Fig. S1. The complete Bayesian tree of *Microtus* species as inferred from the cyt*b* data on 229 specimens in MrBayes. The designations are as in Fig. 2.
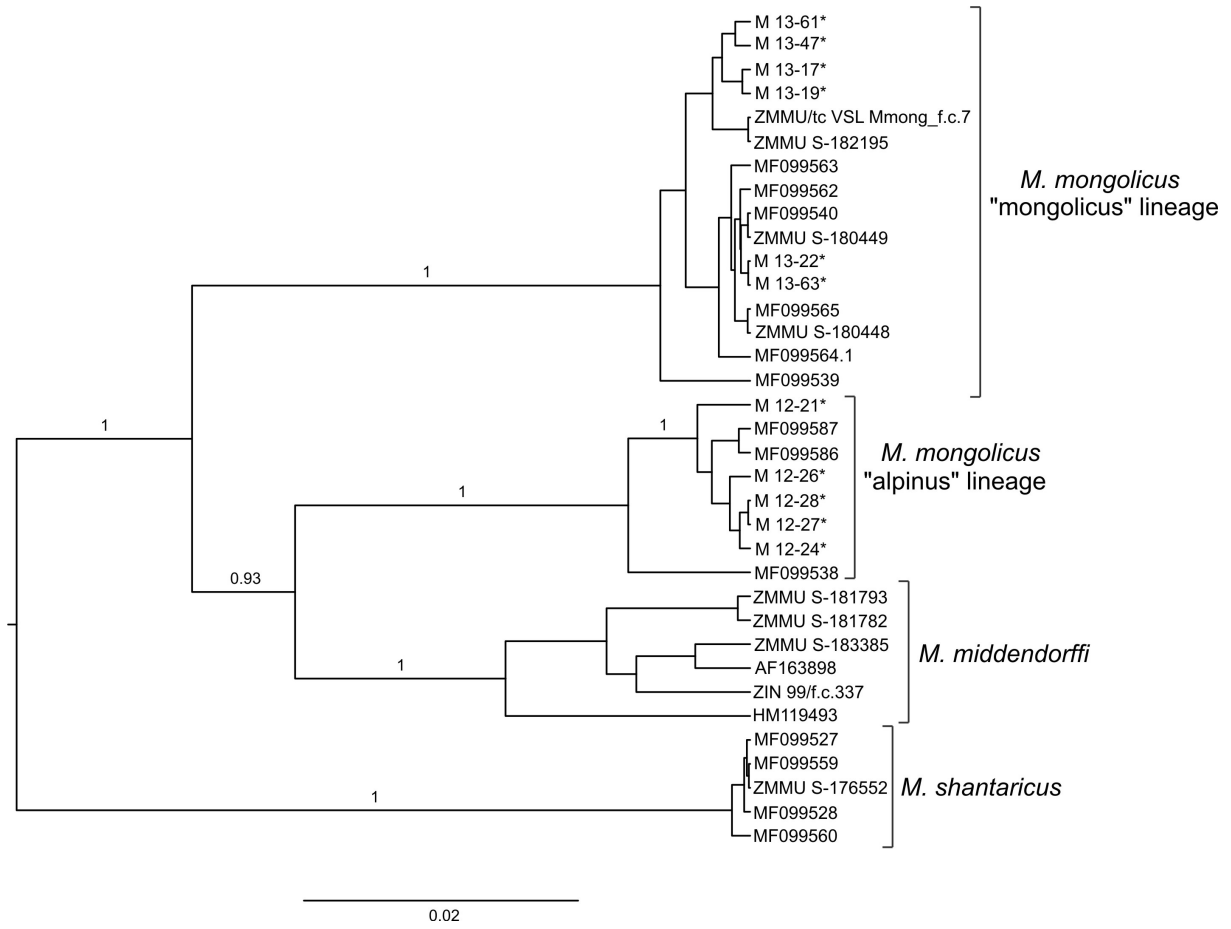
Fig. S2. The fragment of the Bayesian ultrametric tree illustrating the relationships among the haplogroups of *M. maximowiczii* including short sequences not shown in Fig. 2.
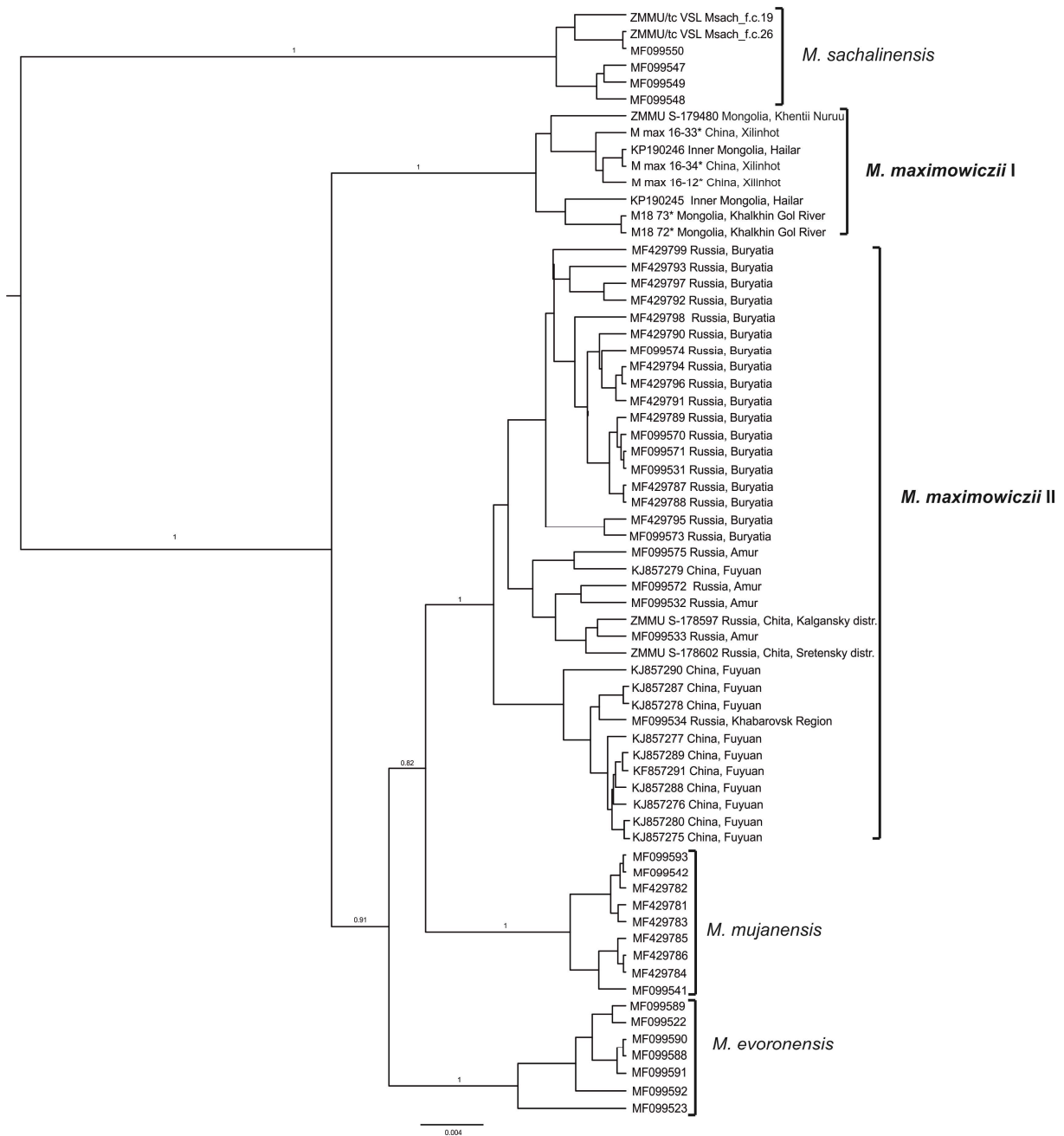
Fig. S3. The fragment of the Bayesian ultrametric tree illustrating the relationships among the haplogroups of *Microtus mongolicus* including short sequences not shown in Fig. 2.
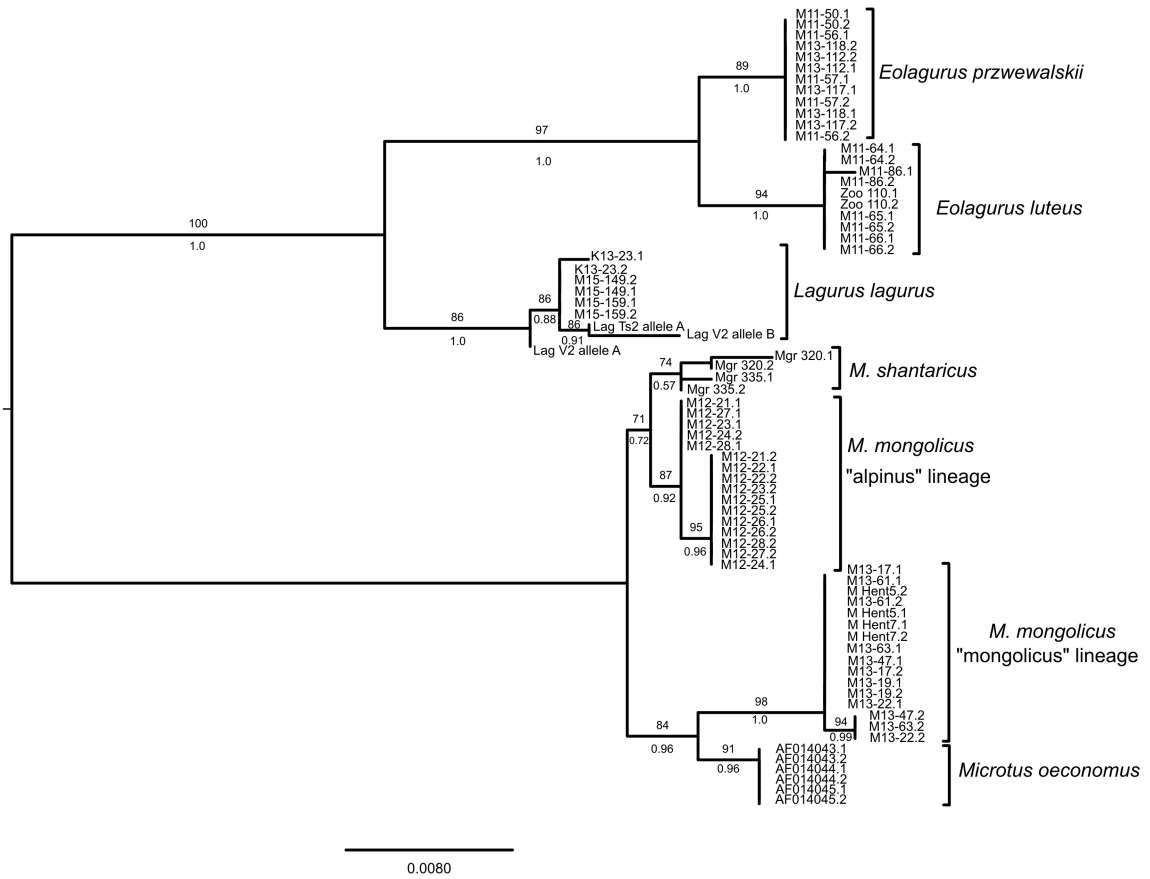
Fig. S4. The ML tree illustrating the relationships among the sequences of *P53* in the examined species of *Microtus* and Lagurini. Numbers above and below branches correspond to ML fast bootstrap support (> 50 %) and Bayesian posterior probabilities (MrBayes), correspondingly.
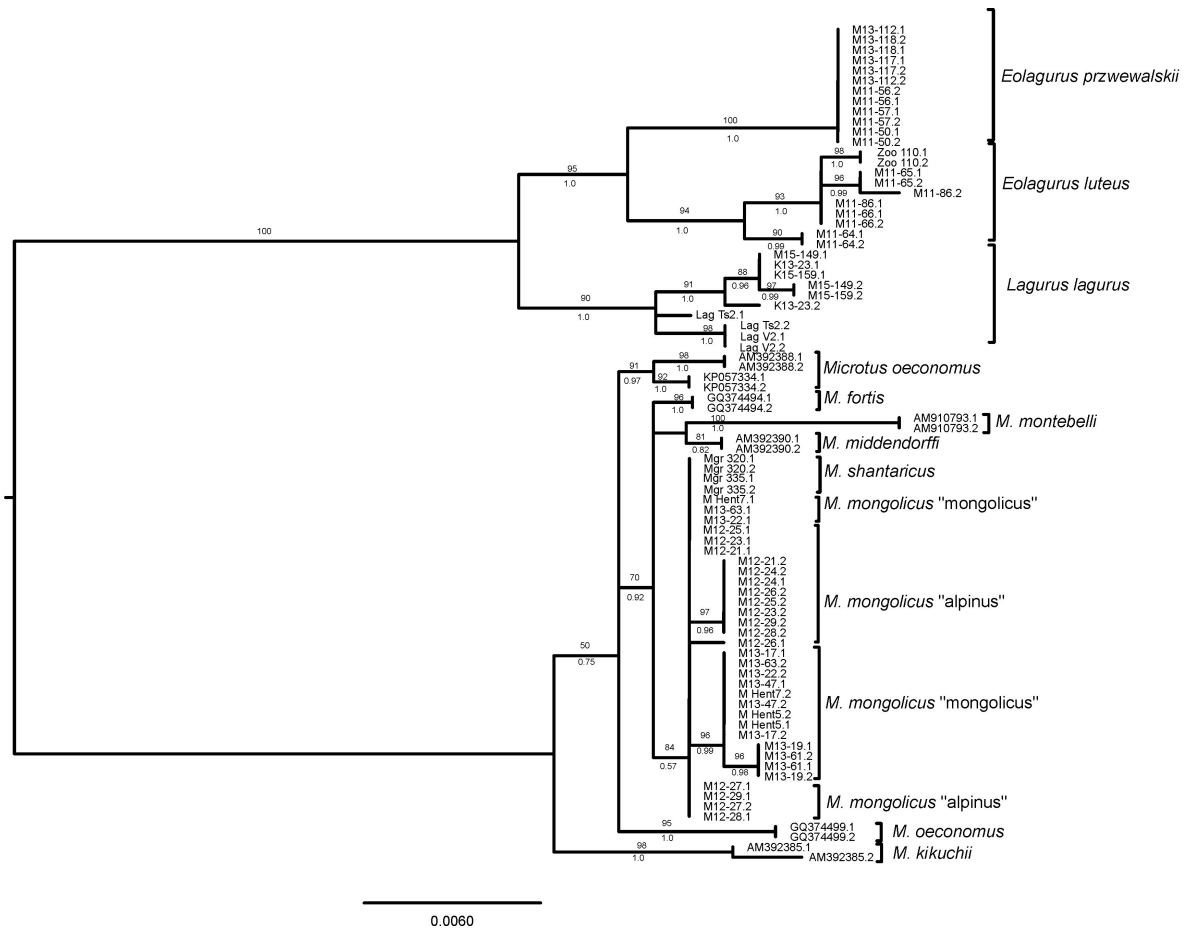
M13-112.1
M13-118.2
M13-118.1
M13-117.1
M13-117.2
M13-112.2
M11-56.2
M11-56.1
M11-57.1
M11-57.2
M11-50.1
M11-50.2

Eolagurus przwewalskii

Zoo 110.1
Zoo 110.2
M11-65.1
M11-65.2
M11-86.2
M11-86.1
M11-66.1
M11-66.2
M11-64.1
M11-64.2

Eolagurus luteus

100
1.0
98
1.0
96
0.99
93
1.0
94
1.0
90
0.99
95
1.0

M15-149.1
K13-23.1
K15-159.1
M15-149.2
M15-159.2
K13-23.2
Lag Ts2.1
Lag Ts2.2
Lag V2.1
Lag V2.2

Lagurus lagurus

91
1.0
88
0.96
97
0.99
90
1.0
98
1.0

AM392388.1
AM392388.2

] *Microtus oeconomus*

KP057334.1
KP057334.2
GQ374494.1
GQ374494.2

] *M. fortis*

AM910793.1
AM910793.2

] *M. montebelli*

AM392390.1
AM392390.2

] *M. middendorffi*

Mgr 320.1
Mgr 320.2
Mgr 335.1
Mgr 335.2

] *M. shantaricus*

M Hent7.1
M13-63.1
M13-22.1
M12-25.1
M12-23.1
M12-21.1

M. mongolicus "mongolicus"

M12-21.2
M12-24.2
M12-24.1
M12-26.2
M12-25.2
M12-23.2
M12-29.2
M12-28.2
M12-26.1

M. mongolicus "alpinus"

M13-17.1
M13-63.2
M13-22.2
M13-47.1
M Hent7.2
M13-47.2
M Hent5.2
M Hent5.1
M13-17.2
M13-19.1
M13-61.2
M13-61.1
M13-19.2

M. mongolicus "mongolicus"

M12-27.1
M12-29.1
M12-27.2
M12-28.1

] *M. mongolicus* "alpinus"

GQ374499.1
GQ374499.2

] *M. oeconomus*

AM392385.1
AM392385.2

] *M. kikuchii*

98
1.0
92
1.0
96
1.0
100
1.0
81
0.82
91
0.97
70
0.92
97
0.96
84
0.57
96
0.99
98
1.0
95
1.0
98
1.0
50
0.75
100
90
1.0

0.0060

Fig. S5. The ML tree illustrating the relationships among the sequences of *GHR* in *Microtus* and Lagurini. Designations are as in Fig. S4.
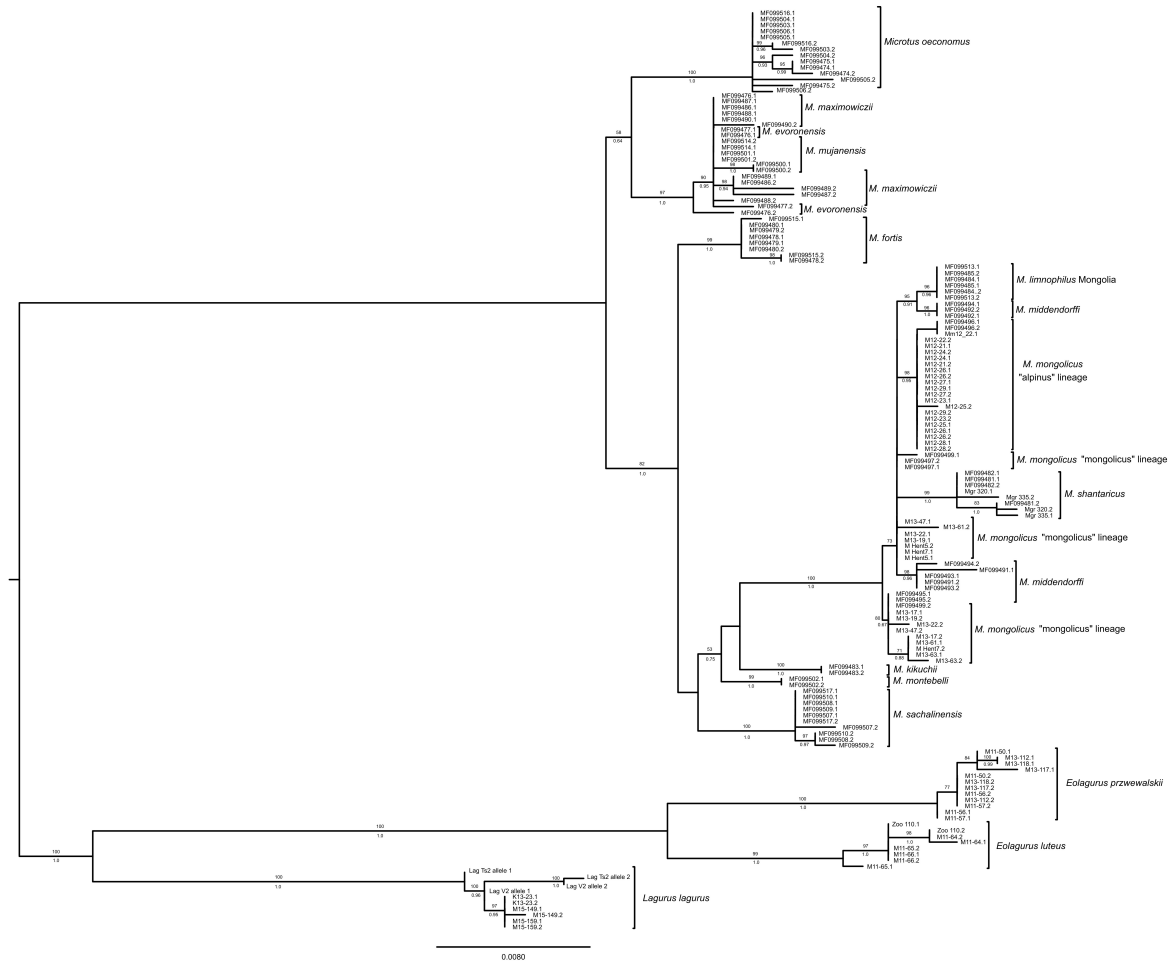
Fig. S6. The ML tree illustrating the relationships among the sequences of *BRCA1* in *Microtus* and Lagurini. Designations are as in Fig. S4.
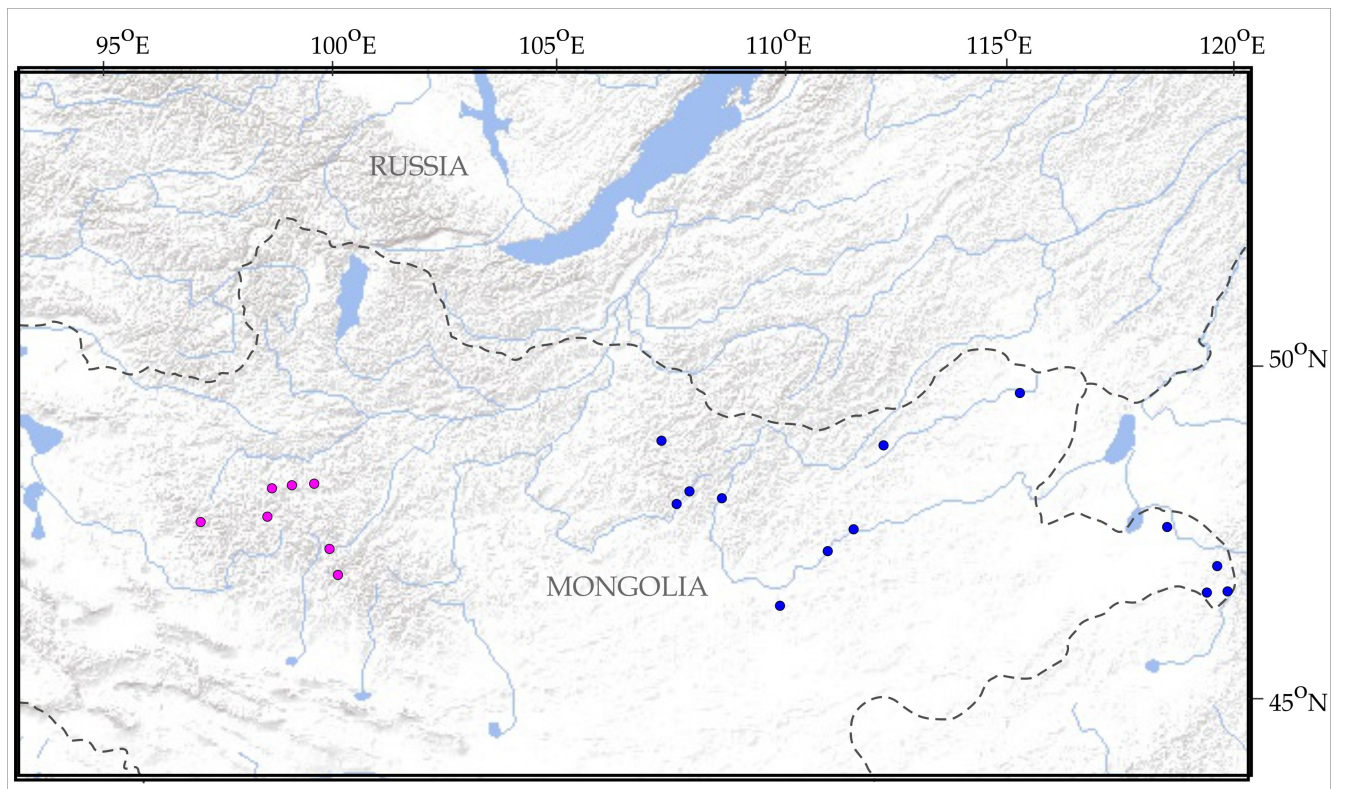
Fig. S7. Distribution of *M. mongolicus* s.l. in central and eastern Mongolia based on the specimens stored in the collection of the Zoological Museum of Moscow State University. Blue and magenta points denote localities for *M. mongolicus* s.str. (eastern lineage) and *M. alpinus* (western lineage).