

## Distribution of the stone marten *Martes foina* (Carnivora, Mustelidae) in the European part of Russia

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**ABSTRACT.** The stone marten *Martes foina* (Carnivora, Mustelidae) is widely distributed in continental Europe from the Mediterranean to the Baltic Sea, and from Spain to Volga River. North-eastern border of the species distribution in Eastern Europe is poorly known. Its presence in Moscow Province was confirmed by the specimen found in the vicinity of Kupavna. The recent records of *M. foina* from the European part of Russia are discussing, fragmentariness and heterogeneity of these data is demonstrating.

**KEY WORDS:** *Martes foina*, Mustelidae, distribution, Moscow Province, European Russia.

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## Распространение каменной куницы *Martes foina* (Carnivora, Mustelidae) в Европейской части России

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**РЕЗЮМЕ.** Каменная куница широко распространена в континентальной Европе от Средиземного до Балтийского моря и от Испании до берегов Волги. Северо-восточная граница вида в Восточной Европе изучена недостаточно. Обитание каменной куницы в Московской области подтверждено находкой в окрестностях Купавны. В работе представлены современные данные о находках *M. foina* в европейской части России, продемонстрирована фрагментарность и неоднородность этих данных.

**КЛЮЧЕВЫЕ СЛОВА:** *Martes foina*, Mustelidae, распространение, Московская область, Европейская часть России.

The stone marten, or beech marten, *Martes foina* (Erxleben, 1777) is widely distributed in Palaearctic: from Spain to Central Europe and south part of Eastern Europe, also on islands of Corfu, Crete and Rhodes; through Caucasus Mountains, mountainous regions of Iran and Middle Asia to the Altai Mountains, Mongolia, Himalayas and adjacent parts of China. This is a common mustelid in continental Europe, which distribution area spread from Mediterranean to Baltic Sea and from Portugal to Volga River. However, its northern border in Eastern Europe still stays very poorly known (Fig. 1). Beech marten recorded in Baltic States (Latvia, Lithuania, and Estonia), in western and southern region of Belarus, and Ukraine.

In Russia the species distribution is represented by three fragments not connected with each other. One of them is located in Siberia covering southern part of the Altai Mountains; second one covers the Northern Caucasus and the third fragment is situated in the central part of European Russia. The distribution of the stone marten in the European Russia is highly controversial and in a great extent is based on the anecdotal evidences from trappers and foresters.

Stone marten was reported for the Moscow Province by several authors (Ognev, 1931; Novikov, 1956); however most of these records look doubtful. Ognev (1931) reported about trapping of three specimens of *M. foina* in Shchurovo near Kolomna (55°03'N, 38°49'E). This record together with some personal communications from trappers gave him ability to include stone marten into the fauna of Moscow Province. However, Heptner (Heptner *et al.*, 1967) reviewing all the available records of *M. foina* from the European Russia, came to the conclusion that all findings in the Moscow Province are invalid because none of them were confirmed by any collection specimens. Meantime, in 1936 the stone marten was introduced into eastern part of Ryazan Province (Lavrov, 1946; Nazarov, 1957; Grakov, 2001). Fifty-four specimens were released on the right bank of Oka River not far from mouth of Moksha River in the Laptevsky Forestry of Oksko-Kasimovsky Hunting Area (ca. 54°57'N, 41°22'E). In 1946–1952 stone martens were trapped near Kasimov, Spassk, and Solodtcha (Nazarov, 1957), about 70 km from present border of Moscow Province. Heptner (Heptner *et al.*, 1967) supposed that small popula-



Figure 1. Distribution of *Martes foina* in European part of Russia. Solid line is the border of *M. foina* distribution according to Heptner *et al.* (1967). Recent museum records are shown in black circles, literature data are in open circles.

tion of stone martens could survive in the Ryazan Province, from where single animals were able to reach Moscow and Vladimir provinces. However there were also no any evidences of this suggestion for many years. Grakov (2001: 110) believed that introduced population of stone marten in Ryazan Province completely disappeared and all recent records from this area are results of modern expanding of *M. foina*.

On 20 June 2003 the carcass of stone marten was occasionally found near the town of Kupavna, less than 20 km east from Moscow (55°45'N, 38°07'E) by second and third authors. The adult animal, probably killed by some vehicle, was found on the roadside. The full skeleton and skull with deeply worn teeth are stored in the Zoological Museum of Moscow State University (ZMMU S-175493). This individual may be a distant occasional migrant, but there is a small possibility, that stone marten inhabit Moscow Province, but the density of population is very low. Necessary to take into consideration that evidences for this species in the form of skins or skulls are very rare even from many provinces where *M. foina* is thought to be a resident without doubts (see below). In any case the solution of this problem should be able only with new records and observations.

According to Heptner (in Heptner *et al.*, 1967) the north border of *M. foina* distribution in the European Russia is going more than 400 km south from Moscow crossing south-western part of Bryansk Province where this species was reported for Surazh, Pohep, Trubchevsk, and Pogar. The species was recorded for the Novosil' of Orel Province (see also Ognev, 1931). Eastward the stone marten recorded for Bobrov of Voronezh Province. Close to the central provinces of European Russia stone marten is known from Lugansk District of Ukraine and Gomel Province of Belarus (see Heptner *et al.*, 1967, Fig. 219).

In 1960-1970 the distribution of stone marten already covered most of Bryansk Province (Vatolin, 1979). Since 1970<sup>th</sup> *M. foina* was recorded in many districts of Voronezh Province close to the borders of Saratov, Volgograd and Tambov provinces (Ryabov & Sokolov, 1988). Northward from distribution border sensu Heptner (Heptner *et al.*, 1967) stone marten was recently reported for Kaluga Province (Kaluzhskiye Zaseki Nature Reserve; ca. 53°58'N, 35°32'E) (Alekseev *et al.*, 2002). Unfortunately this record was not supported by collection material.

There are comparatively more records of *M. foina* from the Middle and Lower Povolzh'ye (=Volga River Area). According to Iljin *et al.* (1996) the stone marten now is widely distributed in the Penza Province and was reported for southern part of Ul'yanovsk Province. However the only published record of *M. foina* in the latter province is based on the footprints, observed in the town of Ul'yanovsk in the beginning of 1990<sup>th</sup> (Borodin, 2001). In winter 1987-1988 the single stone marten was trapped in Tatarstan (Verkhneuslonsk District, Sviyaga Forestry), on the right bank of Volga

River (Popov & Lukin, 1988). Garanin *et al.* (2000) also mentioned the trapping of stone marten in Kamskoe Ust'ye District of Tatarstan. Although some authors mentioned the stone marten for the Zhiguli Mountains in Samara Province (Popov & Lukin, 1988), there were no cogent arguments for its presence in Samarskaya Luka or Zhiguli (V. Vekhnik, pers.comm., 2004). The only actual evidence for Samara Province is the road-killed specimen of *M. foina* found in 2001 near Verkhnie Belozerki Village (53°43'N, 49°13'E), on the left bank of Volga River (Borodin, 2001).

In Saratov Province the stone marten recorded for the valleys of left tributaries of Volga River – Eruslan, Bolshoi Uzen' (south of Aleksandrov Gay) and Bolshoi Irgiz rivers (Iljin *et al.*, 1996). There are four specimens of *M. foina* from Engels District of Saratov Province in the collection of Zoological Institute Russian Academy of Sciences (Tab. 1), collected in 1980<sup>th</sup>.

Iljin *et al.* (1996) believe the eastern border of *M. foina* distribution in the European part of Russia lies on left bank of Volga River from Volga-Akhtuba Mezhdurechye (=interfluve) to the mouth of Eruslan River. The presence of stone marten in Volgograd Province is supported by two specimens (Tab. 1). First one was trapped in 30 km north-east of Kamyshin (50°25'N, 45°49'E) in 1996. In the ZMMU collection there is the skin of *M. foina* collected near Elton Village in Volgograd Province (49°10'N, 46°49'E) in 2003.

The first published record of stone marten in Rostov Province was made near Zernograd (46°51'N, 40°18'E) in the 1950<sup>th</sup> (Minoranski, 1963). Abelentsev *et al.* (1973) mentioned few additional trappings of stone martens in Rostov Province. One was trapped in Nedvigovka Village, Myasnikovskiy District in west part of the province in 1960; the second one was killed near Gigant Railway Station, Salsk District, and the third specimen was captured in the valley of Don River, Konstantinovskiy District. Also there are nine specimens of *M. foina* from the western parts of Rostov Province in the collection of Zoological Institute Russian Academy of Sciences (ZIN O.35251–O.35259) which were trapped in 1985–1993. Probably the stone marten became more abundant in the given province since 1970<sup>th</sup> (Abelentsev *et al.*, 1973). If it is so, there is ability for connection between Central Russian and Caucasian parts of *M. foina* distribution area.

It is possible to see from our review that there are a very few confirmed records (collection specimens) of *M. foina* as from the distribution area in European Russia sensu Heptner *et al.* (1967), and also outside of these borders. Some interview data and sightings can be result of misidentification of the pine marten, *Martes martes*. Some specimens of pine marten have a very light throat spot and can be deciding as the stone marten. The correct identification should take into account skull characters and/or the whole set of external characters including shape and coloration of throat spot, relative length of tail and relative fur density of foot (see Baryshnikov, 2001).

Table 1. Museum specimens of *Martes foina* from European part of Russia in the Zoological Institute Russian Academy of Sciences (ZIN) and Zoological Museum of Moscow State University (ZMMU).

Localities	Material	Sex	Date	Collector	Location held and catalogue number
Moscow Province, near Kupavna	skull, skeleton		20.VI.2003	S.V. Kruskop, A.A. Lissovsky	ZMMU S-175493
Saratov Province, Engels District	skulls	male	1987	V.N. Moseikin	ZIN O.35552
					ZIN O.35553
					ZIN O.35554
					ZIN O.35555
Volgograd Province, 30 km NE of Kamyshin, right bank of Volga River	skin, skull, skeleton	female	13.VI.1996	V.Yu. Iljin	ZIN O.34644 (skull, skeleton), ZIN C.82619 (skin)
Volgograd Province, Elton Village	skin		II.2003	V.A. Lopushkov	ZMMU S-175432
Rostov Province, Verkhnedonsk District, Konotop Forestry	skull	male	29.XI.1988	P. Ivliev	ZIN No.35251
Rostov Province, near Millerovo	skulls	male	25.XI.1985	C.V. Topolyanets	ZIN No.35252
			25.X.1985		ZIN No.35253
		female	3.X.1985		ZIN No.35254
			XII.1985		ZIN No.35259
Rostov Province, Kamensky District, Starostanichnoe Hunting Area	skull	male	9.I.1993	V.I. Dedov	ZIN No.35255
			I.1993		ZIN No.35256
Rostov Province, near Rostov-na-Donu, Zado'n'e	skull		XII.1992	Pshenichnyi	ZIN No.35257
Rostov Province, Tarasovsky District, Mityakinskaya	skull	female	11.XI.1989	S.P. Ivanov	ZIN No.35258

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