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TERRESTRIAL MAMMAL FAUNA AND THREATENED SPECIES IN FRANCE

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ABSTRACT – With the passing of time, the terrestrial mammal fauna changed considerably in France: definitive extinctions, temporary disappearances, natural reapparitions, introductions and reintroductions. 21 species are considered as threatened (endangered and vulnerable)and two have completely disappeared. However, more precise data are needed for **a** few of them.

***Key** Words:* Threatened species, Terrestrial mammals, France.

The terrestrial mammal fauna of France includes 99 regular, breeding species, of which 11 are introduced species and 5 regular non breeding. Such a fauna is relatively rich: it represents about 45% of European species. France's biogeographic position is favourable and representative of European diversity owing a wide variety of situations including continental, atlantic, alpine and mediterranean. Strictly speaking, France has no national endemic mammals but shares several endemic species with neighbouring countries: it is the case for Pyrenean desman (*Galemys pyrenaicus*) and several species of *Microtus terricola* (Beaufort and Fayard, 1983)

During ancient historical periods (before 1600), four species have disappeared. Seven additional species have lost during more recent historical times.

Happily we have recovered five of them owing to presumed natural recolonization from neighbouring European populations. Such was the case, for example, for grey seal in the nineteen-sixties, for the common seal in the nineteen-seventies, and for the wolf in 1992. The reapperance of the wolf in the extreme south-east of France (Mercantour National Park) in consequence of its natural occurrence from Italy is the most striking and recent reacquisition (Maurin and Keith, 1994).

The status of introduced species is very heterogenous: two species (Rodents) have a large and continuous distribution; three species remain very localised; the Florida rabbit has been largely introduced in a first step but its implantation did not really succeeded and is now doubtful. Voluntary and managed reintroductions concern eight species such as continental lynx (Vosges, Jura and Alpes), while the definite disappearance of this species from Pyrenees is still discussed; as for the seven other ones, they had not completely disappeared or had partly reappeared (*Capra **ibex)*** and they have benefited of regional reimplantations (Maurin and Keith, 1994).

Two extinct species since 1600 did not reappeared and have not been reintroduced: moreover, thirty species (29%) can be considered as rare (9 species), vulnerable (13 species) or endangered (8 species) at the national scale. It has to be

Table 1 - Mammals of France: status and evolution

A/ TOTAL NUMBER OF TERRESTRIAL* MAMMAL SPECIES :	104	of which 11 introduced species
and to add : - occasional :	5	*Odobenus rosmarus, Erignatus barbatus, Phoca groenlandica. Phocn hispida, Cystophora cristata.*
and : - extinct species, before 1600 :	4	
and : - extinct species, since 1600 :	2	5 additional species have disappeared and have reappeared
Maximal proved number of mammal species :	110	

* excluding Cetaceans

B/ LIST OF MAMMALS ENDEMIC TO FRANCE	none

C/ LIST OF EXTINCT SPECIES :	YEAR	
1. historical period : before 1600 :		
Equus ferus	18th century	historical evidences or data are rare
Bos primigenius	6th century	historical evidences or data are rare
***Bison** bison*	7th century	historical evidences or data are rare
Prolagus sardus	18th century	historical evidences or data are rare
2. after 1600 :		
(Canis lupus)	1939	reappeared locally in 1992 in Mercantour national park
(Lynx lynx)	1910 (Alpes)	partly reappeared (1984). partly reintroduced (1983 and post.) maybe remained in the Pyrenees
Monachus monachus	1975	last observations in Corsica
(Halichoerus grypus)	by the end of 18th century	reappeared (around 1960)
(Phoca vitulina)	1930	reappeared since 1979
(Capra ibex)	1815	partly reappeared (around 1950), partly reintroduced (1972 and post.)
Capra pyrenaica	by the end of 19th century	to reintroduce

D/ LIST OF INTRODUCED NON INDIGENOUS SPECIES :	YEAR	REASONS FOR INTRODUCTION	ACCLIMATATION
Procyon lotor	1960; sparse observ.	accidental : escaped	very localised, sparse but continuous observations
Mustela vison	beginning of 20th century	accidental : escaped	in way of extension
Cervus dama	ancient	deliberate. for cynegetic or ornemental purposes, or accidental	many captive and some feral populations
Cervus (Sika) nippon	from1913	deliberate, for cynegetic or ornemental purposes	large distribution, populations § still limited
Hydropotes inermis	around 1960	accidental : escaped	very limited range (one feral population)
Callosciurus erythraeus	around 1980	accidental : escaped	very limited range
Ondatra zibethicus	beginning of 20th century	accidental : escaped	large extension
Rattus norvegicus	18th century	accidental, linked with human activities	large extension
Rattus rattus	4th century B.C.	accidental, linked with human activities	large extension
Mus musculus	7th century B.C.	accidental, linked with human activities	large extension
Myocastor coypus	by the end of 19th century	accidental : escaped or deliberate for ecological purposes	large extension
Sylvilagus floridanus	around 1953, not acclimatized	deliberate, for cynegetic purposes	probably not acclimatized definitively

E/ LIST OF REINTRODUCED SPECIES			
1. after their complete disparition			
Lynx lynx	1983 and post.	for biological purposes	maybe remained in the Pyrenees
Capra ibex	1972 and post.	for biological purposes	

(continued)

E/ LIST OF REINTRODUCED SPECIES	YEAR	REASONS FOR INTRODUCTION	ACCLIMATATION
2. after only regional disparitions			
Ursus arctos	1996	for biological purposes	acclimatation not yet confirmed
Lutra lutra	from 1972	for biological purposes	acclimatation not confirmed
Felis silvestris	after 1950	for biological purposes	acclimatation not confirmed
Cervus elaphus	from a long time	for cynegetic purposes	
Rupicapra rupicapra	from 1956	for cynegetic purposes	
Marmota marmota	from 1950	for cynegetic and biological purposes	
Castor fiber	from 1965	for biological purposes	

F/ LIST OF APPEARED OR REAPPEARED SPECIES	YEAR	ORIGIN	ACCLIMATATION
1. spontaneously appeared non indigenous species			
Nyctereuctes procyonoides	from 1979	spontaneous geographical extension	non yet established as a stable population
2. disappeared then spontaneously reappeared indigenous species			
Canis lupus	1992	spontaneous	
Lynx lynx	from 1984	first reintroduced, then spontaneous	
Halichoerus grypus	around 1960	spontaneous	
Pkoca vitulina	1979	spontaneous	
Capra ibex	from 1950	first spontaneous, then reintroduced	

G/ LIST OF THREATENED SPECIES : REFER TO TAB. 2

Table 2 - Threatened mammals in France

	RELATIVE ABUNDANCE	TENDANCY OF POP.	TENDANCY OF RANGE
Endangered			
Rhinolophiis mehelyi	very rare	regression	regression
Myotis dasycneme	rare	regression	no evidence
Canis lupus	very rare	extension	extension
Ursus arctos	very rare	regression	regression
Lutra lutra	rare	stability	partly extension, partly regression
Mustela lutreola	rare	regression	regression
Lynx **lynx**	rare	extension	extension
Phoca vitulina	very rare	extension	extension
Vulnerable			
Rhinolophus ferrumequinum	rare	regression	no evidence
Rhinolophus hipposideros	rare	regression	no evidence
Rhinolophus euryale	rare	regression	regression
Myotis myotis	not common	regression	no evidence
Mvotis blythi	rare	regression	no evidence
Myotis capaccinii	rare	regression	no evidence
Myotis emarginatus	rare	regression	no evidence
Myotis bechsteini	rare	stability (?)	stability (?)
Nyctalus noctula	rare	stability (?)	stability (?)
Nyctalus leisleri	rare	stability (?)	stability (?)
Barbastella batbastellus	rare	regression	no evidence
Miniopterus schreibersi	not common	regression	no evidence
Halichoerus grypus	rare	stability	stability

(continued)

	RELATIVE ABUNDANCE	TENDANCY OF POP.	TENDANCYOFRANGE
Rare			
Sorex alpinus	rare	stability (?)	stability (?)
Talpa caeca	rare	stability (?)	stability (?)
Galemys pyrenaicus	rare	regression	stability
Tadarida teniotis	rare	stability (?)	stability (?)
Myotis brandti	rare	stability (?)	stability (?)
Vespertilio murinus	rare	stability (?)	stability (?)
Eptesicus nilssoni	rare	stability (?)	stability (?)
Cricetus cricetus	rare	regression	stability
Lepus timidus	rare	stability	stability

noted that among these, 18 species are Chiroptera and this reflects also the relative lack of information on this group as well as the lack of comparative data on their previous status. The "Red" status of French mammal fauna is very comparable to the general situation of mammals as the European scale (Beaufort, 1991).

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