Supplement

Dirty Nails The fauna in relation to the mountainside environment

Enrico Bassi

A dirty black thumbnail, but if you look carefully, all the fingernails are just as soiled, if you examine each of them. They will look dirty to you if, like mountain ridges, you peer at them closely.

Not random mountains but those mountains with names. Like all the teeth of Mount Resegone¹, for example.

Pick them out one by one and you'll see. You will fall in love with that sequence as visible from the city of Lecco or further away from Brianza. You can imagine them if you close your eyes. They become distorted when you turn your back and leave. Going down to Brumano or Fuipiano.

Fui-piano. A time gone by. "I was slow. I had a different

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¹Resegone: mountain whose name comes from the Italianization of the Lombard term *resegun*: "big saw," on the eastern branch of Lake Como. It is a Dolomitic massif with a characteristic serrated ridge, after which it is named.

pace, one unknown today. I was a shepherd, a merchant, a farmer, a woodsman, a miner. I emigrated to Switzerland. My nails were worn down, chipped, blackened by the *prida*², from building drystone walls."

Dirty nails. From one past to another. Until a few decades ago, we were nothing but dirty nails.

Like those on the paws of a guard dog. Or of a marten climbing up the trunk of a spruce tree to sneak into the nest of a black woodpecker, or a deer that scents the air before running off.

Or one that sniffs it and stays, edging away slowly, along the side of the meadow we just passed.

Thus, his tracks and ours, suddenly coming closer together in an indefinable temporal stratigraphy, perhaps only a handful of seconds apart. There where the human foot passes and leaves its mark, another handful—this time of excrement—is laid. Musty dark projectiles mark the noble deer's passage only a stone's throw from a wooden bench (Figure 2). And it's here that you really wonder whose world it is.

Whether it belongs to humans and their totalitarian egocentrism or, turning this egocentric logic on its head, to the deer.

² Prida: a peculiar feature of the building tradition of the Imagna Valley (province of Bergamo) is the use of prida (stone) to construct drystone walls.



After all, in that Alpine, Apennine, foothill, and mountain world, self-centered man has unknowingly created admirable eco-centers. Skillful, hard-working, calloused hands have triggered slow and small yet constant changes, leaving centuries-old environments suspended, pruning those ancient chestnut groves, sowing green meadows perched along the edges of rocky crags, terraces and *ciglioni*³ sown with buckwheat, showing how the Saracens ultimately reached far into the highlands.

Walls that rise up from the earth like beacons shining on farsighted choices that have heralded innovation, merited replication and become traditions handed down over the centuries. From the lemon groves of Lake Garda to those facing the sea, such as Amalfi and the Cinque Terre, on the Aosta Valley and Trentino slopes of the Cembra Valley. To the sunny sectors of the Rhaetian side of Valtellina, protecting its "heroic" vineyards, and those of Val Chiavenna and its chestnut forests.

Where human fatigue peaked, a formidable diversification of fauna may be found

And here, where human effort was at its greatest,

³ Ciglione: agricultural formation similar to drystone walls to reduce the slope in areas to be cultivated, but as the slopes are not very steep, they tend to have a grassy escarpment.



greatest is also the explosion of biodiversity, with species now rarely found elsewhere. Here, along with rather common thermophilic species such as the green lizard and wall lizard (reptiles); we also have the mole, the dormouse and various species of shrew (micromammals); as for birds, we may find the most sensitive bioindicators of environmental quality such as the Sardinian warbler, the barred warbler, the wryneck, the yellowhammer, the little shrike and the whitethroat, typical—at different altitudes depending on the species—of these very special xerothermic islands represented by those terraces with drystone walls, full of ravines and potential. Here dwells the hoopoe, unjustly defined by Ugo Foscolo in his poem "Dei Sepolcri" as a "lugubrious nocturnal bird," but later rehabilitated by Eugenio Montale as a "gay bird, slandered by poets," and for this reason it was taken as a symbol by the LIPU: the Italian association for the conservation of birds and their environments.

All this will last as long as the drystone walls are maintained without collapsing, without sinking into the vegetation or without being tamed by the advance of the greater ash tree: a tall and outspoken soldier that the forest sends forward to conquer the front line, in the eternal struggle between humankind and the wilderness.

In the chestnut forests once governed by humans,



more ancient and hollowed-out, with their heavy, solid arms, we find instead the very rare collared grouse, the grappler and the nuthatch whistling and chattering noisily, looking for ideal cavities to lay their eggs on the mighty wrinkled branches, the light of which, if necessary, may be reduced by bringing in small amounts of earth and mud to prevent entry by dangerous arboreal predators such as the weevil and the marten, picids and corvids.

In these peculiar environmental settings, this will last as long as the upland hay meadows are mown and the forest edge cleared: Away with the hammer, let us pick up the scythe!

If the meadows are carefully destoned and given the nutrients they deserve.

Dry manure is dumped every few yards from a *gèrlo*⁴ carried on one's back, in the fall before the snow, which, once melted, will have spread it out and ensured it is absorbed by the soil below.

This will provide the ideal meadow, the perfect pasture for the very rare corncrakes, linnets, quails, and larks that sing, fluttering up like sparks from a campfire, the hunting of which is still permitted despite the fact that they are now almost extinct.

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⁴ A traditional wicker backpack.

"June, the maturity of the year, I thank God for you," sang Francesco Guccini. And indeed, after the *maggengo*⁵, amid the village and the mountain hut, the cows would then climb even higher until they reached Prato Giugno ("June Meadow," a placename in Val Taleggio, province of Bergamo). In summer, they would then move up to the Alpine pasture. Children would sleep above the hut, where there would be a fireplace.

Just as the *maggengo* was inhabited by cows, dogs, the odd pig and shepherds, so many of the grassland and migratory bird species arrived from Africa in the month of May.

Men and birds would then move synchronously up the slopes of the mountainside.

Timely sundials for farmers (like the *Corna del Mesdè*⁶, which would be lit up with the sun's rays at lunchtime), and on which, a few hours earlier, hosted the silent landings of migratory birds on their night flights, guided by the constellations.

And so on May 18, 1923 (perhaps), unknowingly, a farmer and the first corncrake of the season, just back

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 $^{^{\}rm 5}$ The hay meadows used in the month of May.

⁶ The "Midday Horn."

from Tanzania and full of testosterone, met up at dawn, the bird shrieking croakily from the flowering grass for hours on end, making him sound like an invisible frog. *Grata-peten* as he is called in the mountains of Trento, or *pare di quae*⁷ in the Bergamasque area. Or *Crex crex potentissimus*, in the words of old museum conservators.

The ancient alliance mentioned above, however, is based on the pace of yesteryear. That of the slow arrival of man which let animals take cover. And at the onset of the scythe, hares and corncrakes would scuttle away unharmed, grassy stalks crushed against their snouts and beaks. With the herbaceous stems of the high grasses in the *prati pingui* ⁸ which served as allied pillars behind which to hide the little heads of partridges and quails seeking an escape route.

Maintaining the meadows therefore also means maintaining the rhythms with which they have been

^a Prati pingui: meadows with perennial grasses, medium to tall in height, with several herbaceous types accompanied by other species (at the second mowing, producing umbellifer-rich elements) more or less regularly fertilized and mown (at least twice a year) that are an expression of the Arrhenatherion elatioris (Molinio-Arrhenatheretea) alliance. Secondary grassland communities, subject to regular mowing, with more or less intense fertilization on sunny slopes, may be found up to about 1,500 m.a.s.l. Regular mowing and non-excessive fertilization are the essential condition for good management of these meadows, whose landscape quality may be compromised by excessive liquidation (which significantly decreases the number of species and worsens the aesthetic appearance by favoring entities with inconspicuous flowers, Lasen 2017).



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⁷ In breeding season, male corncrakes sing. Among the widespread names in the Mediterranean basin, references to the supposed migratory performance described since antiquity are common. In Italy, for example, dialect names are almost always vulgarizations of what has become established in the official language: raquaio, (while the Italian is re di quaglie). There are, however, curious and interesting exceptions, such as the grata-péten of Tesino (province of Trento) because of the sound produced akin to that given by the rubbing of the teeth of a comb, or the coiòt ("coyote") from the culture of Upper Friuli (Bonato et al. 2004). In Bergamasque pare di quae literally means "father of quails" because it is believed to be able to guide the latter on its arduous migration.

mown for centuries, for those times gave animals the chance to lay their eggs, give birth to their young in the grasses and hide them from predators.

"I was *gèrlo*, *campàc* 9, coal, and *calchèra* 10. I was stones, manure, potatoes and firewood on my shoulders. I weighed fifty kilograms and walked fifty kilometers a day. Taking the stones out of the meadow and making drystone walls out of them."

Low walls hundreds of meters long. One every three meters on the steepest slopes. One every ten when the slope was less harsh, and the luxury of finding boulders on which to lay other stones—saving time and effort—could be afforded.

Walls to hem the goats in first, then for land, then manure and then cows. I was cheese. Before that I was milk, chestnut flour, and sometimes bread. "I had a trail, a path, a cabin, and a stove." Wood to cut and move along the mountain ridges. Occasionally I would use a pòsa¹¹ for my back. One every ten to fifteen minutes of walking.

In the *campàc'*, hay and foliage (*patüsc* in the Central Alps) are raked from the forest floor to become the bedding of the beasts in the dark stables.

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⁹ A wicker basket carried on one's shoulders.

 $^{^{\}rm 10}\,\text{A}$ kiln for the production of lime.

¹¹ A stop-off point.

Where a stream ran along a border, between the stones and the path, a few willows were allowed to grow because, in the poor rural economy, they were necessary.

Indeed, in order to be carried on one's back, both the *campàc'* and the *gèrlo* had *stròpi* (shoulder straps) made from long, straight branches like those of the willow, twisted several times until they gained the right shape and flexibility to best be carried on one's shoulders.

Harsh knowledge. When an innovation was successful, it would become a tradition replicated for centuries, passing from hamlet to hamlet, spread by the ancient mountain people, truly indomitable trans-valley migrants. Like that of using the precious wood of the Swiss stone pine, which grows in the higher and inner reaches of the Alps in a cold continental climate. Rare wood that is hard to obtain, for the trunk remains unreachable, buried in the snow for months, yet it is softer and more workable, ideal for making trunks for child brides and their trousseaux, mountain daughters let go too soon before a hidden tear from their fathers.

Black lungs for those who returned as strangers only in summer. Who would leave their wives with new babies, whom they would only see for the first time the



following summer. Confidences shared between women at the fountain. One more mouth to feed. "Let's stay close together, so as to ward off death."

All tired arms and early to bed. But that was how the world turned. And it seemed it would do so forever.

Human nature. Mirrored only in nature itself. And accordingly so.

"E me ho imparà a diventà 'n sass, a supurtà qualsiasi pass, a rutulà senza lamentass".

"And I learned to become a rock, to endure any step, to roll on without complaint."

(from "Ciamel amuur" by Davide Van De Sfroos).

When tradition betrays the fauna

Emblematic is the case of the mountain village of Livinallongo (BL) where, in 2015, a number of meadow-mowing machines for were purchased by the municipality: an 18-horsepower Aebi motor mower with studded steel wheels, a 1.9-meter mowing bar, an Erni Gt 200 Hill Rake, a hayrake, and a 1.14-meter Aebi/Carroy T1176 mulcher for a total cost of thirty-five thousand euros.

The machines were purchased in order to rationalize



the work, reduce the number of workers required and thus the time needed. Quite a large investment for a small Italian municipality, and one made in pursuit of a noble intent: they wanted to maintain the landscape inherited from their ancestors.

"Thanks to these new machines," commented the mayor, "the large meadow of Puliné above Poeve was moved in no time."

In the mountains, in addition to mowing the meadows, alpine watering holes were also created and maintained with periodic bottom-sealing activities, in which numerous amphibian species (e.g. the yellow-bellied toad, the great crested newt, and the alpine newt) inextricably adapted to survive in these special and fragile biotopes.

Now, these small pools of water have been mostly forgotten and have lost their original role due to the introduction of new forms of mountain farming that have cut down transfer times from the stables on the valley floor to the Alpine pastures at high altitudes. In fact, the intermediate pools along the ancient transhumance routes—being no longer used by the animals, now transported quickly on board cattle wagons—have dried up and sometimes been replaced by anomalous plastic troughs or bath tubs that forever prevent the amphibians from reproducing, for they



fatally trap the animals that slip into them due to their smooth, vertical sides, making it impossible to get out.

Fortunately, in recent years, there have been praiseworthy initiatives to restore the ancient watering holes conducted by various public authorities, but there is still a long way to go.

The image describes who, what and when. If we are talking about light signs, the "when" is the explanation that perhaps best links man to the wild animal, enshrining an ancient coexistence that we might call an alliance.

An alliance that has managed to create and maintain spaces in which to feed (trophic niches), to reproduce (nests and dens), and shelter (brambles, escarpments, drystone walls), ones in which for a few hours a day (often at night) or for a few months (late autumn, winter and early spring) or for a few years (after a terrible landslide that forever blocks a path carved into a ravine), man no longer sets foot. An alliance that today we would call co-evolution. Humans, other animals (but not all of them), and plant species (but not all of them) that were able to grow together, in a sense, even helping each other.

But those who were not among the chosen species at least deserved a way out. Wolves, brown bears, lynx, golden jackals, wildcats, beavers, otters, bearded



vultures, griffon vultures and monk vultures were picked off one by one, shot down in flight, captured, poisoned, burned alive in their nests or smoked in their dens.

Virtually extinct in the Alps.

Martens, foxes, badgers, skunks, golden eagles and goshawks, although locally extinct, instead managed to take refuge in the wildest and most secluded areas of our mountains. Like those surviving Trentino bears that, in the 1990s, could still be counted on the fingers of one hand.

Mountain dwellers and mountain fauna

A short-lived human condition, that of mountain people, unbeknownst to them. Without terms to quantify it.

That was how things were done. And one would become an adult at the age of eight.

One might catch *ciuici* (great tits) and wait for the robins to come in October. Proud and sacrificial, to be caught with bow and arrow. Then run home to give them to mother as the great revolving carousel (the spit) for the polenta was set in motion.



One need only take a stretch of the Brescian Alpine foothills, nestled between the Garda basin and the Valvestino valley, to gather an astonishing harvest of place names by which, over the centuries, the locals have baptized the mountain peaks, cliffs, caves, slopes, forests, pastures, valleys, springs, streams, and torrents as geographical references by which to orient themselves and also to understand each other and transmit information in daily life and work, within a human community fighting with the severity of an impervious environment (Alessandro Micheli 2022).

But, among these references, those related to wild animals abounded: frequent and recurrent appointments or fleeting and sporadic encounters, to be remembered equally in human memory, are so fascinating in their essence.

What today we would call the gorge of a pre-Alpine stream, which back then was more simply called the *Val dei gàmber* ("Shrimp Valley"); the ridge where the golden eagle constantly guards the boundaries of its territory from conspecific intruders was known as the *Còrna dele àquile* ("Horn of the Eagles"); where today we might say there were historical traces of the presence of wolves on a densely wooded slope, at the time, they would have called it the *luèra*, i.e. where the ancient pit traps were placed for the capture of wolves.



And where the *crocro* ("cackle") of the imperial raven still echoes, it means that we are, without knowing it, in the *Val dei còrf* ("Raven Valley"). Finally, if today, after a short ascent, we reached the rocky summit ridge and noted a very black coluber (a snake of the colubrid family, widespread in northern Italy) we would no longer be in Vobarno (province of Brescia) but on the *Dòs dei bis* that is, on the "Hump of the Snakes."

The impact of productive activities on the fauna

Human fruition of mountain and natural environments causes impact that is often only estimable and hard to quantify. It may arise from single events and actions that are hard to predict, or from their frequent repetition, afflicting even vulnerable species that require undisturbed areas. Actions likely to cause impact on wildlife are often not identified as problematic by most people engaged in enjoying the common good (nature). The category of people likely to cause the most harm generally answer to the name of "WE": those who are often refractory to regulations by more enlightened public administrations, attempting to mitigate the human impact on wildlife through rules and regulations.

Off-piste skiing, snowmobiling, heli-skiing, cable cars, ski lifts, quad biking, trial biking, enduro, sport climbing



on ice and rock falls and aerial flyovers (drones, hang gliders, paragliders and gliders) are just some of the means of transport and pastimes with which modern humans spend their leisure, experiencing the mountains with the hectic pace of the city. Modern pastimes that however clash with past times.

The mountainside system, if it works, offers a place where one may live and die in peace.



Images



Figure 1 – Deer hoofprints (below) only a few inches from boot marks. Photo: Enrico Bassi



Figure 2 – Excrement that marks the passage of a deer in the clearing of an ancient pasture, now overgrown by a sea of mountain pines, into which the deer may retreat if necessary, and from where he may examine human movements cautiously.

Photo: Enrico Bassi





Figure 3 – Corncrake, presumed extinct in Lombardy in the twentieth century, was found nesting by Lombard ornithologists in the late 1990s in mountain hay pastures where little more than a score of singing males were on their way back from their African winter homes. Its presence is inextricably bound up with the sustainable management of foothill and Alpine meadows, the mowing of which must be maintained with non-invasive techniques that do not call for a high degree of mechanization, so as to allow time for the eggs to hatch and the chicks to take cover during mowing operations.

Photo: Michele Mendi







Figure 4 – Left: The hard life of mountaineers while transporting the poor "raw materials" typical of the rural Alpine economy such as straw, hay, chestnuts, manure, stones and wood, with campàc' and gèrlo on their shoulders (Photo: Anonymous, from the web). Right, a typical pòsa, ancient seats made of rock or beaten earth along the paths used by mountaineers to rest on long journeys with heavy loads on their shoulders. They are emblematic of the laborious and age-old activity of shaping and transforming the mountain territory.

Photo: Enrico Bassi







Figure 5 – The difference between "maintaining a meadow" and also caring for the animals that live there. Mowing pastures with increasingly high-performance and aggressive machinery undoubtedly reduces mowing times but jeopardizes the survival of a multitude of wildlife species that have been able to co-evolve with human activities carried out for centuries at much slower speeds. Left, the initiative of the municipality of Livinallongo (BL); right, a roe deer fawn that lost a leg when a motor mower hit it amid tall grass.

Photos: from the web



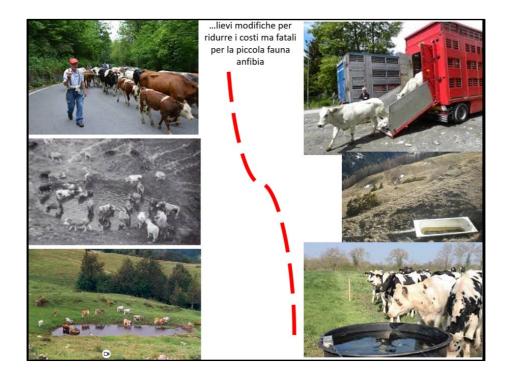


Figure 6 – The traditional practice of cattle herding at high altitudes also involved the use of intermediate grassland sectors where animals would be stationed for a few weeks (e.g. the May pastures) located along the trail, which was undertaken to reach the summer pastures at high altitudes. The use of cattle wagons meant many watering holes lost their purpose and thus dried up due to lack of maintenance.

Composition and photos: Enrico Bassi, except historical ones found online







Figure 7 – The encounter with the animal world, at these altitudes, offers strong sensations, for it blends with the fatigue of the climb and the crisp air of the landscape; humans and animals, here, still move at the same speed.

Photos: Enrico Bassi (left) and Cesarino Leoni (right)





Figure 8 – Livigno (province of Sondrio). Off-piste skiers' tracks close to the only forest plot where it is ascertained that a dozen or so roe deer are wintering at an altitude of 2,000 m, limiting their wintering area here for decades to a few hundred square meters to maximize their chances of survival, jeopardized by the continuous and unpredictable disturbance caused by skiers. Right, bombastic snowmobiles in transit against the icy scenery of the central Alps, where animals must conserve vital energy to survive by avoiding unnecessary escapes.

Photo: Enrico Bassi







Figure 9 – Chamois and alpine chough. Photos: Renato Moggi (left) and Alberto Salvaterra (right)

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Dedication and thanks

Dedicated to Alessandro Micheli and his wisdom, for the ridges, saddles and every corner of Garda speak of him, the greatest master, now no longer with us.

Thanks to Renato Gregorini and those who, over the years, have told me all they knew about the mountains.



Biographical Notes

With a degree in Natural Sciences from the University of Pavia, Enrico Bassi is mainly concerned with wild birdlife, censuses and ornithological research, environmental restoration and mitigation. He devotes particular attention to issues concerning the conservation of Italian avifauna and diurnal and nocturnal birds of prey, such as habitat loss and subtraction, the management of Natura 2000 Network Sites, the impacts of power lines and and overhead cables, as well as and hunting activitiesy, and hunting-related saturnism. From 2004 to 2022, he was a researcher and ornithologist at ERSAF -- Stelvio National Park. for which he followed multiyear projects on Ggolden Eeagle and Bbearded Vvulture conservation. He is a member of the Advisory Board of the VCF (Vulture Conservation Foundation), an organiszation committed to the research into and the conservation of European, African and Middle- Eastern vultures.

