

FIRST RECORDS OF THE NORTHERN RACCOON *PROCYON LOTOR* IN ITALY

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RIASSUNTO - Prime segnalazioni del procione *Procyon lotor* in Italia. In Lombardia fra il 2004 e il 2008 sono stati segnalati 10 individui di procione *Procyon lotor*. La distribuzione delle osservazioni è coerente con l'areale attualmente occupato dalla specie in Europa. Il fatto che le osservazioni siano avvenute lungo il corso dell'Adda e dei canali da esso alimentati permette di ipotizzare che la specie abbia colonizzato il paese seguendo una rotta di dispersione che connette l'area del lago di Como alla Svizzera e al corso del fiume Adda. L'osservazione di giovani suggerisce l'esistenza di una popolazione riproduttiva in Italia.

Parole chiave: *Procyon lotor*, espansione, distribuzione, specie alloctone, Lombardia, Italia

Feral populations of the Northern raccoon *Procyon lotor* are widely distributed outside its original range, since the species has been repeatedly introduced for fur and hunting. In Europe, the raccoon has been introduced in central Germany (Hessen) between 1927 and 1934 and a second population has been established in Berlin at the end of World War II. During the late 1960s, following the voluntary release of an unstated number of individuals, the raccoon has colonized Northern France, where the first record of the species dates back to 1934 (Bartoszewicz, 2006). The raccoon has been also introduced into several areas of Russia and in Belarus during the 1950s, but only a few populations succeeded in establishing.

Following the above-mentioned introductions, the species has strongly increased its numbers in Germany and France and slowly dispersed all over central Europe (Bartoszewicz, 2006). Currently it is distributed in the Netherlands (first record: 1960), Austria (1974), Switzerland (1976, Sciaffusa canton), Luxembourg (1979), the former Yugoslavia, the Czech Republic,

Slovakia, Hungary, Belgium, Poland, Denmark, Lithuania, Norway and Sweden (Lassig, 2003; Cirovic and Milenkovic, 2003; Bartoszewicz, 2006). More than 20 records of free living raccoons have been collected in Great Britain during the 1980s. All individuals came from captivity, without any evidence of reproduction except for a record in Yorkshire (Corbet and Harris, 1991) (Fig. 1).

In Germany the raccoon population has increased since the late 1950s, its estimated abundance ranging from 200.000 to 400.000 individuals (Hohmann and Bartussek, 2001). The analysis of hunting-bags shows that the raccoon is abundant next to the area of original release (Hessen and Brandenburg), whilst it is rather rare - about 0.1 ind/Km² (assessed from original data reported in Bartussek, 2004) -, in the rest of the country. In the neighbouring countries the species is usually rare or only locally abundant (Lutz, 1995). Populations are localized in Lithuania, Poland, southern Ukraine and Russia and rare, with few occasional individuals or non-reproductive groups, in Sweden, Norway and Denmark; the

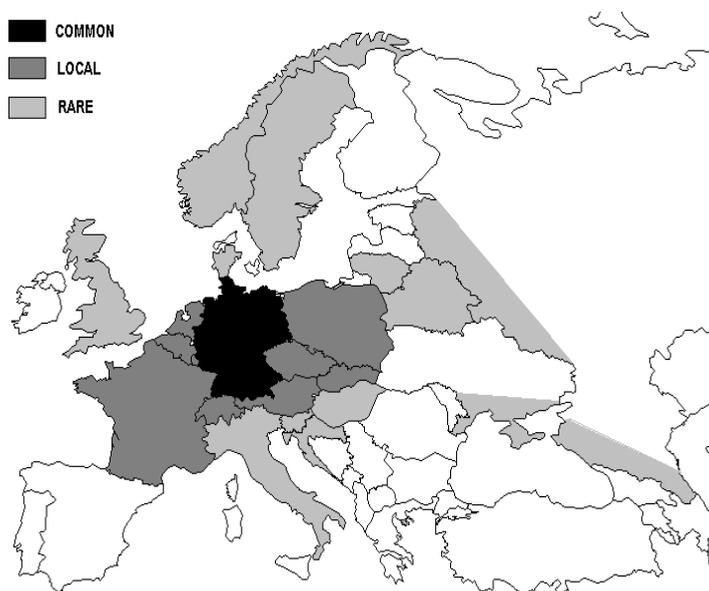


Figure 1 - Current distribution and abundance of the Northern raccoon in Europe (common = population widely distributed and reproductive; local = population only locally abundant and reproductive; rare=scattered individuals, no evidence of reproduction, individuals from captivity).

Scandinavian individuals probably escaped from captivity (Bartoszewicz, 2006). Since 2004, ten records of the raccoon have been reported for the Lombardy region (northern Italy). All the individuals were observed around canals or ditches; eight individuals were sighted in the wild, while two were killed by road traffic (Fig. 2). Records are concentrated south of Milan (Fig. 3), whilst no observation is available for the eastern and western plain of the River Po. On the basis of recorded distribution, we can hypothesize that feral raccoons dispersed from Switzerland, moving along a dispersal route formed by the depression of the Lake of Como and the River Adda valley. The presence of the species in Cassano d'Adda and Vaprio d'Adda, close to both the southern part of the lake and the river, as are the records along two canals (Muzza and Addetta) fed by the River Adda, support our hypothesis.

Nonetheless, raccoons are mainly distributed in northern Switzerland, whilst only a few sightings are available for the southern Valais, Grigioni and Ticino cantons (Läsigg, 2003).



Figure 2 - A Northern raccoon killed by road traffic in the River Po plain.

Moreover, there is no evidence that the Swiss raccoon population is currently increa-

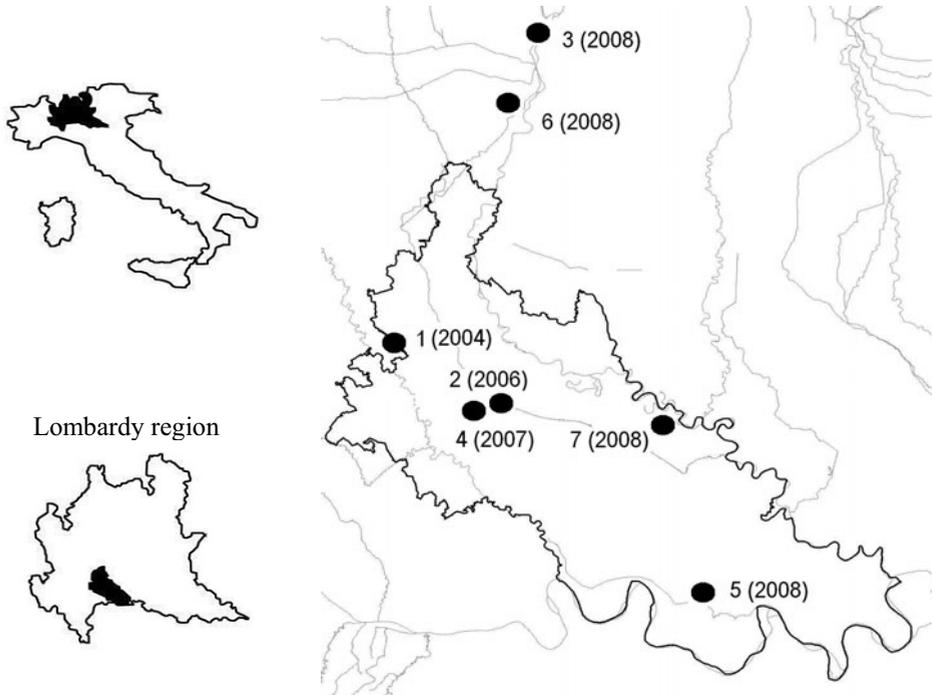


Figure 3. Records and years of the sightings of the Northern raccoon in Lombardy (province of Lodi: 1 = Tavazzano con Villavesco, 2, 4 = Muzza di Cornegliano Laudense, 7 = Bertonico; Province of Milan: 3 = Vaprio d'Adda, 5 = Fombio, 6 = Cassano d'Adda). Hydrographic system in thin line; records 3 and 6 are out of scale.

sing and spreading. However, since mammalian dispersal can be non-regulative (Lidicker and Stenseth, 1992), individual movement can be unrelated to population increase; as a consequence, dispersal could be more diffuse than expected in the low-density Swiss population and partially underestimated by zoologists.

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