

THE MAMMAL FAUNA OF ITALY A REVIEW

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ABSTRACT – A synthesis on the status of the Italian mammals species is reported. For each order, faunistic and biogeographic data and conservation concern are considered. In addition, a list of endemic, rare and/or endangered mammal species, classified according to the new IUCN criteria is provided as well as the species and subspecies recently introduced in Italian territory.

Key words: Mammals, Italy, Conservation, Status, Endemism, Introduced species

INTRODUCTION

Current knowledge on the distribution, taxonomy and systematics of Italian mammals can not be considered exhaustive (cf. Angelici, 1996). In Italy there are 117 species of mammals including those Cetaceans species stranded ashore and those sighted in territorial waters. This number includes only those species which have been captured or seen with certainty and excludes those that have not been reported in the last 30 years (Amori et al., 1993; Amori et al., submitted).

There are not any up-to-date syntheses on the Italian mammal fauna. All available works are very old and have only an historical value (Cornalia, 1870; Toschi and Lanza, 1959; Toschi, 1965)

The aim of this paper is to report briefly the current status of the Italian mammalian fauna, scanning it at the order level. For a more detailed approach, both at the historical and taxonomic level see Amori et al. (submitted).

ORDER ACCOUNT

INSECTIVORA

None of the 16 species (13,7% of all Italian mammal species) of insectivores recorded in Italy can be considered threatened or endangered. All the species except moles are officially protected on the whole Italian territory.

The only serious factor that could represent a threat to their population sizes is the intense and uncontrolled use of pesticides and, in particular, of insecticides.

Population size on a national scale, as well as the actual distribution range of some of these species, are hard to estimate.

This order is present in Italy with 3 endemic species and 21 endemic subspecies (Amori et al., submitted).

CHIROPTERA

Chiroptera are represented by 29 species (24.8% of all Italian mammal species).

Major threats to the species of this order are the use of pesticides and insecticides and, for species which live in caves, the disturbance and degradation of these habitats.

It can be said that none of the species of Chiroptera present in Italy is really threatened though they should all be considered as having an indeterminate status because little is known about their population sizes. Some of these species are considered rare in Italy mainly because of lack of data.

Due to their high vagility, Chiroptera are characterized by low levels of endemisms. At present there is only one subspecies, *Myotis blythii oxygnathus*, considered endemic for Italy.

LAGOMORPHA

This order, which is represented by six species (5.1%), is very important economically and for hunting.

In some cases the introduction of *Lepus europaeus* from Eastern Europe countries to increase population size has disturbed considerably the autochthonous fauna and has also caused the introduction of some parasites (Spagnesi and Trocchi, 1992). These introductions, together with excessive hunting, have caused the disappearance of the endemic subspecies *Lepus europaeus rneridiei* that once occurred in Central and Northern Italy and is today most probably introgressed with imported taxa. The Appenine hare *Lepus corsicanus*, recently recognized as an endemic Italian species (Hoffmann, 1993; Palacios, 1995/96), underwent a dramatic range contraction probably due to the same factors. Another example of harmful introduction is represented by the cotton tail *Sylvilagus floridanus* (see Tab. 3), a North-American species well adapted to the northern Italian climate, where it is a strong competitor with autochthonous lagomorphs.

Besides the endemisms already mentioned (Tab. 1) there are other species biogeographically important like *Lepus timidus varronis*, which includes an Alpine sub-endemism, and the wild rabbit *Oryctolagus cuniculus huxleyi*, a threatened species (Tab. 2) (Angelici, 1996), representing a Mediterranean sub-endemism.

Table 1 - List of Italian endemic species

<i>Sorex samniticus</i> Altobello, 1926
<i>Crocidura sicula</i> Miller, 1901
<i>Talpa romana</i> Thomas, 1902
<i>Lepus corsicanus</i> de Winton, 1898
<i>Microtus savii</i> (de Sbls-Longchamps, 1836)

Table 2 - Threatened species and subspecies in Italian territory. CR = Critically Endangered; EN= Endangered; VU = Vulnerable; LR = Lower risk, nt = near threatened, lc = least concern; EX = Extinct; NE = Not Evaluated

	IUCN CATEGORIES (1994, 1996)
<i>Oryctolagus cuniculus huxleyi</i> (Haeckel, 1874)	EN
<i>Lepus capensis mediterraneus</i> Wagner, 1841	VU
<i>Lepus europaeus meridiei</i> Hilzheimer, 1906	CR
<i>Lepus corsicanus</i> de Winton, 1898	CR
<i>Sciurus vulgaris</i> Linnaeus, 1758	VU
<i>Eliomys quercinus</i> (Linnaeus, 1758)	VU
<i>E. quercinus liparensis</i> Kahmann, 1960	CR
<i>E. quercinus sardus</i> Barret-Hamilton, 1898	EN
<i>Dryomys nitedula</i> (Pallas, 1779)	VU
<i>D. nitedula intermedius</i> (Nehring, 1902)	VU
<i>D. nitedula aspromontis</i> von Lehmann, 1964	EN
<i>Myoxis glis melonii</i> Thomas, 1907	VU
<i>Muscardinus avellanarius</i> (Linnaeus, 1758)	VU
<i>Micromys minutus</i> (Pallas, 1771)	VU
<i>Canis aureus</i> Linnaeus, 1758	NE
<i>Canis lupus</i> Linnaeus, 1758	VU
<i>Ursus arctos</i> Linnaeus, 1758	CR
<i>Ursus arctos marsicanus</i> Altobello, 1921	EN
<i>Lutra lutra</i> (Linnaeus, 1758)	CR
<i>Martes martes</i> (Linnaeus, 1758)	LR/lc
<i>Felis silvestris</i> Schreber, 1777	VU
<i>Lynx lynx</i> (Linnaeus, 1758)	NE
<i>Lynx lynx alpina</i> Ragni, Possenti and Mayr, 1993	EX (XX century)
<i>Monachus monachus</i> (Hermann, 1779)	CR
<i>Balaenoptera ucutorostrata</i> Lacépède, 1804	VU
<i>Kogia simus</i> (Owen, 1866)	NE
<i>Ziphius cavirostris</i> G. Cuvier, 1823	VU
<i>Delphinus delphis</i> Linnaeus, 1758	EN
<i>Pseudorca crassidens</i> (Owen, 1846)	VU
<i>Orcinus orca</i> (Linnaeus, 1758)	VU
<i>Steno bredanensis</i> (G. Cuvier, 1828)	NE
<i>Cervus elaphus</i> Linnaeus, 1758	VU
<i>C. elaphus corsicanus</i> Erxleben, 1777	EN
<i>Capreolus capreolus italicus</i> Festa, 1925	EN
<i>Ovis orientalis musimon</i> (Pallas, 1811)	VU (Sardinian populations)
<i>Capra hircus aegagrus</i> Erxleben, 1777	EN
<i>Capru ibex</i> Linnaeus, 1758	LR/nt
<i>Rupicapra pyrenaica ornata</i> Neumann, 1899	EN

RODENTIA

With 27 species; rodents represent 23.1% of all Italian mammal species. Italian rodents have some rare and contracting subspecific populations that should be protected (Amori et al., submitted). Some species, like *Micromys minutus*, have an undetermined status, though they have presumably undergone a population size decrease due to the disappearance of their habitat, caused by environmental degradation (Amori, 1993).

This order, being present in Italy with one endemic species and 24 endemic subspecies, contributes considerably to the Italian mammal biodiversity.

Among Italian rodents four species and one subspecies, that have been either introduced or escaped from captivity, are naturalized (Tab. 3) (cf. Amori and Lapini, in press).

Table 3 - Introduced species and subspecies in Italian territory

<i>Lepus europaeus europaeus</i> Pallas, 1778
<i>L. europaeus hybridus</i> Desmarest, 1822
<i>L. europaeus transsylvanicus</i> Matschie, 1901
<i>Sylvilagus floridanus</i> (J. A. Allen, 1890)
<i>Sciurus carolinensis</i> Gmelin, 1788
<i>Tamias sibiricus</i> (Laxmann, 1769)
<i>Marmota marmota latirostris</i> Kratochvil, 1961
<i>Ondatra zibethicus</i> (Linnaeus, 1766)
<i>Myocastor coypus</i> (Molina, 1782)
<i>Mustela vison</i> Schreber, 1777
<i>Herpestes edwardsii</i> (E. Geoffroy, 1818)
<i>Lynx lynx carpathicus</i> Kratochvil and Stollmann, 1963
<i>Capra hircus aegagrus</i> Erxleben, 1777

CARNIVORA

Carnivora are represented by 17 species (14.5%). Up to the seventies many of these species were considered as pests and were hunted. Nowadays the situation has improved but some species are still threatened (see Tab. 2), and others, like *Mustela putorius* and *Martes martes*, have an unknown status. A very likely hypothesis is a reduction in numbers probably due to a general environmental degradation.

From a biogeographical point of view, five endemic subspecies are recognized (Amori et al., submitted) but a deeper knowledge of the order is needed (cf. Vigna Taglianti, 1988).

CETACEA

Thirteen (11.1%) species have been in Italian waters. The order has no endemisms. Some species (e.g. *Physeter macrocephalus*, *Stenella coeruleulba*) suffer from fishing techniques with pelagic nets.

ARTIODACTYLA

In Italy there are nine species (7.7%), five of which are sub-endemic and decreasing in population size; one, *Capra ibex*, shows an Alpine endemism at the subspecific level (*C. i. ibex*).

More severe genetic and disease control is needed on animals introduced into Italy. The number of introduced specimens should anyway be reduced progressively until all introductions of alloctonous individuals are definitely suppressed and replaced by re-introductions of individuals belonging to Italian taxa (Angelici, 1996)

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