

# DISTRIBUTION OF MAMMALS IN ALBANIA

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**ABSTRACT** - Some 63 species have been recorded in Albania from 1950 to 1994, with the exclusion of Cetacea. Another 15 species, including 5 found on the eastern border between Albania and Greece, are considered probably present. Hence 78 species could occur in Albania. According to IUCN red list of threatened animals, 8 species are defined as vulnerable, 15 as lower risk and one (the Mediterranean monk seal) as critically endangered. In Albania, the legal protection of mammals includes all bat species, carnivores (except the stone marten, the red fox and the wolf), the chamois, the roe deer and the Mediterranean monk seal. General information on the distributional pattern and the population size is reported for some species, mainly carnivores.

*Key words:* Distribution, Mammals, Albania

## INTRODUCTION

Knowledge of Albanian mammals is very poor and fragmented. Rather old approximate distribution maps are available for carnivores, ungulates and bats (Puzanov and Mitrushì, 1955; Hanak et al., 1961; Lamani, 1970). Only for the otter (*Lutra lutra*) have more recent distributional data been collected by a field survey (Prigioni et al., 1986). Other Albanian mammal studies concern body measurements, taxonomic problems and breeding biology of the brown hare *Lepus europaeus* (Dani, 1967), the eastern hedgehog *Erinaceus concolor* (Dani, 1969) and the black rat *Rattus rattus* (Bajrami and Serezi, 1981).

A first list of Albanian mammals with evidence of the main threatened species is included in reports about the environmental situation of the country (Atkinson et al., 1990; TEI and ELC, 1992).

This paper summarises the available information on the presence of mammals in Albania, including comments on the status of some species. Data concern approximately the period 1950-94 and have been obtained from literature, collections of Tirana Museum, directly in the field and from the observations of naturalists, foresters and gamekeepers. Information on some carnivore species and game species has been obtained from the General Directorate of Forestry Economy of Albania. The cetacean species have been not considered.

## PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS OF THE COUNTRY

Albania covers an area of 28784 km<sup>2</sup> and has an average population density of 113/km<sup>2</sup> (from 5 to over 300 people/km<sup>2</sup>); about 64% of the population is rural. More than 3/4 of the territory is mountainous with an average altitude of 708 m a.s.l.

Mountain and alpine areas preserve wide forest systems characterized by high diversity, either in the composition of species or in the structure. According to vertical successive stages, the lowest vegetation stage is represented by coppice forest with a prevalence of *Quercus cerris*, *Q. petraea*, *Fraxinus ornus*, *Ostrya carpinifolia*, *Acer platanoides* and in second order of *Prunus mahaleb*, *Acer obtusatum* and *Carpinus orientalis*. The higher stage is dominated by beech forest and pine forest (*Pinus nigra*), often in association with small woods of *F. peuce*, *P. heldreichii*, *Abies alba* and *Abies borisii-regis*.

Albania has 450 km of coastline, of which 284 km belonging to the Adriatic sea. The Adriatic coast is flat with beaches, sand dunes, lagoons, swampy estuary; in contrast, the Ionic coast presents abrupt and deep sea floors with rocky cliffs and narrow gritty beaches. Three main climax vegetation zones can be recognised: xeromediterranean sclerophyllic maquis with *Quercion ilicis* and Oleo-Ceratonion, eumediterranean evergreen forest where *Pinus pinea* and *F. halepensis* are prevailing and submediterranean xeric broad-leaved forest, Orno-Ostryetalia (mainly on the northern coast).

In Albania the total area of arable land is about 7000 km<sup>2</sup> of which 2500 km<sup>2</sup>, are coastal plains. The cultivated land is quite divided into fields of small size; hedgerows and treerows bordering fields are very scarce. The predominant crops in the plains are wheat, maize, vegetables, oats, sunflowers, cotton, tobacco, rice and forage, while olives, vineyards, citrus fruit and orchards are widespread in the lowest hills, which have been terraced for cultivation. Chemical pesticides with high toxicity (Lindane and Methylparathion) are still used.

Albania is very rich in water resources because of the morphological features of its territory. The hydrographic network is greatly developed (1,4 km per km<sup>2</sup>). Rivers, because of the irregular precipitation, have a torrential and erosive character and generally have wide, meandering river-beds in the low plains, but about 400 km of water courses have been embanked. In the lowlands, riparian vegetation (mainly *Salix* sp., *Populus* sp., *Alnus glutinosa*) is scarce; in the uplands a thick riparian vegetation (e.g. *Platanus orientalis*, *Quercus* sp.) is generally widespread. About 1000 reservoirs occur through the country; they are mainly small in size (1-10 ha). Canals are especially distributed along the coastal plains and their total length is estimated to be 32000 km. Lagoons and saltmarshes mainly occur along the Adriatic coastal area and cover a total surface of about 15 km<sup>2</sup>. They generally preserve a high environmental diversity with a large number of microhabitats and vegetal associations concerning, for example, those of the sand dunes with psammophyllous and halophytic species, shrub forest (e.g. *Tamarix parviflora*, *Salix* sp.) and pine and coppice forests.

Albania has 6 national forest parks covering a total surface of about 8 km<sup>2</sup>, 23 natural reserves (about 35 km<sup>2</sup>) and 200 nature monuments.

## ALBANIAN MAMMALS

Sixty three species have been recorded in Albania (Tab. 1); another 15 species, including 5 found in 1989 on the eastern border between Albania and Greece (mountainous area surrounding the Ohrit Lake, M. G. Filippucci pers. comm.), can

be considered probably present (Tab. 2). Hence 78 species could occur in Albania. According to the IUCN (1996) red list of threatened animals, 8 species are defined as vulnerable, 15 as lower risk, one (the otter) as not evaluated and one ( the Mediterranean monk seal) as critically endangered.

Table 1 List of mammals occurring in Albania. (1) recorded by Andera, 1991. Legal status in Albania: P=Protected, H=Hunted; IUCN (1996) Red List of Threatened species: VU = Vulnerable, A2c = population decline projected or suspected in the future based on a decline in area of occupancy, extent of occurrence and/or quality of habitat; A1c = population reduction observed, estimated, inferred or suspected in the past based on a decline in area of occupancy, extent of occurrence and/or quality of habitat; D2 = very small or restricted species, population is susceptible; LR = Lower risk, cd = conservation dependent, nt = near threatened; NE = Not Evaluated; CR = Critically Endangered, C2a = Small population size and decline, continuing decline and all individuals in a single subpopulation

ENGLISH NAME	SPECIES	LEGAL STATUS AND IUCN
ERINACEIDAE		
Eastern hedgehog	<i>Erinaceus concolor</i>	
TALPIDAE		
Blind mole	<i>Talpa caeca</i>	
SORICIDAE		
Pygmy shrew	<i>Sorex minutus</i>	
Common shrew	<i>Sorex araneus</i>	
Alpine shrew	<i>Sorex alpinus</i>	
Water shrew	<i>Neomys fodiens</i>	
Pygmy white-toothed shrew	<i>Suncus etruscus</i>	
Lesser white-toothed shrew	<i>Crocidura suaveolens</i>	
RHINOLOPHIDAE		
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	P, VU A2c
Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	P, LR/cd
Mediterranean horseshoe bat	<i>Rhinolophus euryale</i>	P, VU A2c
Blasius' horseshoe bat	<i>Rhinolophus blasii</i>	P, LR/nt
VESPERTILIONIDAE		
Whiskered bat	<i>Myotis mystacinus</i>	P
Lesser mouse-eared bat	<i>Myotis blythi</i>	P
Greater mouse-eared bat	<i>Myotis myotis</i>	P, LR/nt
Long-fingered bat	<i>Myotis capaccinii</i>	P, VU A2c
Geoffroy's bat	<i>Myotis emarginatus</i>	P, VU A2c
Noctule	<i>Nyctalus noctula</i>	P
Leisler's bat	<i>Nyctalus leisleri</i>	P, LR/nt
Serotine	<i>Eptesicus serotinus</i>	P
European free-tailed bat	<i>Miniopterus schreibersi</i>	P, LR/nt
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	P
Nathusius' pipistrelle	<i>Pipistrellus nathusii</i>	P
Kuhl' pipistrelle	<i>Pipistrellus kuhlii</i>	P
Savi's pipistrelle	<i>Hypsugo savii</i>	P
Brown long-eared bat	<i>Plecotus auritus</i>	P
Grey long-eared bat	<i>Plecotus austriacus</i>	P
MOLOSSIDAE		
European free-tailed bat	<i>Tadarida teniotis</i>	P

(continued)

ENGLISH NAME	SPECIES	LEGAL STATUS AND IUCN
LEPOKIDAE		
Brown hare	<i>Lepus europaeus</i>	H
Rabbit	<i>Oryctolagus cuniculus</i>	
SCIURIDAE		
Red squirrel	<i>Sciurus vulgaris</i>	H. LR/nt
European souslik	<i>Spermophilus citellus</i>	VU A1c
MYOCASTORIDAE		
Coypu	<i>Myocastor coypus</i>	
MYOXIDAE		
Fat dormouse	<i>Myoxus glis</i>	LR/nt
Forest dormouse	<i>Dryomys nitedula</i>	LR/nt
Common dormouse	<i>Muscardinus avellanarius</i>	LR/nt
MURIDAE		
Common vole	<i>Microtus arvalis</i>	
(1) Vole	<i>Microtus felteni</i>	LWnt
Black rat	<i>Rattus rattus</i>	
Brown rat	<i>Rattus norvegicus</i>	
House mouse	<i>Mus musculus</i>	
Yellow-necked mouse	<i>Apodemus flavicollis</i>	
Wood mouse	<i>Apodemus sylvaticus</i>	
Rock mouse	<i>Apodemus mystacinus</i>	
Harvest mouse	<i>Micromys minutus</i>	LR/nt
SPALACINAE		
Lesser mole rat	<i>Spalax leucodon</i>	VU D2
URSIDAE		
Brown bear	<i>Ursus arctos</i>	P
CANIDAE		
Golden jackal	<i>Canis aureus</i>	P
Wolf	<i>Canis lupus</i>	H
Red fox	<i>Vulpes vulpes</i>	H
MUSTELIDAE		
Weasel	<i>Mustela nivalis</i>	P
Western polecat	<i>Mustela putorius</i>	P
Stone marten	<i>Martes foina</i>	H
Pine marten	<i>Martes martes</i>	P
Badger	<i>Meles meles</i>	P
Otter	<i>Lutra lutra</i>	P. NE
FELIDAE		
Wildcat	<i>Felis silvestris</i>	P
Lynx	<i>Lynx lynx</i>	P
PHOCIDAE		
Mediterranean monk seal	<i>Monachus monachus</i>	P. CR C2a
SUIDAE		
Wild boar	<i>Sus scrofa</i>	H
BOVIDAE		
Chamois	<i>Rupicapra rupicapra</i>	P
CERVIDAE		
Roe deer	<i>Capreolus capreolus</i>	P
Fallow deer	<i>Dama dama</i>	

Table 2 Species probably present in Albania (\* species found on the border between Albania and Greece, M.G. Filippucci pers. comm., see Tab. 1 for IUCN categories and criteria)

ENGLISH NAME	SPECIES	LEGAL STATUS AND IUCN
TALPIDAE		
Balkan mole*	<i>Talpa stankovici</i>	
SORICIDAE		
Miller's water shrew	<i>Neomys anomalus</i>	
Bi-coloured white-toothed shrew	<i>Crocidura leucodon</i>	
RHINOLOPHIDAE		
Mehely's horseshoe bat	<i>Rhinolophus rnehelyi</i>	P, VU A2c
VESPERTILIONIDAE		
Greater noctule	<i>Nyctalus lasiopterus</i>	P, LR/nt
MYOXIDAE		
Garden dormouse	<i>Eliomys quercinus</i>	VU A1c
MURIDAE		
Bank vole*	<i>Clethrionomys glareolus</i>	
Balkan snow vole*	<i>Dinaromys bogdanovi</i>	LR/nt
Snow vole*	<i>Chionomys nivalis</i>	LR/nt
(vole)	<i>Microtus thomasi</i>	LR/nt
Common pine vole*	<i>Microtus subterraneus</i>	
Sibling vole	<i>Microtus rossiaemeridionalis</i>	
Northern water vole	<i>Arvicola terrestris</i>	
Striped field mouse	<i>Apodemus agrarius</i>	
MUSTELIDAE		
Stoat	<i>Mustela erminea</i>	

In Albania the legal protection of mammals includes all bat species, carnivores (except the stone marten, the red fox and the wolf), the chamois, the roe deer and the Mediterranean monk seal. Nevertheless, hunting of protected species is allowed by special permission by the Ministry of Agriculture. The otter is controlled when damaging fisheries.

Important roosting sites for cave bats have been recorded in Pishkast (Pogradec), Vanishte (Gjirokaster), Fushe-Kruje (Krujë), Ali Deba (Shkoder), Korite (Corodove), Shales (Elbasan). In 1991 a colony of about 10 000 females of *Myotis capaccinii* was checked in a cave located on the southern bankside of the Prespes se Vogel lake (J. Chytil pers. comm.).

For the carnivores, the brown bear seems to be mainly distributed in the high forest throughout the country. The most important zones for the species are: Lure (Peshkopi), Germenje (Kolonje), Cangonj (Korce), and Hondisht and Llenge (Pogradec). The total population is estimated at about 490 individuals.

The wolf is mainly distributed in the Albanian Alps with a population size of about 400 individuals. It is included in hunting species list because seems to cause damage to livestock. The jackal seems to be rare and absent from the coastal plain.

The otter is widespread in much of the country but its range is restricted in the central area, coastal plain and Korce's plain (Fig. 1). It occurs mainly in uplands (600 m a.s.l.) but good populations are also encountered in some lowland areas and coastal marches (Lezhe lagoons). For other mustelids, the polecat is becoming rare

and the pine marten seems to be scattered or very restricted in range (from the Albanian Alps to Gramsh district). The same situation concerns also the wild cat and the lynx. About 50 lynxes are assessed for Albania and the best population seems to occur in Theth National Park and surrounding areas.

The Mediterranean monk seal has been recorded in the '80s in Butrintit and Karavastase lagoons. Suitable resting and breeding sites for this species could be available along the coastline between the Vlore gulf (Karaburum peninsula) and Sarande gulf.

With regard to some game species, the brown hare and the wild boar show low density in much of the country; this is also true for the roe deer although it is protected (Tab. 3). The total population of this cervid is estimated at about 900 individuals, while the red deer has disappeared (F. Lamani pers. comm.) and the fallow deer seems to occur only in captivity.

Table 3 Mean density (individuals/Km<sup>2</sup>) of some species recorded in Autumn 1991. Data collected from 26 administrative districts by the General Directorate of Forestry Economy of Albania; S.D. = standard deviation.

SPECIES	MEAN	S.D.	MIN-MAX
<i>Lepus europaeus</i>	4.7	4.3	1-19
<i>Vulpes vulpes</i>	1.5	1.7	0.2-8
<i>Martes foinu</i>	0.9	0.6	0.1-2
<i>Capreolus capreolus</i>	1.2	4.3	0.03-20
<i>Sus scrofa</i>	0.2	0.2	0.02-1

The range of the chamois (about 1 000 individuals are assessed) includes the Albanian Alps in the north of the country and the Trebeshinë-Dhembel-Nëmërçk mountains in the south.

Albania preserves its native mammal species, particularly the game species, since the introduction or restocking of exotic species and strains do not seem to have occurred. In recent years only the coypu has been introduced, but it seems to occur in captivity.

The political and structural situation in Albania is still characterised by a noticeable instability of initiatives. This is a clear indication of an incipient institutional and economical reform process which is just starting in all productive, social and legislative sectors. Therefore an uncontrolled economic development could involve marked losses in natural habitat and especially in very sensitive areas hosting rare or threatened mammal species. A study programme is urgently needed in order to outline a general picture of distribution and status of mammals and strategies for their conservation.

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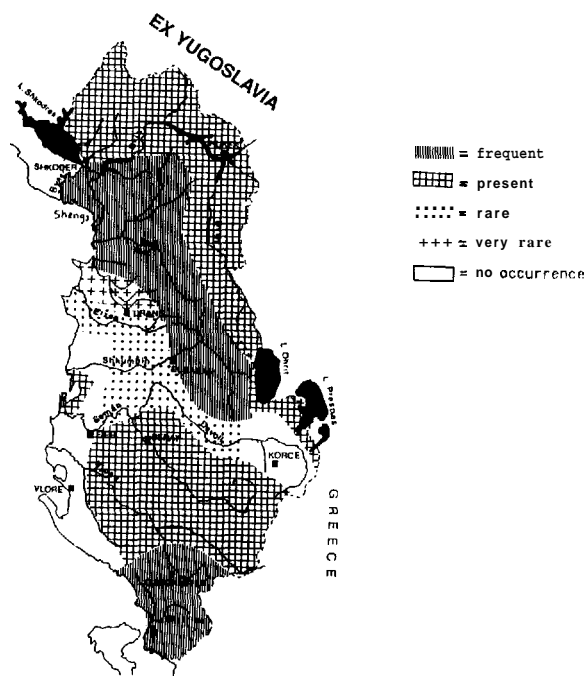


Figure 1 - Distribution of the otter in Albania.

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