence while you walk, gently rustling leaves and branches and speaking in a calm and regular voice – it does not matter what you say, but the sound of your voice will be sufficient.
-  Never approach the bear at less than 50 metres, just in case the bear is wounded or in difficulty. In this situation, call the authorities in charge. Contrary behaviours, such as those that often occur in urban centres with "confident" bears, when they are surrounded by a shouting crowd that approaches to admire and photograph them, subjects the animals to high levels of stress and represents an element of risk for people. In fact, any bear, feeling "chased", can potentially attack a crowd in self defence or just to escape.

**How to behave if you meet a Marsican brown bear?**



In close proximity to bear cubs, even apparently without the adult bear, it is recommended that you walk away immediately and report their location to the relevant authorities. To approach the cubs may prompt a defence reaction from the mother. Always walk away from bears feeding on a carcass.



In case the bear intentionally comes towards you growling, it is likely that it is a bear which feels threatened by your presence or behaviour - a female with cubs, a bear close to a carcass or a bear pursued by your dog. In these situations, usually the bears do not attack, but they may pretend to (threatening behaviour). You have to use the same countenance as above: keep calm, speak in a calm voice, try to divert its attention by slow movements, dropping an object to distract it and walk away without rushing. If all this does not work, it is recommended to crouch on the ground in a foetal position. The bear will realise that you are submissive and not threatening, and should leave you alone.



In the case of a bear encounter while in your vehicle, it is important to stop the car, and lower the headlight beams, so as not to frighten the bear, and let the bear leave the area of its own accord. Never follow the bear with your vehicle or on foot, which could prompt the animal to run away and put the animal, yourselves and oncoming vehicles in danger.



It is good practice when driving in the mountains where wildlife frequently crosses the roads, to maintain a maximum speed of 50 km/h as animals are unpredictable and can suddenly run into the road leaving no time to avoid them.







## What is a Bear-smart community?

The **Bear-smart community** project encourages cooperation between local communities, businesses, and individuals to prevent conflict between bears and humans by removing any potential source of bears being attracted to urban areas. It promotes simple but effective solutions to avoid unnecessary situations caused either by the bears or to them.

In central Italy, the few remaining Marsican bears are forced to live in territories which, while suitable and mostly protected, are characterised by a strong human presence. Preventing the conflict between humans and bears is therefore fundamental to rescue this subspecies from the brink of extinction.

## Where?

The best practice explained in this manual, are good for all communities in the areas of habitual presence of the species, such as the mountains of the Abruzzo, Lazio and Molise National Park and of the External Protection Zone, or in those suitable territories where the Marsican bear needs to expand in order to survive. Areas such as the Majella-Morrone, Sirente-Velino, Gran Sasso and Monti della Laga, Sibillini, Ernici-Simbruini and Matese massifs. Equally important, therefore, are the **natural connection corridors** between protected areas, favoured for the movement of Marsican bears.

## Why?

Since 1970, 124 bears were found dead and nearly 80% of these deaths were the result of human-induced causes, either directly or indirectly.

In July 2013, a male Marsican brown bear called Stefano was found dead on Monte Marrone, in the Molise Mainarde. The necropsy pathologists highlighted the presence of bullets of various calibres in the body of the unfortunate animal.

In 2014 at least five Marsican bears were roaming around Pettorano sul Gizio and some residents reported damage to beehives, chicken coops and vegetable gardens. The exceptionality of the event was experienced by the population of Pettorano, especially those who suffered damage, with a lot of scaremongering, and it cost the life of a young male, shot dead.

In 2016 another young male died following a collision with a vehicle while crossing the State Road 17 in the Roccaraso territory. The necropsy report revealed a displaced fracture of the left front limb, caused by a bullet from a gun which was fired with the intention of hitting the animal in the heart.

In 2017, a bear was probably killed by a snare in Picinisco. Only few remains of the creature were found in 2018, but more than enough to determine the species.

In 2018, four bears died due to unfortunate human errors: a male died because of a tranquillizer dart, while a mother bear with two cubs were found drowned

in an exposed water reservoir near Villavallelonga.

In 2019 two female bears were killed in road accidents with vehicles along the SS 652 near Rionero Sannitico and the SS 17 near Castel di Sangro respectively. The presence of bears is considered by some to be a direct danger to humans. Irrational fears can cause violent reactions from part of the local human communities. The voluntary killing of a Marsican bear is a criminal offense punishable by prison (article 544 bis of the Criminal Code), as well as being serious danger to this endangered species.

What occurred in these episodes highlights the need to intervene with preventive measures to avoid self-made justice. Conflicts between men and bears are generated by few animals that get used to finding “easy food” in urban areas, for instance unprotected beehives and domestic animal enclosures. These are generally young bears or females with cubs which get closer to inhabited areas to avoid the natural areas occupied by adult male bears. These males can, and do at times kill any cubs which are not their offspring, to induce the females to reproduce, or would kill young males. To co-exist with bears is fundamental to prevent losses to crops and domestic animals, and to inform the population over the right behaviour and practice to maintain in case of a sighting of bear in the surroundings.



## When?

**Immediately**, because there is no time to lose. The damage caused by bears is mainly concentrated between August and October, when the bears need to fatten up to prepare for the winter, but the actions required to avoid “easy food” in urban areas needs to be implemented throughout the year. This will allow the presence of the bear to be felt as a privilege and resource, rather than a problem.

We must be sure that it is not easy for them to find food in the villages to prevent feeding in inhabited areas from becoming a habit. Bears can completely lose their distrust of humans.

**What is a Bear-smart community?**

## How: bear-smart actions

In 2015-2017, following the repeated conflict between rural activities and bears that led to the killing of the Marsican bear in 2014, Salviamo l'Orso, Monte Genzana Alto Gizio Nature Reserve, Dalla Parte dell'Orso and Rewilding Apennines worked to ensure that the communities of Pettorano sul Gizio and Rocca Pia adopted best practices and made themselves carriers of them. The results have been incredibly positive, with a reduction of the damage caused by bears in the two municipalities by 76% in 2015, 98% in 2016 and almost 100% in 2017. This shows the effectiveness of the interventions.

## Bear-proof beehives and livestock farms

It is necessary to protect the beehives and livestock farms with electric fences. **Electrified fences** are a barrier that prevents bears from entering an animal enclosure, a vegetable garden or even accessing beehives. By touching the metal filaments of the fence, the bear receives an electric shock, strong enough to be painful to the bear without harming it. In order for the fence to be effective, it is important that the fear of crossing it is higher motivation than the desire of doing so to reach food.

It is important that the landowner together with the volunteers of the partner associations and the Reserve staff, perform regular checks and reparations to the electrified fences.



**Bee keepers and farmers** in the bear's home range are invited to contact the staff of the National Parks and reserves or our association for a survey of their property and to assess the need of electrified fences to protect their orchards, vegetable gardens, beehives and animal enclosures. If there are funds, the fences will be donated and installed free of charge by our staff and volunteers.

The Salviamo l'Orso association is constantly committed to raising funds for the purchase of electric fences by joining the project "A passage for the

Bear" and through the additional contributions made by AISPA (Anglo Italian Society for the Protection of Animals).

## **Bear-smart orchards and urban vegetable gardens**

It is necessary to pick ripe fruits before the fall, and remove any fallen fruit.

## **Bear-smart management of organic waste and other food-attractors**

A correct management of organic waste is necessary to avoid bears being attracted to waste bins:

Where there is not a door-to-door rubbish collection, the organic material waste-bins will be fitted with a special closure that is bear-proof.

Where there is door-to-door rubbish collection, it is necessary that people keep their rubbish in the house or in the garage until the day of pick-up.

In any case, it is recommended not to add left-over meat to the compost, which will need to be regularly mixed and should always be covered to avoid developing strong smells that can attract animals.

Domestic animals' food will need to be stored in enclosed areas that are inaccessible to bears and must never be left in gardens or close to inhabited areas.

## **Bear-smart sanitary management of domestic animals**

The conservation of bears is strongly linked with the correct sanitary management of areas within its range. Some of the infectious diseases potentially harmful to bears can be transmitted by dogs; these include *Canine distemper*, *leptospirosis*, *hepatitis* and *parvovirus*. The transmission of these diseases can be avoided through vaccinations and correct management of dogs. Dog vaccination is recommended in all cases to protect them from these potentially deadly diseases.



## Correctly managing our dogs means...

- ✔ **Register the dog with the canine registry and have it micro chipped by a professional veterinary surgeon.** The microchip is mandatory by law, and is inserted permanently under the skin. It ensures that the dog is identifiable at the regional canine registry and that it is possible to track its ownership in the case of the dog going missing.
- ✔ In case of change of ownership, loss or death of the dog, or when the owner changes address or telephone number, **it is mandatory to inform the local office of the regional veterinary service** who will update the personal information of the dog and its owner in the regional canine registry.
- ✔ **Have the dog wear an identification tag on its collar or bib.** This tag should feature all information required to reach its owner (e.g. a telephone number).
- ✔ **Have the dog vaccinated and regularly checked by a veterinary surgeon.**
- ✔ **Never let dogs roam free. Always have them under close control.**



**“Respect for these few and simple practices will ensure a peaceful and pleasant coexistence between man and the bear with whom we have shared these mountains for millennia and which risks extinction because of us.”**

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