



Priroda  
Javna ustanova



*Velike*  
ZVIJERI

Primorsko-goranska županija / County of Primorje-Gorski kotar  
Javna ustanova Priroda / Priroda Public Institution

## Susret s velikim zvijerima

Za nas obične ljude susresti risa ili vuka u prirodi uistinu je prava rijetkost. Najdragocjenije slike najčešće su rezervirane za istraživače koji tom susretu pridodaju iznimnu količinu strpljenja i smirenosti, te u tišini promatraju djeliče života ovih životinja koje kasnije slažu u slagalicu iz koje možemo pročitati zanimljivu priču. Ako ikad vidite risa u šumi, s obzirom na izrazito malu brojnost i činjenicu da ris ne želi biti viden i uznemiravan, možete se smatrati sretnikom. Vjerojatnost da ćete sresti vuka također je iznimno mala, a ako se i sretete, taj bi susret mogao kratko trajati jer vukovi uglavnom bježe od nepoznatog. S obzirom na veću brojnost i način života, prilikom šetnje šumom mnogo je veća vjerojatnost susreta s medvjedom, stoga vam u nastavku teksta donosimo nekoliko smjernica kako izbjeći takav susret.

## Encounters with large carnivores

For ordinary people, encountering a lynx or wolf in nature is truly a rarity. These most precious occurrences are usually reserved for researchers who invest a lot of patience and calmness during these encounters, observing in silence the different parts of the animals' lives, later putting them together like pieces of a jigsaw puzzle that we can then read like an interesting story. If you ever see a lynx in the woods, you can consider yourself lucky, because this animal is very rare and it does not want to be seen and disturbed. The probability of encountering a wolf is also very low, and if you do see one, this is probably going to be a very brief encounter, because wolves generally run from the unknown. Given the larger population of bears and their habits, there is a greater probability of meeting a bear while walking in the woods. For this reason, let us give you a few guidelines on how to avoid encountering a bear.

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Uvodna riječ

# Velike zvijeri

**P**rimorsko - goranska županija jedno je od rijetkih područja u Europi koja još i dan danas nastanjuju tri velike zvijeri koje inače žive na europskom kontinentu: smeđi medvjed, vuk i ris. Život čovjeka i velikih zvijeri od davnina je na ovim prostorima usko povezan i ispunjen vjerovanjima, legendama i simbolikom duboko utisnutom u kulture naroda. Nažalost, taj suživot bio je također prožet predrasudama i mržnjom, zbog čega su populacije ovih životinja u većini europskih zemalja danas u potpunosti istrijebljene. Posljednji ris u Hrvatskoj ubijen je 1903. godine, nakon čega je 1973. godine uspješno reintroduciran na područje Dinarida. Populacije vuka i medvjeda umalo su dovedene do ruba nestanka, a njihovo preživljavanje bilo je moguće samo u čovjeku teško pristupačnim predjelima. Postupni oporavak malobrojnih populacija bio je moguć tek nakon čovjekova napuštanja goranskih sela i šumskih predjela, koja su tada ponovno mogla postati utočišta za divlje životinje. Zakonska regulativa i zaštita doprinijele su smanjenju i reguliranju lovnog pritiska, a informiranje javnosti pomoglo je općedruštvenoj prihvaćenosti potrebe zaštite velikih zvijeri. Danas na prostoru Republike Hrvatske obitavaju tri predstavnika velikih zvijeri, a dio su cjelovitih većih populacija koje obitavaju na prostorima Dinarida. Osim što pridonose bioraznolikosti naše zemlje, velike zvijeri su također i pokazatelji očuvanosti šumskih staništa, a kao predatori na vrhu hranidbenog lanca utječu i na stabilnost ostalih vrsta, ali i stabilnost samog staništa. Upravo vuk, medvjed i ris prirodnu baštinu naše zemlje čine iznimno bogatom, a Gorski kotar najvažnije je područje za njihovo očuvanje.

Foreword

# Large carnivores



**T**he County of Primorje-Gorski kotar is one of the few areas in Europe that is still inhabited by all three large carnivores that live on the European continent: the brown bear, wolf and lynx. The life of man in the local area has always been connected to these large carnivores and filled with beliefs, legends and symbolism that have taken a deep root in folk culture. Unfortunately, this coexistence has also been filled with prejudice and hatred, which has led to the extinction of populations in most European countries. The last lynx in Croatia was killed in 1903, but the species was successfully reintroduced in 1973 into the area of the Dinarides. Wolf and bear populations have been brought to the brink of extinction, and have managed to survive only in areas that are barely accessible to man. Their survival and gradual recovery has only been possible after people abandoned mountain villages and forest habitats, which has made these areas suitable for wild animals again. Croatian legislation and conservation have contributed to the reduction and

regulation of hunting, and informing the public has helped to create a wider social awareness of the need to protect large carnivores. At present, Croatia is home to three large carnivores which are part of larger populations that inhabit the area of the Dinarides. In addition to contributing to local biodiversity, these animals are also an indicator of the preservation of forest habitats. Being predators, they are at the top of the food chain and contribute to the stability of other species and the stability of the habitat. The wolf, bear and lynx make Croatian natural heritage particularly rich and interesting, and Gorski kotar is the most important area for the conservation of these animals.

## Ugroženost velikih zvijeri

**R**azvoj civilizacije i porast broja stanovništva nisu velikim zvijerima ostavili dovoljno prostora za miran suživot s čovjekom. U prošlosti to je dovelo do masovnog ubijanja ovih životinja, koje je uglavnom bilo potaknuto strahom i praznovjerjima u toj mjeri da danas na prostorima zemalja zapadne Europe predstavnici velikih zvijeri više ne postoje. Iako je čovjek glavni krivac što su populacije medvjeda, vuka i risa dovedene do kritične brojnosti za koju je oporavak upitan, te su populacije čak i danas, unatoč zakonskoj zaštiti i naporima da se velike zvijeri očuvaju, još uvijek suočene s brojnim problemima koji utječu na smanjenje njihove brojnosti. Intervencije čovjeka u njihova staništa (gradnja autocesta, željezničkih pruga, širenje naselja, turističko-rekreativne aktivnosti, sječa šuma, ograđivanje lovišta i drugih posjeda, zagađenje...), utjecaj na plijen (krivolov, jednostrano lovno gospodarenje...) predstavljaju neizravan, ali negativan utjecaj na populacije velikih zvijeri. Nezakonito ubijanje (najčešće puškom i otrovom) direktan je način čovjekova djelovanja na smanjenje brojnosti velikih zvijeri, a one nažalost nerijetko stradavaju i na cestama, kao posljedica sve veće gustoće prometnica.

## Vulnerability of large carnivores

**T**he development of civilisation and population growth have not left enough space for large carnivores to peacefully coexist with man. In the past, this led to the mass killing of these animals. This was mainly caused by fear and superstition and was done to such an extent that these large carnivores no longer exist in most western European countries. Although man is guilty of bringing bear, wolf and lynx populations to a critically low number of individuals, to a point where their recovery is uncertain, and although today these populations are protected by law and great efforts are being made to help them survive, they are nevertheless still faced with numerous problems that result in the reduction of their numbers. Human interventions in their habitats (the construction of motorways and railroads, the expansion of towns and villages, activities related to sport and tourism, deforestation, fencing in of hunting grounds and other estates, pollution, etc.) as well as the impact of man upon their prey (poaching, imbalanced wildlife management, etc.) have an indirect but negative effect on the populations of large carnivores. By illegal killing (mostly with rifles or by poisoning), man directly contributes to the reduction of the number of large carnivores. Another threat is the increasingly dense network of roads and other transport routes.



# Vuk (*Canis lupus* L.)

**S**ivi vuk sisavac je iz reda zvijeri (*Carnivora*) te je ujedno i najveći predstavnik porodice pasa (*Canidae*). Postojeće populacije sivog vuka naseljavaju uglavnom sjevernu hemisferu, a procjenjuje se da u svijetu danas živi oko 150.000 jedinki, najveće brojnosti u Kanadi. Sivi vuk gotovo je u potpunosti istrijebljen s područja zapadne Europe, a Hrvatska je jedna od rijetkih europskih zemalja na čijem području još uvijek obitava. Smatra se da na svijetu postoje tri vrste vuka: sivi vuk (*Canis lupus*) koji je zastupljen s nekoliko podvrsta, crveni vuk (*Canis rufus*), čije su populacije nekada nastanjivale jugoistočni dio SAD-a, odakle su istrijebljene do 1980-ih godina te ih se danas pokušava vratiti uzgajanjem u zatočeništvu i puštanjem u nekadašnja staništa, te etiopski vuk (*Canis sinensis*) koji je brojčano sveden na svega 550 jedinki koje većinom nastanjuju Nacionalni park Bale u planinskim predjelima jugoistočne Etiopije.

## Čovjek i vuk

O povezanosti vuka i čovjeka govori nam povijest ispunjena raznim mitovima i pričama. Dok su indijanska plemena i Mongoli vuka smatrali totemom, Uzbeci i Huni vučicu svojom pramajkom, u europskoj mitologiji vuk je najčešće bio simbol zla, razaranja i divlje sile koja ubija nevina bića. Takvo vjerovanje posljedica je neprijateljskog odnosa između čovjeka i vuka koji je nastao u prošlosti zbog sličnih prehrambenih navika. Nažalost, takav stav prema vuku održao se sve do danas upravo zbog njegovanja legendi o vukodlacima i proždiračima djece koje su na našim područjima prisutne već stoljećima. Izreke koje su dio naše svakodnevice »Čovjek je čovjeku vuk«, »Mi o vuku, vuk na vrata«, »Ovce na broju, vuk sit« govore koliko je jaka simbolika vuka na razini svjetovne kulture. Upravo negativan stav i neznanje ljudi o ovim veličanstvenim zvijerima ohrabrilo je njihov bezrazložni izlov i ubijanje.

## Brojnost vukova

Nekoć je vuk bio najrasprostranjenija vrsta sisavca na Zemlji zbog svoje prilagodljivosti različitim ekološkim čimbenicima i mogućnosti života na svakom staništu koje mu je omogućavalo dovoljno hrane i zaklon. Danas se njegove populacije uglavnom održavaju na teško pristupačnim područjima. Pisani dokumenti (lovna statistika) govore nam da su vukovi još do 1894. godine živjeli na području cijele Hrvatske, te im je brojnost nakon te godine počela drastično opadati. Čovjekovi naponi za istrebljenje vuka posebno su pojačani nakon Drugog svjetskog rata, o čemu nam govori podatak da je samo u Gorskom kotaru u razdoblju 1946. - 1986. ubijeno 540 vukova, što je u konačnici dovelo do smanjenja populacije na samo dvadesetak jedinki početkom 1990-ih godina. Nakon toga, populacija se postupno počela oporavljati, čemu je značajnije pridonijelo proglašenje vuka zaštićenom životinjskom vrstom na našim prostorima 1995. godine. Na području Gorskoga kotara već se deset godina telemetrijski prate vukovi radi utvrđivanja brojnog stanja, veličine čopora i njegovog životnog prostora, te aktivnosti i dinamike kretanja pojedinih čopora. U razdoblju 2002. do 2010. godine

praćeno je 17 vukova unutar 3 čopora: čopori Snježnik, Risnjak i Suho. Prema podacima iz 2009. godine, procjenjuje se da na području Primorsko-goranske županije obitavaju 32 jedinke sivog vuka, koje žive unutar 7 čopora.

## Obilježja i način života vuka

Na području Hrvatske boja krzna vuka uvijek je siva, tamnija s leđne strane. Građom mu je tijelo prilagođeno načinu života, trčanju i dugotrajnom kasu. Iznimno razvijena osjetila omogućuju mu izuzetno dobar njuh i sluh. Hrani se isključivo mesom, kostima i drugim dijelovima plijena kojeg lovi, a ulovljeni plijen u potpunosti iskoristi. Vukovi love i žive u čoporu čiju jezgru čini jedan reproduktivni par, a svi ostali pripadnici čopora potomci su tog para. Vukovi u čoporu sve svoje aktivnosti provode zajedno tijekom cijele godine, a provedbu svih aktivnosti održava složena društvena struktura, uvijek dominantni roditeljski par i ostali pripadnici koji mogu međusobno graditi odnose nadređenosti ili podčinjenosti. U čoporu samo jedna vučica može imati mlade, što u konačnici - zbog nemogućnosti parenja i nedostatka hrane - tjera ostale vukove na napuštanje roditeljskog čopora i njihova teritorija, te u potragu za

### Sivi vuk / Grey wolf: Osobna iskaznica / General information

*Latinsko ime / Scientific name:* Canis lupus

*Masa odraslog vuka / Weight of adult wolf:* 30-40 kg

*Visina / Height:* 60-70 cm

*Dužina od nosa do vrha repa / Length from nose to tip of the tail:* 120-180 cm

*Boja krzna / Fur colour:* Siva, tamnija na leđima / Grey, darker on the back

*Životni vijek / Life span:* 12 do 14 godina / 12 to 14 years

*Broj mladunaca u leglu / Number of cubs per litter:* 4-6

*Brojnost u Hrvatskoj / Number of wolves in Croatia:* Oko 200 jedinki / Approximately 200 individuals

*Prehrana:* Jelen, srna, divlja svinja i mali sisavci poput zeca, puha ili miša... katkad i domaće životinje /

*Diet:* Deer, roe deer, wild boar and small mammals such as rabbits, dormice, mice, etc. Sometimes domestic animals

Strogo zaštićen Zakonom o zaštiti prirode, što znači da je ubijanje, uznemiravanje i uzimanje iz prirode strogo zabranjeno, a eventualni zahvat u populaciju iznimka. Populacijom se u Republici Hrvatskoj upravlja temeljem »Plana upravljanja vukom« / Strictly protected by the Nature Protection Act, which means that killing, disturbing and removing them from their natural environment is strictly prohibited. Intervention in the population is possible only as an exception. The population in the Republic of Croatia is managed on the basis of the *Wolf Management Plan*.

vlastitim teritorijem i osnivanjem novog čopora. Vukovi su izrazito teritorijalni pa ulaz stranog vuka na teritorij drugog čopora nerijetko može završiti njegovom smrću, iako je evidentirano nekoliko primjera »usvajanja« stranog vuka. Zaklonjenost je vuku potrebna jedino da bi izbjegao čovjeka, jer drugih neprijatelja u prirodi nema. Vuk i čovjek nisu u direktnom sukobu, već je netrpeljivost čovjeka posljedica predacije vuka nad divljači, a katkad i napada na domaću stoku koja nije čuvana. Glavninu hrane vukova koji obitavaju na području Gorskog kotara čine srna, jelen i manjim dijelom divlja svinja. Također, na jelovniku mu se mogu naći i manji glodavci, te domaće životinje. Opće je poznato da u lovu vukovi biraju plijen koji će lakše uloviti, što pozitivno utječe na zdravlje populacije plijena i stabilnost ekosustava.

## Wolf (*Canis lupus* L.)

The grey wolf is a mammal from the *Carnivora* order and also the largest representative of the *Canidae* family. Present populations of the grey wolf mostly inhabit the northern hemisphere. It is estimated that in the world today there are approximately 150,000 wolves, the majority being in Canada. The grey wolf has been almost completely extirpated from Western Europe, and Croatia is one of the few European countries where this animal still lives. There are generally considered to be three species of wolves in the world: the grey wolf (*Canis lupus*), which has several subspecies, the red wolf (*Canis rufus*), which used to inhabit south-eastern parts of the USA, where they were extirpated by the end of the 1980s (efforts are now being made to reintroduce them into their former habitats after breeding them in captivity), and the Ethiopian wolf (*Canis simensis*), which has been reduced to only 550 individual animals, most of which live in the area of the Bale National Park in the mountainous regions of south-eastern Ethiopia.

### Man and wolf

The connection between the wolf and man is reflected in numerous myths and tales throughout history. While Indian tribes and the Mongols regarded the wolf as a totem, and the Uzbeks and Huns considered the she-wolf as their primordial mother, the wolf in European mythology was mostly a symbol of evil, destruction and a wild force that killed innocent creatures. Such a belief was the consequence of the hostile relationship between man and wolf, which was caused by similar eating habits. Unfortunately, such an attitude towards wolves has survived up to the present day due to the legends of werewolves and child-eaters which have been present in the local area for centuries. Well-known proverbs such as »Man is a wolf to his fellow man«, or »speak of the devil« (which is rendered as »speak of the wolf« in Croatian) show how strong the symbolism of the wolf is at the level of international culture. This negative attitude and ignorance about these magnificent animals has encouraged people to hunt and kill them without reason.

## Numbers

In the past, the wolf was the most widely distributed mammal on Earth because of its ability to adapt to different ecological factors, and its ability to live in every habitat that would provide enough food and shelter. Today, wolf populations mainly survive in areas that are barely accessible to man. Written documents (hunting statistics) show that wolves used to live in the entire area of Croatia until 1894, after which their numbers started decreasing rapidly. Man's efforts to exterminate the wolf were particularly intense after World War Two, which can be seen in the fact that in the period from 1946 to 1986 as many as 540 wolves were killed in Gorski kotar alone, which ultimately led to a drastic decrease in the population, which by the early 1990s had only approximately 20 individual animals. After this, the population started to gradually recover, which was significantly boosted by the fact that the wolf was declared a protected species in 1995. In Gorski kotar, wolves have been monitored by telemetry for ten years in order to determine their number, the size of packs and habitats, and to monitor the activities and movements of individual packs. In the period from 2002 to 2010, 17 wolves from 3 packs (named Snježnik, Risnjak and Suho) were monitored. According to data from 2009, it is estimated that in the area of the County of Primorje-Gorski kotar there are 32 individual grey wolves that live in 7 packs.

## Characteristics and habits of the wolf

Wolves that live in Croatian territory have grey fur which is darker on the back. Their body structure is adapted to their way of living, running and trotting long distances. The wolf's particularly well-developed senses enable it to smell and hear extremely well. The wolf feeds exclusively on the meat, bones and other parts of its prey, which it consumes entirely. Wolves hunt and live in packs whose core consists of one reproductive pair, while all other members of the pack are descendants of that pair. Wolves in a pack perform all their activities together throughout the year, and the performance of these activities is reflected in a complex social structure: the parental pair is always dominant, and other members can mutually establish superior or inferior relationships. Only one female wolf in a pack can have young, which eventually forces other wolves to leave their parental pack and territory, because of the inability to mate and due to a lack of food, in order to search for their own territory and to establish a new pack. Wolves are extremely territorial animals, and if an outsider enters the territory of a pack, this can result in it being killed, although there are some recorded cases of wolves being adopted by a pack. Wolves need shelter only to avoid humans, because they have no other natural enemies. Wolf and man are not in direct conflict, but the intolerance of man is a result of the wolf's predation of wild animals, and the fact that it sometimes attacks unprotected livestock. Wolves that live in Gorski kotar mainly feed on deer, roe deer, and, to a lesser extent, wild boar. Sometimes they can also eat small rodents and domestic animals. It is widely known that when hunting, wolves choose the prey that is most easily caught, which has a positive effect on the health of the population of the prey and the stability of the ecosystem.

# Jeste li znali?

- 1927. godine francuski policajac je pokušao ustrijeliti dječaka za kojeg je mislio da je vukodlak. Iste je godine ubijen zadnji divlji vuk u Francuskoj.
- Posljednji vuk u Velikoj Britaniji ubijen je 1680. godine, u Irskoj 1786., a u Danskoj 1772.
- Ime Vuk roditelji bi u prošlosti nadjenuli nedonoščadi i slabashnoj djeci jer simbolizira otpornost i izdržljivost.
- Sve pasmine pasa nastale su udomaćivanjem vuka, u procesu koji je započeo prije približno 100.000 godina.
- Vukovi ne zavijaju na Mjesec. Zavijanjem pripadnici jednoga čopora međusobno komuniciraju te se tako lakše okupljaju. Zavijaju u znak prisutnosti, ponekad i u znak žalosti, ili pak nakon što su ulovili plijen kako bi se ponovo okupili u čoporu. Zavijanje je i jedan od načina obilježavanja teritorija.
- Kada su gladni ili u lovu, vukovi ne zavijaju jer bi time otkrili svoju prisutnost potencijalnoj lovinu.
- Vukovi ne bi bili dobri »psi čuvari« jer im je u prirodi sumnjičavost i strah od nepoznatog, te će se radije sakriti ili pobjeći, nego stajati i lajati.
- Vukovi mogu namirisati drugu životinju na udaljenosti većoj i od 1,6 km. U šumi mogu čuti na udaljenosti većoj od 8 km.

# Did you know that... ?

- In 1927, a French policeman tried to shoot a boy who was believed to be a werewolf. The same year, the last wolf in the wild was killed in France.
- The last wolf in Great Britain was killed in 1680, in Ireland in 1786, and in Denmark in 1772.
- In the past, parents would give premature or weak babies the name Vuk (Croatian for wolf), because it symbolised resistance and endurance.
- All breeds of dog are the result of domesticating the wolf, a process that started approximately 100,000 years ago.
- Wolves do not howl at the moon. Howling is a type of communication used by members of the same pack so they can assemble more easily. Wolves howl as a sign of their presence, sometimes to express sadness, or to summon other members of the pack after having caught prey. Howling is also a means of marking their territory.
- When hungry or hunting, wolves do not howl because this would reveal their presence to potential prey.
- Wolves would not make good watchdogs, because they are naturally suspicious and afraid of the unknown, and would rather hide or escape than stay and bark.
- Wolves can smell other animals from a distance of more than 1.6 km. In a forest, they can hear at a range of more than 8 km.

# Euroazijski ris (*Lynx lynx*)

**D**anas je na svijetu poznato ukupno pet vrsta risova, od kojih dvije nastanjuju i europske prostore. Euroazijski ris zvijer je iz porodice mačaka (*Felidae*), roda risova (*Lynx*). Najveći je među svojim srodnicima, a kako mu i ime kaže, nastanjuje euroazijski kontinent. Na europskom kopnu živi i znatno manji iberijski ris (*Lynx pardina*) puno manjeg areala rasprostranjenosti. Populacije euroazijskog risa nastanjivale su područja cijelog euroazijskog kontinenta sve do 19. stoljeća, kada im zbog sukoba s čovjekom brojnost drastično opada, te ris u potpunosti nestaje s prostora većine europskih zemalja.

## Čovjek i ris

Zaista se malo podataka može naći o mitologiji risa, povezanosti čovjeka i ove životinje, no prema dostupnim izvorima informacija nesumnjivo je da je ris oduvijek bio simbol izvrsnog vida. Prema povijesnim zapisima, »ris je mogao vidjeti kroz predmete«. Ris se također spominje kao misteriozna i rijetko viđena životinja, što u potpunosti odgovara stvarnom načinu njegova života, te objašnjava činjenicu da u narodnim predajama hrvatskog naroda ne postoje legende i priče koje se odnose na ovu životinju. U našoj je kulturi prisutna tek poneka fraza poput »bijesan kao ris«, koja se ustalila u svakodnevnom govoru, a najvjerojatnije se odnosi na stvarne obrasce ponašanja risa prilikom obrane ako je napadnut. S obzirom na to da mu je za život potrebno relativno veliko područje, gustoće populacija risa uistinu su malene, a prema načinu života koji je samotani i skriven jasno je da je prava rijetkost ugledati risa u prirodi. Iako stoljećima nije bio žrtva ljudske mašte, vrlo brzo se ustalilo opće mišljenje da je ris »krava strava dlakavih ušiju«, nakon čega je ubijanje risova postalo u potpunosti poželjno i odobravano od strane javnosti.

## Brojnost

U prošlosti, ris je živio na gotovo cijelom prostoru europskog kontinenta. Od 16. stoljeća brojnost populacija risa počinje opadati, a znatan pad ova velika mačka doživljava početkom 19. stoljeća, kada zbog sukoba s interesima čovjeka, promjena u staništu i pretjeranog lova posljednja utočišta nalazi u planinskim lancima poput Dinarida i Karpata. U svijetu risovi naseljavaju različita staništa. Od otvorenih i rijetko šumovitih područja u Aziji, uključujući polupustinje i visoka planinska područja bez drveća, do tundre na sjeveru. U Hrvatskoj su njihova staništa šumska, brdovito-planinska područja Dinarida. Smatra se da je posljednji autohtoni ris u Hrvatskoj ulovljen 1903. u šumama oko Tršća u Gorskome kotaru. Zadnji primjerci te dinarske populacije još postoje u Makedoniji i Albaniji. Iako ga na našim prostorima nije bilo gotovo cijelo stoljeće, 1973. godine u Sloveniji su puštena tri para risova iz slovačkih Karpata, kao pokušaj vraćanja risova na ove prostore. Već krajem 1970-ih godina prvi primjerci viđeni su i u Hrvatskoj. Ova populacija tu se i zadržala, te se smatra da danas na području Gorskog kotara, Like, Hrvatskog primorja i sjeverne Istre broji između 40 i 60 jedinki.

## Obilježja i način života

Euroazijski ris najveći je od svojih srodnika. Krzno mu je svijetlosmeđe do crvenkaste boje s više ili manje uočljivim pjegama, a karakterizira ga kratak rep na vrhu pokriven crnom dlakom i čuperci crnih dlaka na ušima čija duljina može varirati od 4 do 8 cm. U usporedbi s drugim risovima, euroazijski ris ima relativno duge noge, i to stražnje duže od prednjih. Velike šape odlična su prilagodba na kretanje po snijegu, a pandže se mogu uvući. Risovi su teritorijalne životinje koje žive pojedinačno, na velikom prostoru i u relativno maloj gustoći. Dnevno mogu proći i do 30 km u potrazi za hranom, a veličina teritorija ovisi o količini dostupnog plijena. Vrlo ih je teško vidjeti u prirodi s obzirom na to da su najaktivniji u sumrak i svitanje, dok se tijekom dana odmaraju. Žive samotnički i štite svoj teritoriji. Mužjak i ženka sreću se samo radi parenja između siječnja i travnja. Nakon deset tjedana, ženka koti najčešće 2 do 3 mladunca na nekom mirnom mjestu, i oni ostaju uz majku sve do sljedećeg proljeća. Glavna hrana su im srne i jelenska mladunčad, iako katkad jedu i šumske glodavce i zečeve, koji su od iznimne važnosti za mlade risove tijekom osamostaljivanja. Sposobni su uloviti životinju koja je tri do četiri puta veća od njih samih. Kad ulovi plijen, risovi hranjenje obično započinju mesom

### Euroazijski ris / Eurasian lynx: Osobna iskaznica / General information

*Latinsko ime / Scientific name:* Lynx lynx

*Masa odraslog risa / Weight of adult lynx:* 16-30 kg

*Visina / Height:* do 60 cm/ up to 60 cm

*Dužina od nosa do vrha repa / Length from nose to tip of the tail:* 80-130 cm

*Boja krzna / Fur colour:* Svijetlosmeđa do crvenkasta, tamnija / Light brown to reddish, darker on the back

*Životni vijek / Life span:* do 12 godina / Up to 12 years

*Broj mladunaca u leglu / Number of cubs per litter:* 2-4

*Brojnost u Hrvatskoj / Number of lynxes in Croatia:* 40-60 jedinki / 40-60 individuals

*Prehrana:* Srna, mladunče jelena, muflon, divlja svinja, divokoza, jazavac, lisica, zec, divlja mačka, lještarka /

*Diet:* Deer, fawns, muflon, wild boar, chamois, badger, fox, rabbit, wildcat, hazel grouse

Status zaštite: Strogo zaštićen Zakonom o zaštiti prirode, što znači da je ubijanje, uznemiravanje i uzimanje iz prirode strogo zabranjeno. Populacijom se u Republici Hrvatskoj upravlja temeljem »Plana upravljanja risom« / Conservation status: Strictly protected by the Nature Protection Act, which means that killing, disturbing and removing them from their natural environment is strictly prohibited. The population in the Republic of Croatia is managed on the basis of the *Lynx Management Plan*.



s buta, te ostatke plijena sakriju lišćem i zemljom ili ga podvuku pod stijene, te se vraćaju sljedećih nekoliko dana dok ne pojedu čitav plijen. Međutim, nerijetko se dešava da ostale životinje poput medvjeda, lisice ili vrane pojedu plijen, pa ris mora ponovno u lov. Na dan u prosjeku jedan ris pojede između 1 i 2,5 kg mesa. Vuk i čovjek najveći su mu suparnici u pronalaženju hrane.

## Eurasian lynx (*Lynx lynx*)

Today, there are five lynx species worldwide, two of which inhabit European areas. The Eurasian lynx is a carnivore from the cat family (*Felidae*) and is a member of the *Lynx* genus. As its name suggests, it lives on the Eurasian continent and is the largest species in this genus. The European continent is also home to the Iberian lynx (*Lynx pardinus*), which is significantly smaller in size and is much less widespread. Populations of the Eurasian lynx used to inhabit the entire Eurasian continent until the 19th century, when its population started decreasing rapidly due to conflict with humans. Today, the lynx is completely extinct in most European countries.

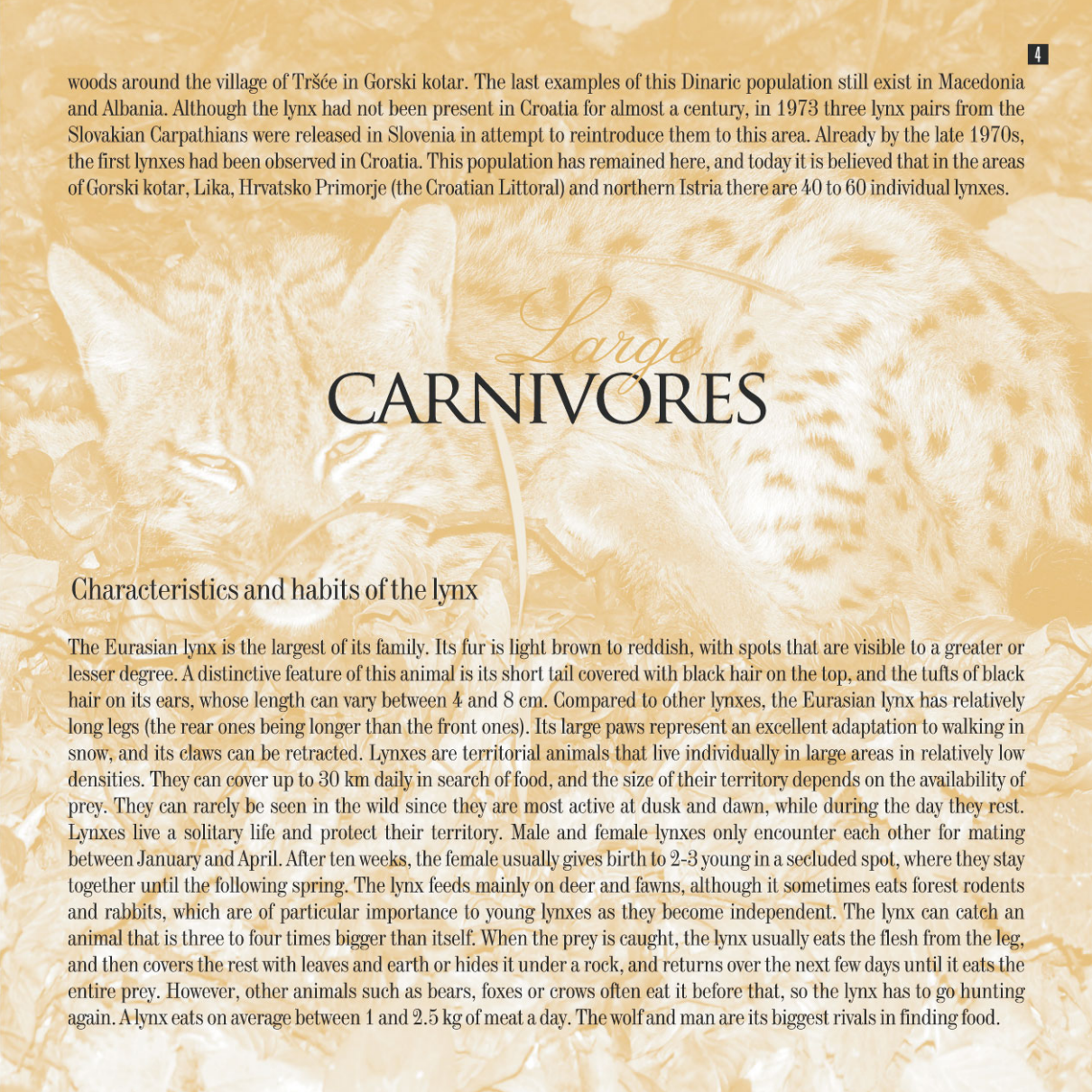
### Man and lynx

There is very little information on the mythology of the lynx and the connection between humans and these animals. However, according to available sources, the lynx has always been a symbol of excellent sight. Historical documents even state that »the lynx could see through objects«. The lynx is also described as a mysterious animal that can rarely be seen, which corresponds to its actual habits, and explains why in Croatian folk tradition there are no legends and stories related to this animal. In the Croatian language, there is only the phrase »furious as a lynx«, which probably reflects the actual behaviour of a lynx if it is attacked. Since the lynx needs a relatively large area, the density of lynx populations is really sparse. In addition, due to its solitary and secluded way of life, it is obvious why seeing a lynx in the wild is such a rarity. For many centuries, the lynx was not the victim of the human imagination. However, the general opinion that the lynx is a »bloody horror with hairy ears« quickly became accepted, and the public started to approve of killing it.

### Numbers

In the past, the lynx used to live across the entire European continent. From the 16th century, lynx populations started to decrease and were significantly reduced by the 19th century, when this animal found its last refuges in mountain ranges such as the Dinarides or Carpathians because of conflict with human interests, changes in habitat, and excessive hunting. Throughout the world, the lynx inhabits various habitats: from open and barely wooded areas in Asia, including semi-desert and high mountain regions without trees, to tundra in the north. In Croatia, the lynx inhabits the wooded, mountainous areas of the Dinarides. It is believed that the last indigenous lynx in Croatia was caught in 1903 in the

woods around the village of Tršće in Gorski kotar. The last examples of this Dinaric population still exist in Macedonia and Albania. Although the lynx had not been present in Croatia for almost a century, in 1973 three lynx pairs from the Slovakian Carpathians were released in Slovenia in attempt to reintroduce them to this area. Already by the late 1970s, the first lynxes had been observed in Croatia. This population has remained here, and today it is believed that in the areas of Gorski kotar, Lika, Hrvatsko Primorje (the Croatian Littoral) and northern Istria there are 40 to 60 individual lynxes.



## *Large* CARNIVORES

### Characteristics and habits of the lynx

The Eurasian lynx is the largest of its family. Its fur is light brown to reddish, with spots that are visible to a greater or lesser degree. A distinctive feature of this animal is its short tail covered with black hair on the top, and the tufts of black hair on its ears, whose length can vary between 4 and 8 cm. Compared to other lynxes, the Eurasian lynx has relatively long legs (the rear ones being longer than the front ones). Its large paws represent an excellent adaptation to walking in snow, and its claws can be retracted. Lynxes are territorial animals that live individually in large areas in relatively low densities. They can cover up to 30 km daily in search of food, and the size of their territory depends on the availability of prey. They can rarely be seen in the wild since they are most active at dusk and dawn, while during the day they rest. Lynxes live a solitary life and protect their territory. Male and female lynxes only encounter each other for mating between January and April. After ten weeks, the female usually gives birth to 2-3 young in a secluded spot, where they stay together until the following spring. The lynx feeds mainly on deer and fawns, although it sometimes eats forest rodents and rabbits, which are of particular importance to young lynxes as they become independent. The lynx can catch an animal that is three to four times bigger than itself. When the prey is caught, the lynx usually eats the flesh from the leg, and then covers the rest with leaves and earth or hides it under a rock, and returns over the next few days until it eats the entire prey. However, other animals such as bears, foxes or crows often eat it before that, so the lynx has to go hunting again. A lynx eats on average between 1 and 2.5 kg of meat a day. The wolf and man are its biggest rivals in finding food.

# Jeste li znali?

- Ris ima odličan vid i može uočiti miša s udaljenosti od 70 m.
- Riječ *lynx* dolazi od grčke riječi *leuko* - što znači »bijeli, sjajan«, pri čemu se najvjerojatnije mislilo na njegove oči koje reflektiraju svjetlo.
- U srednjem vijeku vjerovalo se da ris zakopava svoju mokraću kako bi je sakrio od ljudi jer iz nje nastaje dragi kamen *lyncurius*. Pretpostavlja se da se mislilo na granat ili na jantar.
- Zbog skrovitog načina života, u narodnim predajama o risu se govori kao o životinji koja vidi, a nije viđena. Često ga zovu »šumskim čuvarom tajni«. Zbog njegove sposobnosti da promatra u tišini povezuju ga i sa znanstvenicima u potrazi za znanjem.
- Zbog njegovog oštrog vida, u prošlosti su smatrali da ris može vidjeti kroz kamenje i drveće, kroz zidove i pod zemlju.
- Na sjevernom nebu postoji zvijezda ris koje je u 17. stoljeću otkrio Johannes Hevelius. Priča kaže da je tako nazvano jer je vrlo slabo vidljivo, pa treba imati oštar vid poput risa da bi ga se uočilo.

## Did you know that... ?



- The lynx has excellent eyesight and can spot a mouse from a distance of 70 m.
- The word *lynx* comes from the Greek *leuko* - which means »white, bright«, which probably referred to its eyes that reflect the light.
- In the Middle Ages, it was believed that the lynx buried its urine to hide it from people, as the *lyncurium* gem was thought to be obtained from it. Probably this referred to garnet or amber.
- Due to its secluded way of life, folklore treats the lynx as an animal that sees but cannot be seen. It is often called »the keeper of the secrets of the forest«. Due to its ability to observe in silence, the lynx has also been connected with scientists in search of knowledge.
- Because of its sharp sight, people in the past believed that the lynx could see through stones, trees and walls and underneath the earth.
- In the northern sky, there is the Lynx constellation, which was discovered in the 17th century by Johannes Hevelius. The story goes that the constellation was given this name because it is barely visible and one must have sharp sight like a lynx to see it.

# Smeđi medvjed (*Ursus arctos*)

**N**ajveće zvijeri koje nastanjuju kopno upravo su pripadnici porodice medvjeda (*Ursidae*), i danas ih na svijetu postoji svega osam vrsta. Smeđi medvjed obitava na prostorima Euroazije i Sjeverne Amerike te se, ovisno o životnim i okolišnim uvjetima, pojavljuje u nekoliko varijeteta. Tako mužjaci na području Kamčatke mogu doseći težinu od 1000 kg u odnosu na svoje europske rođake kod kojih mužjaci u prosjeku dosegnu težinu do 250 kg. Smeđi medvjed nekada je bio rasprostranjen na području čitave Europe (izuzev Islanda, Sicilije i Korzike), dok je danas iz većine zapadnoeuropskih zemlja u potpunosti istrijebljen.

## Čovjek i medvjed

Medvjedi su od davnina diljem svijeta bili dio različitih kultura i civilizacija, unutar kojih ih se uglavnom smatralo simbolima snage, izdržljivosti i hrabrosti. Prije otkrića novih kontinenata, medvjed je na europskom tlu smatran i štovan kao kralj životinja. Eskimske zajednice njegovale su legende prema kojima je čovjek tehnike lova učio od polarnih medvjeda. Smeđi medvjed utkan je i u grčku mitologiju kroz legendu o nastanku zvijezda Mali i Veliki medvjed. Prema toj legendi, Zeusova žena, gnjevna zbog nevjere, mladu nimfu Kalisto, koja je Zeusu rodila sina Arctusa, pretvorila u medvjeda. Kada je mladi Arctus odrastao, tijekom lova u šumi naišao je na medvjedicu te je Zeus, kako bi spriječio okršaj sina i majke, oboje pretvorio u zvijezde na nebu. Za otkrivenu špilju u Alpama s ostacima špiljskog medvjeda antropolozi smatraju da predstavlja oblik svetišta neandertalaca posvećenog medvjedu, što je dokaz da se ovu životinju na europskim prostorima izrazito štovalo.

## Brojnost

Nakon posljednjeg ledenog doba, područje Dinarida, koje obuhvaća i središnji dio Hrvatske, postaje utočište i dom smeđeg medvjeda. Povećanjem broja stanovništva, smanjuje se njegov životni prostor i sve češće dolazi do susreta s čovjekom. U početku je medvjed bio smatran konkurencijom pri lovu, a kasnije je čak slovio kao »grdni neprijatelj korisne divljači i stoke i opasnost za čovjeka«. Zbog toga se u 18. i 19. stoljeću masovno ubijalo medvjede, najčešće dočekom pred brlogom, zamkama, hajkama i otrovom. Stavljanjem smeđeg medvjeda na popis lovne divljači u drugoj polovici 20. stoljeća, a nakon toga i donošenjem Plana gospodarenja smeđim medvjedom, stalo se na kraj nerazumnom ubijanju ove životinje, te postupnom rastu brojnosti medvjedih populacija. Procjenjuje se da danas na području Republike Hrvatske obitava 1000 jedinki smeđeg medvjeda.

## Obilježja i način života

Tijelo medvjeda prekriva smeđa dlaka koja na hrptu može biti i nešto tamnija. Iako je medvjed najveći kopneni mesožder

i spada u red zvijeri (*Carnivora*), čak 95% njegove prehrane čini biljna hrana, pa se tako najčešće hrani zeljastim biljkama, raznim mekanim plodovima i plodovima bukve. Ostatak prehrane čine razne ličinke beskralježnjaka i strvine koji su ostaci prehrane vuka ili risa. Na području Republike Hrvatske naseljava guste šume bukve i jele, gdje živi samotnim životom. Medvjedi preferiraju velika, neprekinuta područja bogata raznolikim biljnim pokrovom. Najvažnije karakteristike pri odabiru staništa su dostupnost hrane, mogućnost zaklona i postojanje prostora za brloženje, a veličina životnog prostora može varirati od nekoliko desetaka km<sup>2</sup> do nekoliko tisuća km<sup>2</sup>, što ovisi o količini hrane. Iako ga možemo susresti i tijekom dana, medvjed je najčešće aktivan noću, a svoj dnevni ležaj napušta u prvi sumrak. Kreće se hodom, kasom i u skokovima, te iako djeluje iznimno tromo može trčati i brzinom od 55 km/h. Zbog manjka hrane tijekom zime, medvjedi u brlozima spavaju zimski san. U zimskom snu tjelesna im temperatura pada i usporava se rad srca. Ženke u brlogu, sredinom zime, kote najčešće dva mladunca i hrane ih svojim vrlo bogatim mlijekom. Za preživljavanje novorođenih medvjedića u brlozima zimi presudan je mir u staništu, stoga u medvjede brloge ne treba zadirati ili bućiti u njihovoj blizini, jer ukoliko se medvjedica osjeti ugroženom, može pobjeći i ostaviti mlade. Mladi medvjedići žive s majkom do druge godine svog života. Medvjedica se pari svake druge godine. Medvjed se glasa specifičnim režanjem samo kad je izazvan i time želi upozoriti i otjerati uljeza. Muški medvjedi ponekad se glasaju

## Smeđi medvjed / Brown bear: Osobna iskaznica / General information

*Latinsko ime / Scientific name:* Ursus arctos

*Masa odraslog medvjeda / Weight of adult bear:* 100-350 kg

*Visina / Height:* oko 100-120 cm / Approximately 100-120 cm

*Dužina od nosa do vrha repa / Length from nose to tip of the tail:* 120-225 cm

*Boja krzna / Fur colour:* Sve nijanse smeđe / All shades of brown

*Životni vijek / Life span:* do 25 godina / Up to 25 years

*Broj mladunaca u leglu / Number of cubs per litter:* 2 (1-4)

*Brojnost u Hrvatskoj / Number of bears in Croatia:* oko 1000 jedinki / Approximately 1000 individuals

*Prehrana:* Biljke (95%), beskralježnjaci i rjeđe lešine, domaće životinje i divlje životinje - iznimno rijetko /

*Diet:* Plants (95%), Invertebrates and occasionally carcasses, domestic and wild animals (extremely rarely)

Status zaštite: Zakonom o zaštiti prirode proglašen je zaštićenom vrstom, ali je svrstan u lovnu divljač, što znači da se može gospodarski iskorištavati na temelju kvota. Gospodarenje medvjedom u Republici Hrvatskoj temelji se na »Planu gospodarenja smeđim medvjedom« / Conservation status: The bear is protected by the Nature Protection Act, but is classified as game, which means that it can be legally hunted on the basis of quotas. Bear management in the Republic of Croatia is based on the *Brown Bear Management Plan*.

režanjem kad se nadu oko iste ženke u sezoni parenja. Poseban se zvuk, sličan predenju mačaka, ali glasniji i intenzivniji, čuje kad medvjedići sišu mlijeko svoje majke.

## Brown bear (*Ursus arctos*)

The largest land-based carnivores are members of the bear family (*Ursidae*), which today includes only eight species. The brown bear inhabits the Eurasian and North American continent. Depending on environmental circumstances, there are several varieties. Male bears in the Kamchatka area can reach a weight of up to 1,000 kg, while their European relatives weigh on average 250 kg. In the past, brown bears were widespread throughout Europe (except Iceland, Sicily and Corsica), but today are completely extinct in most west European countries.

### Man and bear

In ancient times, bears played an important role in the legends of various cultures and civilisations, which mostly regarded them as symbols of strength, endurance and courage. Before the discovery of new continents, the bear was honoured on European soil as the king of animals. Eskimo communities had legends according to which man learned hunting techniques from polar bears. The brown bear is also present in Greek mythology in the legend about the creation of the Little Bear and Great Bear constellations. According to this legend, Zeus's wife Hera, angry because of her husband's infidelity, transformed the young nymph Callisto, who gave birth to Zeus's son Arcas, into a bear. When young Arcas grew up, he came across a female bear while hunting in the woods. To prevent a conflict between mother and son, Zeus turned them both into stars in the sky. A cave that was discovered in the Alps with remnants of a cave bear is considered by anthropologists to be a kind of Neanderthal shrine dedicated to the bear, which proves that this animal was deeply venerated in Europe in the past.

### Numbers

After the last Ice Age, the Dinarides area, which encompasses central parts of Croatia, became a refuge and home to the brown bear. The increase in human population led to a reduction in the bear's environment and to more frequent encounters between bears and humans. At first, bears were considered hunting rivals for humans, and later were even regarded as »fierce enemies of useful wildlife and livestock and a threat to man«. Because of this, bears were killed on a large scale in the 18th and 19th centuries, mostly by waiting for them in front of their dens, using traps, by chasing and by poisoning. After the inclusion of the brown bear on the list of animals that can be legally hunted in the second half of the 20th century, and after the publication of the *Brown Bear Management Plan*, the irrational killing of this animal was put to an end, which has led to a gradual increase in bear populations. It is estimated that today there are approximately 1,000 individual bears living in Croatia.

## Characteristics and habits of the bear

The body of a brown bear is covered with brown fur, which can be darker on the back. Although the bear is the largest land carnivore and belongs to the *Carnivora* order, up to 95% of its diet consists of plants. Usually, it feeds on herbaceous plants, various soft fruits and beechnuts. The rest of the bear's diet includes various invertebrate larvae and carcasses left by wolves or lynxes. In Croatia, the brown bear inhabits dense beech and fir forests, where it lives a solitary life. Brown bears prefer large, uninterrupted areas rich in a variety of vegetation. When choosing a habitat, the most important factors are the availability of food, the possibility of finding shelter, and the existence of a spot suitable for denning. The size of its range can vary from several dozen km<sup>2</sup> to several thousand km<sup>2</sup>, and depends on the quantity of food available. Although bears can also be encountered during the day, they are most active at night. They leave the place where they have rested during the day at dusk. The bear can walk, trot and jump. Although it may appear to be rather sluggish, it can actually run at speeds of up to 55 km per hour. Due to lack of food in winter, bears hibernate in their dens. During hibernation, their body temperature falls and their heart rate slows. In mid-winter, female bears generally give birth to two young in their den and feed them with their extraordinarily rich milk. The key factor in the survival of new-born bear cubs in the winter den is a peaceful environment. For this reason, one must not disturb bears in their dens or make a noise in their vicinity, because if a female feels threatened, she can run away and leave her young. Bear cubs live with their mother up to the age of two. Female bears mate every other year. The bear produces specific growling noises only when it is challenged, in order to warn and scare off the intruder. Male bears sometimes growl when around the same female in the mating season. A specific sound, similar to a cat purring, but louder and more intense, can be heard when cubs are suckled by their mother.

## Jeste li znali?



- U svijetu živi 8 vrsta medvjeda.
- Prva medvjedica namijenjena reintrodukciji medvjeda u šume Austrije uhvaćena je upravo u delničkim šumama.
- Iako 95% prehrane smeđeg medvjeda čini bilje, do kraja 19. stoljeća smatralo ga se najvećim neprijateljem korisne divljači.
- U keltskim vjerovanjima medvjed predstavlja boga rata Arzhousa. Po njemu je ime dobio i bretonski kralj Arthur, oko kojeg je nastala legenda o vitezovima Okruglog stola.
- 2012. godine u šumama Austrije ubijen je posljednji smeđi medvjed na tom području koji je potjecao od reintroduciranih jedinki iz Hrvatske i Slovenije.
- Polarni medvjed živi na sjevernom polu, Arktiku. Riječ Arktik na grčkom jeziku znači medvjed, a riječ Antarktik ima suprotno značenje »bez medvjeda«, te označava područje oko južnog pola Zemlje gdje medvjedi ne obitavaju.

# Did you know that... ?

- There are 8 bear species in the world.
- The first female bear that was reintroduced to Austrian forests was caught in the forest around Delnice.
- Although up to 95% of the diet of the brown bear consists of plants, until the late 19th century it was considered the main enemy to human exploitation of the wild.
- According to Celtic beliefs, the bear represented Arzhous, the god of war, after whom the British King Arthur (of the Knights of the Round Table fame) was named.
- In 2012, the last brown bear - a descendant of reintroduced animals from Croatia and Slovenia - was killed in an Austrian forest.
- The polar bear lives in the polar region of the Arctic. The word Arctic comes from the Greek word for bear, and the word Antarctic has the opposite meaning (»without bears«) - it describes the polar region around the Earth's South Pole, where bears do not live.

## Fotografije:

Sivi vuk (1,2); ris (3,4); zaigrani medvjedić (5); smeđi medvjed (*naslovnica*, 7); šumske životinje »uhvaćene« automat-skim kamerama (6); vukovi zavijaju (8)

## Photographs:

Grey wolf (1,2); lynx (3,4); bear cub playing (5); brown bear (*cover*, 7); forest animals »caught« by automatic cameras (6); wolves howling (8)

*Velike*  
**ZVIJERI**



## Smjernice ponašanja u šumi

Opće je prihvaćeno mišljenje da je medvjeda u šumi bolje izbjeći nego susresti, no katkad se taj susret ipak dogodi te najčešće predstavlja neugodno iznenađenje za sve sudionike. Iako je medvjed izuzetno jaka životinja, čije snage i veličine prilikom susreta treba biti svjestan, uvijek će nastojati pobjeći od čovjeka ako je to u tom trenutku moguće. Ne postoje pisana pravila kako se treba ponašati prilikom susreta jer je svaki medvjed zasebna jedinka te prema tome može i različito reagirati, no svakako postoje smjernice ponašanja koje bi vam mogle pomoći da susret s medvjedom izbjegnute. Prilikom šetnji prirodom uvijek treba biti glasan i pričati te tako obližnjim životinjama dati do znanja da ste prisutni. Možete čak imati i zvonice koje će samo zvoniti te tako upozoriti i medvjeda na »čovjeka u blizini«. Ukoliko prilazite vodi treba biti posebno glasan, jer zvukovi vode koja teče prikrivaju zvukove koje proizvodi čovjek. Posebnu dozu opreza treba imati u proljeće jer tada medvjedice s mladunčadi izlaze iz brloga, a od medvjeda može biti opasnija upravo majka koja brani svoju mladunčad. Kao i ljudi, medvjedi se kreću šumskim cestama i putovima, stoga izbjegavajte postavljati šator u neposrednoj blizini takvih mjesta. S obzirom na to da polovicu godine provode u aktivnoj potrazi za hranom i hranjenjem, ne treba ostavljati smeće i ostatke hrane za sobom kako se medvjedi ne bi naučili na takav izvor hrane. Također, prilikom izleta treba paziti na čistoću izletišta kako mirisi hrane ne bi privukli nepoželjne posjetitelje.

## Guidelines for behaviour in the woods

It is widely accepted that it is better to avoid than encounter a bear in the woods. However, such encounters sometimes occur and are mostly an unpleasant surprise for both sides. Despite the fact that bears are extremely strong animals (in case of an encounter, we must always be aware of their strength and size), they will always try to escape from man if possible. There are no written rules on how to behave if you meet a bear, because every individual animal can react in a different way. However, there are certain rules on how to behave that might help you avoid such an encounter. When walking in nature, you should produce sounds and talk loudly to make animals in the immediate surroundings aware of your presence. You can even have a bell whose sound will alert animals that there are people nearby. If you go near water, please be particularly loud, because the sound of running water covers other sounds that you produce. Particular attention is required in spring, because this is the time when female bears leave their dens with their cubs, and we know that a female that protects its young is more dangerous than any other bear. Just like humans, bears walk along forest paths and trails. Therefore, you should avoid setting up tents in the vicinity of such places. Since bears spend six months every year actively searching for food, we should not leave trash and food remains behind otherwise bears could get used to such sources of food. Also, when going on a nature trip, make sure you clean up any picnic area after you and take any garbage with you to avoid the smell of food attracting unwanted visitors.



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# *Large* CARNIVORES



  
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