# Men and Bears: Morphology of the Wild

edited by
Enrico Comba
and
Daniele Ormezzano

aA Accademia university press

The time of Carnival represents a "wild" time at the end of winter and pointing to the beginning of a new season. It is characterized by the irruption of border figures, animal masks, characters which recall the world of the dead and which bring within themselves the germ of a vital force, of the energy that produces the reawakening of nature and announces the growth and fertility of the new crops. This wild domain shows itself under the shapes of a contiguity between human and animal: the costumes, the masks, refer to a world in which the characteristics of the human and those of the animal are fused and intertwined. Among these figures, in particular, emerge those of the Wild Man, the human being who takes on animal-like attributes and aspects, and of the Bear, the animal that, more than all the others, gets as close as possible to the human and seems to reflect a deformed image of it. Such symbolic images come from far off times and places to tell a story that belongs to our common origins. The bear assumes attributes and functions alike in very different cultural contexts, such as the Sámi of Finland or North-American hunter-gatherers, and represents a boundary between the world of nature and the human world, between the domain of animals and the difficult construction of humanity: a process continued for centuries, perhaps millennia, and which cannot still be said complete.

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# Introduction

Enrico Comba and Daniele Ormezzano





The texts collected in this volume draw inspiration from the International Congress which was held on February 7, 2012 at the Regional Museum of Natural Sciences in Turin, with the title: "Liberiamo l'orso: i carnevali europei tra addomesticamento e selvaticità (Let's the bear free: European Carnivals between domestication and wildness)".

In that occasion, the Museum showed in its rooms the third edition of the exhibition "Dèi selvatici: i Carnevali tradizionali del Piemonte (Wild Gods: the traditional Carnivals in Piedmont)", edited by Piercarlo Grimaldi and Luciano Nattino. This exhibition had the purpose to highlight the landscape of mythical figures which animate the traditional Carnivals, among which there are many animal or semi-animal figures: bears, wolves, wild men. Such manifestations of folk culture have been subjected in the course of time to innumerable transformations: some have disappeared, others have been modified, still others have been brought back to life after several years. This is the case with the Carnival of Lajetto, a little village near Condove in the Susa Valley, where the Carnival feast has been resumed and re-activated after a long interruption of more than fifty years, and has been documented in detail in the exhibition in Turin.

The time of Carnival represents the "wild" moment of the end of winter and the beginning of a new season. It is a moment characterized by the irruption of figures of the margin, animal-masks, characters which recall the world of the dead and which bring with them the germ of vital force, the energy which produces the awakening of nature and foretells the growth and fertility of the harvest. Their breaking in the ordained world of the village determines the temporary abolition of the norms, of the boundaries, and of the customs that characterize the course of the everyday life. They leave free space to transgression, reversal, laughing and to the rediscovering of an otherness that takes the form of ancient mythic figures situated on the borders of the human. Such a wild world presents itself in a way that reveals a contiguity between man and animal: the disguises, the masks, allude to a world in which the properties of the human and of the animal get confused and intertwined. Among these figures, in particular, stand out those of the Wild Man, a human being who assumes attributes and aspects of the animal domain, and of the Bear, the animal that above all others resembles man and seems to reflect a transformed human image. These figures are so similar that in many traditional Carnivals it is difficult to distinguish whether the masked personage is a humanlike Bear or a Wild Man with feral features.





The peasant communities throughout Europe share the manifestation of folk ceremonials that take place during the "feasts" marking and emphasizing the fundamental steps in the flowing of the seasons and establishing a correlation between rhythms of nature and the time of individual and social existence. Such fundamental moments allow to rediscover familiar roots, to rebuild communities, produce social relationships, reconnecting threads of forgotten traditions, bringing to the surface a sense of membership, of participation, the desire of an unconditioned commitment, the drive to escape from the rigid rationality of everyday life. The rebirth of the feast which is happening in the last decades, in the classic places of its former flowering (the countryside and the mountains) as well as in the urban areas themselves, allows contemporaneous humankind to partially escape to the effects of globalization, nearly extended to all latitudes, and to regain elements of the past made by affective and

communitarian relationships, novel rhythms and spaces, by this time foreign to contemporary life.

The February meeting has undertaken to put in dialogue the "bears" and "wild men" of the Finnish folk culture (where it is yet possible to meet actually a bear in nature) with those of Piedmont (where their record is preserved in the feasts of a number of places). They are symbolic figures which come from far away times and places to recount something that belongs to a common origin, figures which represent the boundary between the natural world and the world of humans, between animals and the tiresome building of humankind. This latter construction is a process that persisted for centuries, perhaps for millennia, and which cannot be still considered accomplished.

From a naturalistic point of view the brown bear (*Ursus arctos*), an animal whose scientific name which was ascribed to it by Linnaeus recovers both its Greek and its Latin denominations, is the result of the evolution of a group of carnivores of the Fissipedia suborder that during the Miocene, about 20 million years ago, gave birth to several forms which lived in Europe. This animal has had a preeminent position in European nature, because it was the biggest terrestrial mammal and its teeth, if not its very food habits, make it the biggest of the carnivores. Some of the characteristics of its plantigrade stance and above all its capacity to stand erect on its hind legs, using the front paws to take food or as defense weapons, has determined that the peoples that could observe bears with more frequency developed a peculiar consideration of this animal, which is frequently conceived as a sort of transition between man and animal. The contribution by Daniele Ormezzano to this volume helps to better understanding the bear in its naturalistic and behavioral features, as well as the connection which links it to its immediate predecessor, the cave bear, once common inhabitant of the Alpine countries.

The importance of the bear in European Carnival traditions, with particular focus on Western Piedmont, is widely documented in the contribution by Caterina Agus, from which the peculiar vitality of these feasts emerges. They have been able not only to survive, but to regenerate themselves and to reappear in contemporaneous times, continu-

ing to solicit the interest and the commitment of new generations of the inhabitants of the Alpine valleys.

In an ample work, which combines the results of many preceding researches, Rosalyn M. Frank explores the relationship between the bear feasts, appearing in several Carnivals and folk traditions all through Europe, and some specific figures of curers. Significantly, the term attributed to these personages is the same which designates the person, half-human and half-animal, that appears in the Carnival ceremonies and that oftentimes is the protagonist of a pantomime which alludes to death and rebirth. The same term (Hamalau in the Basque Country) reappears in the popular tales, where it designates the subject of a widespread tale in which a child, born from the intercourse between a woman and a bear, shows hybrid features, both human and animal. The Author's hypothesis is that these traditions belong to a very ancient cultural substratum and testify the persistence of a conception according to which the bears are the ancestors of the human beings.

Juha Pentikäinen adds an important documentation about the bear cult among the Sámi, the last hunting people of Northern Europe. Among them, the bear hunt was not significant in terms of food economy, but to hunt the bear and to consume its meat had a particular ritual and cultic meaning. The bear feast fortified the hunters, renewed the value system linked to hunting and strengthened the community spirit. They believed that the killed bear, once come to the spirit land, told to the other animals how a great honor would be to be killed and feasted by humans. Thus, the bears' will to continue to be born again on earth was confirmed, so that they could offer themselves to humans and to be hunted by them. The cult of the bear constituted a crucial phase in the continuous cycle of death and rebirth, of alternation between the human world and the world of the spirits, in which the bear played a symbolic and ritual role of central importance.

Analogously, for the peoples of Finland an Carelia, the bear hunt, described and analyzed by Vesa Matteo Piludu, took on the characteristics of a voyage in Another World, at the same time mysterious and dangerous, of which many traces remain in the folk songs and traditions. The bear, again, was regarded as an outstanding being, with semi-

human features and supernatural qualities, associated with the guardian spirits of the forest, who were represented in female form, as the guardians and mothers of the bear.

Among the Native peoples of America, too, as discussed by Enrico Comba, the bear assumed a particularly meaningful function, as the main animal which was associated with the shaman. The bear was regarded as the instructor of the future shaman and transmitted his knowledge to him or her. Its winter hibernation was interpreted as analogous to the experience of death and rebirth which the initiate had to suffer. In a world characterized by continued metamorphosis and change, as was the cosmos according to the Native cultures, the shaman was a person able to cross the different plans of reality and to assume several shapes, taking advantage of the power owned by non-human beings. That is why the shaman took often the aspect of a bear, an animal which, from various points of view, was situated at the boundary between humankind and animal kind.

Finally, the work by Margherita Amateis puts into a strict connection the three main mythical figures of the European imaginary: the Bear, the Wild Man and the Fool. Though apparently diverse, these mythic personages reveal several analogies and overlaps, showing the representation of the different declinations of the same element. What is at the margins of the human world shows a contiguity between man and animals, between living and dead, between inhabited places and wilderness, between the human world and the world of trees. These relationships are particularly evident through a iconographic analysis which permits to outline a series of correlations between the attributes and characteristics with which these figures are represented, from the Middle Ages until the thresholds of the Modern Age. A comparative analysis shows the presence of various analogies between these characters of the European imaginary and other figures belonging to the cultural universe of the Native Americans, thus suggesting a cross-cultural view of themes and images that goes beyond the habitual circumscribed contexts into which historical and ethnographical research is usually confined.

In conclusion, the present volume collects a number of reflections, investigations and theoretical proposals that include a wide spectrum of themes, thus permitting to de-

sign a number of perspectives that pass through different geographical areas and separated historical moments. This could be regarded as the confirmation of the persistent capacity of the bear to suggest the possibility of crossing the borders, upsetting the usual categories and offering to men the opportunity to observe themselves in the reflected image of a worrying similarity and at the same time an undeniable otherness.

# Men and Bears: Morphology of the Wild

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# Brown bears and cave bears, ancient inhabitants of the Alps

Daniele Ormezzano





This chapter is based on a talk presented at the seminar entitled "Freeing the Bear. The Tame and the Wild in European Carnivals" held on February 7, 2013 at the Regional Museum of Natural History in Torino. It thus retains the same title and general structure.

The fact that most of the presentations at the seminar were anthropological suggested taking a naturalistic approach to the two types of bear – the brown bear and the cave bear – that once lived in our section of the Alpine region, emphasizing the physical and behavioral traits that may have given rise to some of the themes discussed by the other speakers.

A few words are also in order regarding the title, and to its reference to "ancient inhabitants" in particular. Such a designation is obviously appropriate for the cave bear, but though the brown bear lives on, today's bears have been very recently reintroduced, and unless we count a very few disputed sightings, none have yet made it to the Western Alps. We must thus look to the historical data for evidence of a presence that has had such a profound influence on the human populations and their beliefs about the bear that the anthropologists described to us in the seminar.

**Defining bears**

We will now take a closer look at this large mammal with thick brown fur, long muzzle, round ears, bulky body and "clumsy" gait.

**The name**

It was 1758 when Karl von Linné, or *Carolus Linnaeus*, entered the brown bear under the heading *Ferae* in the tenth edition of his *Systema Naturae*, thus creating the current scientific name *Ursus arctos*.

In so doing, Linnaeus chose to join the Latin and Greek terms, almost as if to emphasize that he was dealing here with the true, quintessential bear.

A few years later, in 1794, the German student Johann Christian Rosenmüller took his degree in Leipzig with a dissertation prolixly entitled *Quaedam de ossibus fossilibus animalis cuiusdam, historiam eius et cognitionem accuratiorem illustrantia. Amplissimi philosophorum ordinis auctoritate A.D. 22 Octobris. H.L.Q.C. 1794. Ad disputandum proposuit Ioannes Christianus Rosenmueller Hessberga-Francus, LL. AA. M. in Theatro anatomico Lipsiensi Prosector assumto socio Ioanne Christiano Augusto Heinroth Lips. Med. Stud.*, which in English would be: Some information about the fossil bones of an animal, illustrating the history and rather accurate knowledge of the same. With the authorization of the Most Illustrious Order of Philosophers, proposed for discussion on the appointed day of October 22, 1794 at the habitual time and place by John Christian Rosenmueller of Frankish Hessberg, prosector in the anatomical theater of Liepzig, with the assistance of John Christian Augustus Heinroth, medical student in Liepzig. In this dissertation, Rosenmüller used the binomial Linnaean system to name his subject: *Ursus spelaeus*, the cave bear.

These were the fundamental steps, the birth of the terms that the scientific world still uses today to designate these two bears.

For a better understanding of what they mean, we must go far back into the past, to the time when the "ancestors" of today's languages were spoken. The Indo-European root *rks* of the Sanskrit *ṛkṣa* would appear to be the word from which both of the names used by Linnaeus stem.

The common names, on the other hand, vary more

widely, and in addition to those derived from *arctos* and *ursus,* the Germanic and Northern European world gives us *bear*, *bär*, *bjørn, björn*, all of which carry the meaning of "bright" as well as "brown". Clearly, these are both correlated with the characteristics of the bear's coat. We also find "non-names" being used to denote the bear. The language of our Finnish friends often employs phrases without naming the bear directly. One such is the "golden king of the forest" taken from an incantation and used by Juha Pentikäinen as the title of one of his books. The Slavic world does likewise, referring to the bear's fondness for honey. Such forms presumably arise because of a taboo against naming the animal directly.

**Appearance and dimensions**

Though the bear's appearance is so familiar that it would hardly seem necessary to describe it, a few figures will help us quantify the fact that it is Europe's largest land carnivore, and thus a symbol of strength that was once known as the king of beasts.



The brown bear shows a marked sexual dimorphism, with the males being much larger than the females. According to data provided by the Adamello–Brenta Park, sizes range from 130 to 250 centimeters in length, with a shoulder height of 75-120 cm and a weight of 50 to 150 kilograms for females and 70 to 300 for males. As we go further north or east, the dimensions increase, and the bears of the Eastern Alps weigh 350 to 400 kilograms and stand 2.5 meters tall on their hind legs. Size drops as we move south, and the Marsican brown bear, considered a subspecies (*Ursus arctos marsicanus* Altobello, 1921), is decidedly smaller, with males weighing 100-150 kilograms and reaching a height on the hind legs of 150-180 centimeters.



The largest forms of *Ursus arctos* are those of Kodiak Island, in the Alaskan Gulf archipelago of the same name (USA), which stand up 3 meters tall on their hind legs. Some Kodiak brown bears in captivity weigh over 1000 kilograms.

Cave bears also showed the same pronounced sexual dimorphism but were much larger than most *Ursus arctos*, as they were comparable in size to the Kodial giants.

## Systematics

As we know, bears are mammals, but some details should be given concerning their position within this large class.

Brown bears are Carnivores, though plants figure largely in their diet. Though their skeletons and teeth are not very close to those of what we regard as typical carnivores like lions or ordinary house cats, there are certain telling details: the large upper and lower canines, for example, or the powerful claws.

Taxonomically, bears belong to:

order **Carnivora**,
infraorder **Ursoida**,
superfamily **Ursoidea**,
family **Ursidae**,
subfamily **Ursinae**
genus ***Ursus***
species ***spelaeus*** and ***arctos***





Some forms of Carnivora have adapted to diets that are less reliant on meat, or even completely herbivorous. In this case, the animals are heavier, plantigrade and have a dentition that is better suited to crushing. However, even these forms have two typical teeth – the fourth maxillary premolar and the first mandibular molar – that perform a shearing function and are thus called carnassial teeth, though they differ significantly from similar structures in the Felidae. In general, the premolars and molars are bunodont, or in other words, the crowns have flat occlusal or masticatory surfaces with rounded cusps and are better adapted to crushing than to shearing.

*Ursidae*

The first true ursids appear in the Upper Eocene, around 35 million years ago. They are medium-sized animals that have not yet reached the dimensions typical of bears, and the fact that they are ancestors of this group can be seen from the teeth, where the form described above begins to predominate. The molars have a broader masticatory surface with smaller cusps, along with accessory cuspids and,

at the rear, a wide talonid that becomes the largest part of the tooth.

*Ursus*

In the Pleistocene, two and a half million years ago, Eurasian bears evolve in two directions, two phyletic lines.

One is the Asian line that leads to *U. arctos*, maintains an omnivorous diet, and entered Europe in the late Pleistocene; the other, with *U. deningeri*, increases in size and becomes ever more strictly herbivorous, culminating in *U. spelaeus*.

In Italy, the first signs of the brown bear are in the Galerian, dated to around 458,000 years ago. This was a colder, drier period, and *U. arctos* lived alongside *U. deningeri*.

A little clarification is also in order concerning the characteristics of these animals' skeletons. As our knowledge of fossil forms comes entirely from the parts that are preserved, we cannot make comparisons on the basis of genetic studies of the DNA extracted from the skin and other soft tissues such as the muscles, all of which decay. Hence the importance of non-decaying skeletal parts, and the teeth in particular, as their crowns are coated with one of the hardest and most wear-resistant materials in nature: enamel. Much of the systematics of fossil forms thus hinges on tooth morphology. For both bears, this is expressed by the dental formula I 3/3, C 1/1, P 4/4, M 2/3, where the letters designate incisors, canines, premolars and molars respectively, and the numbers indicate the quantity in the maxillary and mandibular arches. Where the two species differ is in the size: the cave bear's molars are decidedly larger. There is a diastema between I 3 and C and another between C and P1 and between the upper premolars.



*Ursus spelaeus*

As we have seen, the fossil forms are differentiated on the basis of tooth morphology, and the number of cusps on the premolars' masticatory surface in particular. In general, we can say that there is a gradual transformation, with the masticatory surface increasing in size and becoming flatter. Over time, the "spelaeus" group has alternated between being considered as a single species, as different species, or as several species with distinct subspecies. The latter tendency has predominated in recent years. Scholars, Gernot Rabe-

der in particular, have identified new taxa in the Eastern Alps after the discovery of fossil forms in the Conturines cave in Alta Badia.

*Ursus arctos*

Though recent studies of genetic material indicate that different groups are more or less distantly related, the forms of the Alpine region – as imports from the Slavic world – would appear to belong to a genetically homogeneous group.

**Color**

Despite its name, in reality the brown bear's color varies widely, and even more so if we compare the different forms distributed around the world. This variability has led scholars, particularly in the past, to assign a whole series of alternative names to the bear: *albus*, *candescens*, *isabellinus*, *cinereus*, …, *niger*.

Only a few specimens can be truly regarded as brown, and finding a single term that would cover the bears' entire range from jet black to off-white or yellowish is far from easy. Moreover, adult bears' coloring varies not only in the course of the year, but also from place to place on the animal: in general, the paws are the darkest part of the body and the back is the lightest. Entirely black forms are rather rare, and some early scholars such as Buffon and Cuvier distinguished between black and brown bears. Considering differences in size as well as in color, they believed them to be two distinct forms, two varieties: the black variety being larger and gentler in disposition, the other smaller and very ferocious. The former was also called the grass or ant bear, the latter the honey or horse bear

Brown bears are often pictured with fairly light fur tipped with grey. This is not the European brown bear, but the American grizzly, whose name – a garbling of the French *gris* for grey – derives from this coloring, bringing us back to the time when the influence of the French crown and language was widespread in North America. The fact that the North American black bear (*Ursus americanus*) can also be a very light honey color in some parts of its range is also a source of confusion.

## Past and present distribution

*Ursus deningeri* and the cave bear, *Ursus spelaeus*, were the first bears to inhabit the Alps. Many caves, from Liguria to the Karst plateau above Trieste, have provided a wealth of their fossil remains. The cave bear was the more numerous of the two species, and was significantly larger than the modern brown bear.

The caves of the Alpine region show signs of human use, but by contrast with France, no cave paintings have been found. Among the stupendous works that adorn the French caves, from Lascaux to the Chauvet-Pont d'Arc Cave in the Ardèche, depictions of bears are as numerous as they are stunning. The oldest paintings at Chauvet have been dated to around 36,000 years ago.

The cave bear, as its same suggests, is associated with the phenomenon that produced these and similar caves over the millennia, and which requires carbonate rocks such as limestone. Karstification, as the phenomenon is known, occurs when carbonates are dissolved and redeposited. In Piemonte, karstic areas are found in the Val Sesia and Mon Fenera, Sambughetto in the Valle Strona, and in the province of Cuneo with the sequence that starts from the Rio Martino cave on the slopes of Monviso, drops towards Liguria and its Grotte del Bandito caves, and then continues in the area surrounding Mondovì.



From the nineteenth century onwards, these caves have yielded large quantities of fossilized bear bones that are now housed in many of Piemonte's museums – including the one hosting the seminar where this presentation was first delivered – thanks in no small measure to the efforts of such noteworthy scholars from the University of Torino as Luigi Bellardi, Giorgio Spezia and Federico Sacco.

The cave bear remains from the Grotta del Bandito have been dated to a period between 61,000 and 29,000 years ago.

The oldest brown bear remains in Piemonte, on the other hand, date to around 9,500 years ago and were found in a cave located in the Briga Alta area of the Valle Tanaro; the Abisso Armaduk.

Today, we associate the brown bear with mountainous areas, isolated valleys far from inhabited areas, but in the past the animal lived in the lowlands and hills. The broad

forests that covered the Po valley until the late Middle Ages were ideal habitat for bears.

Studies have indicated that the Langhe, Monferrato, Canavese and Torino areas, as well as those around Cuneo and Asti, were heavily forested and that, as Francesco Panero tells us "at least nine forests stretched across the plains and the hills that run from the Canavese to the Novarese, and extend from the Po as far as the Biella hills". Over time, the need for firewood and timber for construction and manufacturing, as well as the acreage cleared for farmland and pasture, drastically reduced the region's forests, and today only a few areas of the Po Valley retain their former appearance. It should also be noted that the spread of invasive non-native trees, principally the black locust or *Robinia pseudoacacia*, has further disrupted the woodland panorama, forever altering what little remains of the lowland forest that once covered the plain.

For the modern traveler in the Alps, finding a bear on one's path is still rare, despite efforts at repopulation. The Alps, in fact, have a level of human activity that is far different from that familiar to our Finnish friends, for whom running into a bear is still quite likely. At the edge of the Asian bear's range, Finland abounds with bears, whose population is estimated at around 30,000.





In Italy, in addition to a relatively stable population of around 60 Marsican bears, approximately 45 to 50 brown bears currently live in the Adamello-Brenta Park. For the most part, they are recent or very recent transplants from the Balkans. The valley areas around Adamello were the home of the last native Italian bears in the Alps.

In many ways, the rather small number of brown bears in Italy is at odds with the testimony offered by the other speakers at the seminar. We must not forget, however, that bears were plentiful in the Alpine region for much of its history, and records from the eighteenth century or even later often mention the killing of the last bear in a given area.

Place names also provide evidence of the bear's former range.

The bear's presence in here in Piemonte is well documented. Bears still lived in the Lanzo valleys, for instance, in comparatively recent times, as it would appear that the last one was killed in 1703. The curtain thus fell on a scene

that had once been much livelier, if we consider that hunters killed 42 bears in the years from 1367 to 1370. In these areas, it was customary to give part of the slain animal to the feudal lord of the place or his representative, the castellan for example. In Mezzenile and Ceres, the head was given, in Usseglio the shoulder, in Quassolo six ribs, and in Lemie a half quarter. The historian Cibrario writes of the hunts of the Dukes of Savoia, Emanuele Filiberto and Carlo Emanuele II. This information is given in the records of the Castellany of Lanzo and of other townships, especially in the Viù valleys and in Val d'Ala. Here too, several place names remind us that bears were once found in the region: Vallone dell'Orsiera, for example.

In the Biella area, records specify the parts of the bear to be given to the bishop of Vercelli, while the bear's presence is also reflected in the coats of arms of a number of towns, including Biella itself, Andorno and the old township of Mosso, as well as that of the Province of Biella.

The Val Susa and the valleys around Pinerolo also have many place names that are reminiscent of bears, starting with Orsiera, the mountain watershed between the two areas.



The Cuneo and Mondovì areas also have records indicating which parts of the bears killed in hunts are to be given to feudal lords like the Marchese di Saluzzo or bishops such as that of Asti, as well as many place names memorializing bears.

As we move eastwards, the traces left by bears' historical presence increase, and many studies – including recent ones conducted during reintroduction efforts, provide a good understanding of the animals' former range.

**The upright posture**

One of the characteristics that have contributed most to the view of the bear as human-like is its ability to stand on its hind legs. Nevertheless, many students of bears' behavior say that this is something they do quite rarely, though bear attacks can involve an upright stage. In general, though, standing tends to indicate curiosity rather than aggressiveness, at least among wild bears. For the tamed animals used by bear trainers, it is very common.

Among carnivores, there are two forms of locomotion

(and thus two types of limb morphology: plantigrade and digitigrade. Plantigrade locomotion is found in raccoons and in some mustelids and viverrids. With this form of locomotion, the long bones – humerus, femur, radius, ulna and the tibia and fibula – are more robust than their counterparts in plantigrades. This characteristic is often very pronounced, and the distal portion of these bones is generally very thick and heavy compared to the central portion, or diaphysis.

A more detailed examination paying particular attention to the plantar cushions, however, shows that only the bear's hind limbs are well adapted for plantigrade locomotion, while the forelimb exhibits somewhat plantigrade features.

The morphology of the hind leg, with the heel that rests squarely on the ground, enables the animal to assume a fairly stable upright position. Looking carefully at the images of the hind leg, we can see that the femur is never fully vertical as in humans, but always remains at an angle with respect to the ground.

**Licking the bear into shape**



Another theme that has made a profound impression on man's imagination is that of the bear's birth and the characteristics of the newborn bear. From Aristotle to the medieval bestiaries, for instance, the belief was handed down that bear cubs are born as formless lumps, and their mother then licks them into shape. This belief is reflected in the Italian and French folk expression "a badly licked bear" to indicate an awkward or uncouth person.



In all likelihood this "legend" has its roots in the extremely small size of the cubs at the time of birth, which usually takes place in January/February, during the hibernation period. Eyes closed and completely hairless, the cubs weigh no more than two or three hundred grams. The mother bear's habit of licking her cubs frequently may also have contributed. That this was known was due to the old – and rather bloodthirsty – practice of hunting bears during hibernation, finding the den with dogs, and then digging and dragging the animal out.

**Hungry as a bear**

The period just before hibernation is crucial for bears. The need to build up the fat reserves that will enable them to

make it through to spring still in good health means that they must find massive amounts of nourishing food. They thus gorge on everything they can find, in a process called hyperphagia that increases their body weight by 30 to 40%.

Around 60% of the brown bear's diet consists of vegetable matter: hazelnuts and various fruits, including apples, cherries, plums, grapes, rosehips and blueberries. A further 6% of the bear's intake consists of insects, chiefly ants, and other sources of animal protein.

This diet varies in the course of the year, with meat consumption peaking in the spring, upon awakening from hibernation, and in summer. This is also true of honey.

**The raging bear**

The bear's unpredictable character and sudden furies, especially at the approach of a human, have made it a byword for rage. Thus, depictions of the seven deadly sins – in Piemonte, for example, sometimes show wrath mounted on a bear.



**Breaking wind**



The bear, supposedly, breaks wind at the advent of spring. During hibernation, in fact, the bear's intestinal tract is blocked by a plug consisting of epithelial cells sloughed off the intestinal lining, mucus, hair and feces. The bears' forceful expelling of this plug on waking from hibernation is at the basis of many of the themes that have been taken up by folklore, such as seasonal rebirth from the world of the dead, the wind and many more.

**Bears and dragons**

If, as we have seen, the idea of the bear is ancient, that of the cave bear is fairly recent. The first studies comparing the skeletal remains found in caves with modern bears appeared only in the mid-eighteenth century. Before then, these finds had fueled beliefs in fantastic beings, dragons in particular. Traces of this interpretation can be seen in many of the place names given to caves: Buco or Tana del Drago on the Italian side of the Alps, Drachenhöhle bei Mixnitz in Austria, or the Swiss Drachenloch – famous as the site of the skull findings described by Emil Bächler, who interpreted them as evidence of a bear cult – as well as other caves in

the Germanic linguistic area. In considering this connection between bears and dragons, we must also consider what the first explorers must have felt as they saw these chalky white bones spread across the brick red silt of the cave floor, illuminated only by their guttering torches. Clearly, only one explanation was possible. All these signs of ferocity must have been left by some fearsome beast: the dragon.

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# Time of the bear, the bear in time

Caterina Agus





## The bear: lunar, wild, mythical

Animal masquerades are a major feature of carnival time, as their public appearance in the community predicts the course the new agrarian year will take, and suggests the strategy that the peasant should adopt in the fields. From time immemorial, the calendar of rural Piemonte has been marked with a complex series of ceremonial customs associated with the earth's reawakening. In this world, the moon was the most important arbiter of traditional rhythms, as it made it possible to tell well in advance what the coming year would be like, and plan farm work accordingly.

Every year, the carnival bear went into hibernation on the 11th of November – Martinmas – an event that brought on the approach of winter. The bear's reawakening was associated with the appearance of the winter moon heralding Easter: on this night, between the 1st and 2nd of February, the bear emerged from his den to check the heavenly body's position. And depending on the phase of the moon, he decided whether to go back to sleep or come out of his den for good.

According to a proverb common to many areas, if the bear wakes to a dark sky – a new moon – he will leave his

den and spring will be quick to start, but if the sky is lit by a full moon, he will go back to sleep for another forty days and spring will have to wait. Year by year, the peasant was thus reminded of how to interpret the moon's position, and thus know whether a late Easter would bode well for the crops, or an early Easter would mean a lean year.

The reason the bear has risen to be the predictor of spring is to be sought in his habit of passing the winter underground. According to the ethno-folklorist Claude Gaignebet (1974), all animals whose reappearance or emergence from hibernation is linked to the coming of spring have been seen as pyschopomps, conductors of souls in their journey. The bear is thus privy to the world of the dead and the chthonic powers, and his hibernation can be interpreted as seasonal state of near-death from which the animal is reborn, a vanquisher of death.

This moment of the year when the forces of chaos burst through into the everyday, poised between the death and the rebirth of nature, was viewed with apprehension by the rural communities of the past, who believed that the hosts of the dead would return and mix with the living: the custom of masquerading as these hordes of souls reflects a familiar idea, viz., that to communicate with the dead, one must become – at least temporarily – one of them.





In the words of Alfredo Cattabiani: "the masked figures […] represent the epiphany of the dead who rise from the netherworld and blend with the living in the general crush: terrifying and vital, they attack, they frighten, groping and pawing, snaring, seizing and carrying away, they caper like madmen and buffoons while the deafening clangor suggests the explosion of the old cosmos, the old year. These figures are in reality the epiphany of all-renewing Death […]" (2003, p. 147).

Indisputably, there is a link between the festival of the bear and Candlemas: the animal awakening from his winter sleep represents the rebirth of nature, defeating winter's chill.

The bear festivals we will discuss in the following pages would appear to number among the rites that, by overturning the established order of things, symbolize the periodic upwelling of primordial chaos, followed by a cosmic regen-