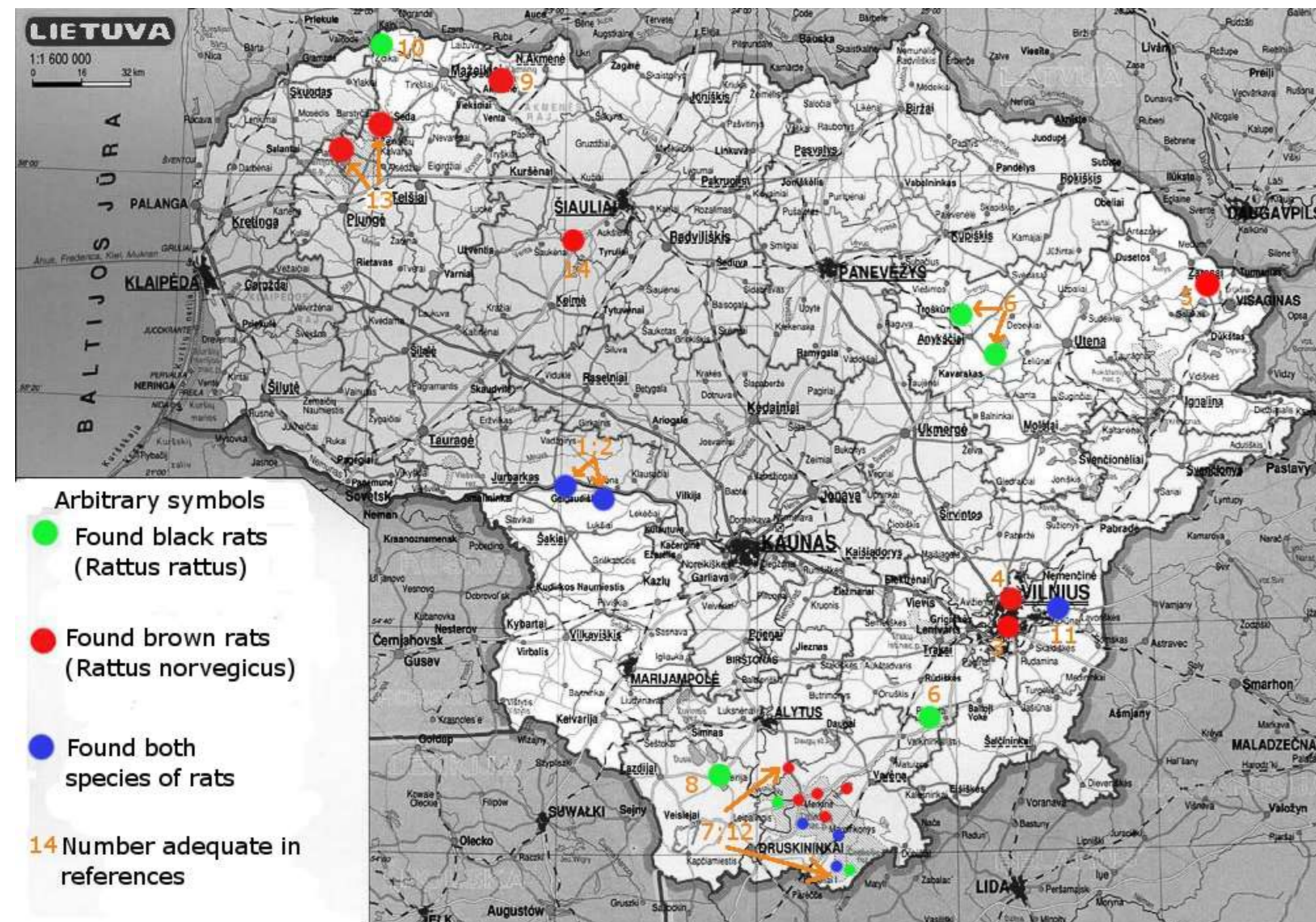


New data about rat distribution in Lithuania

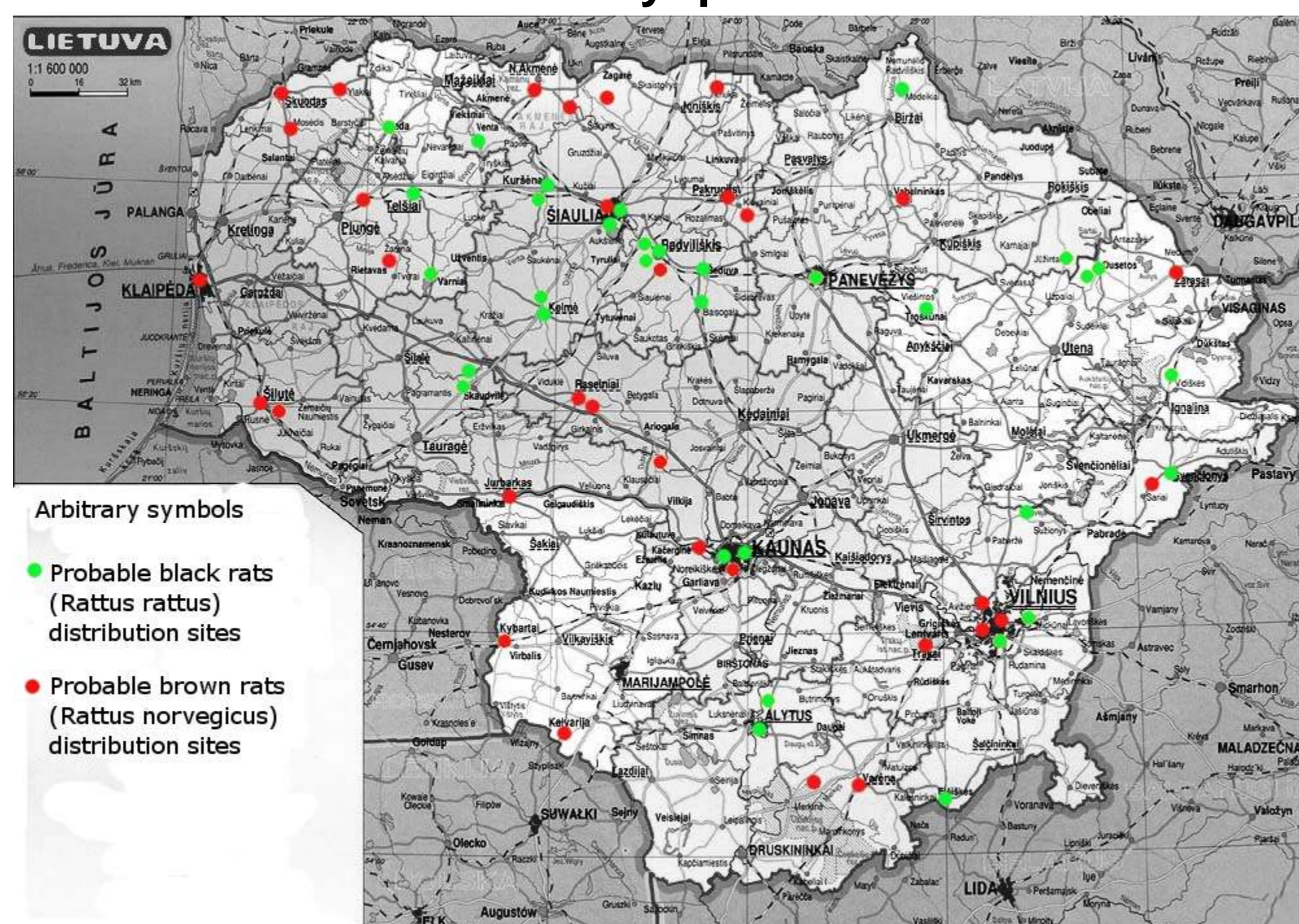
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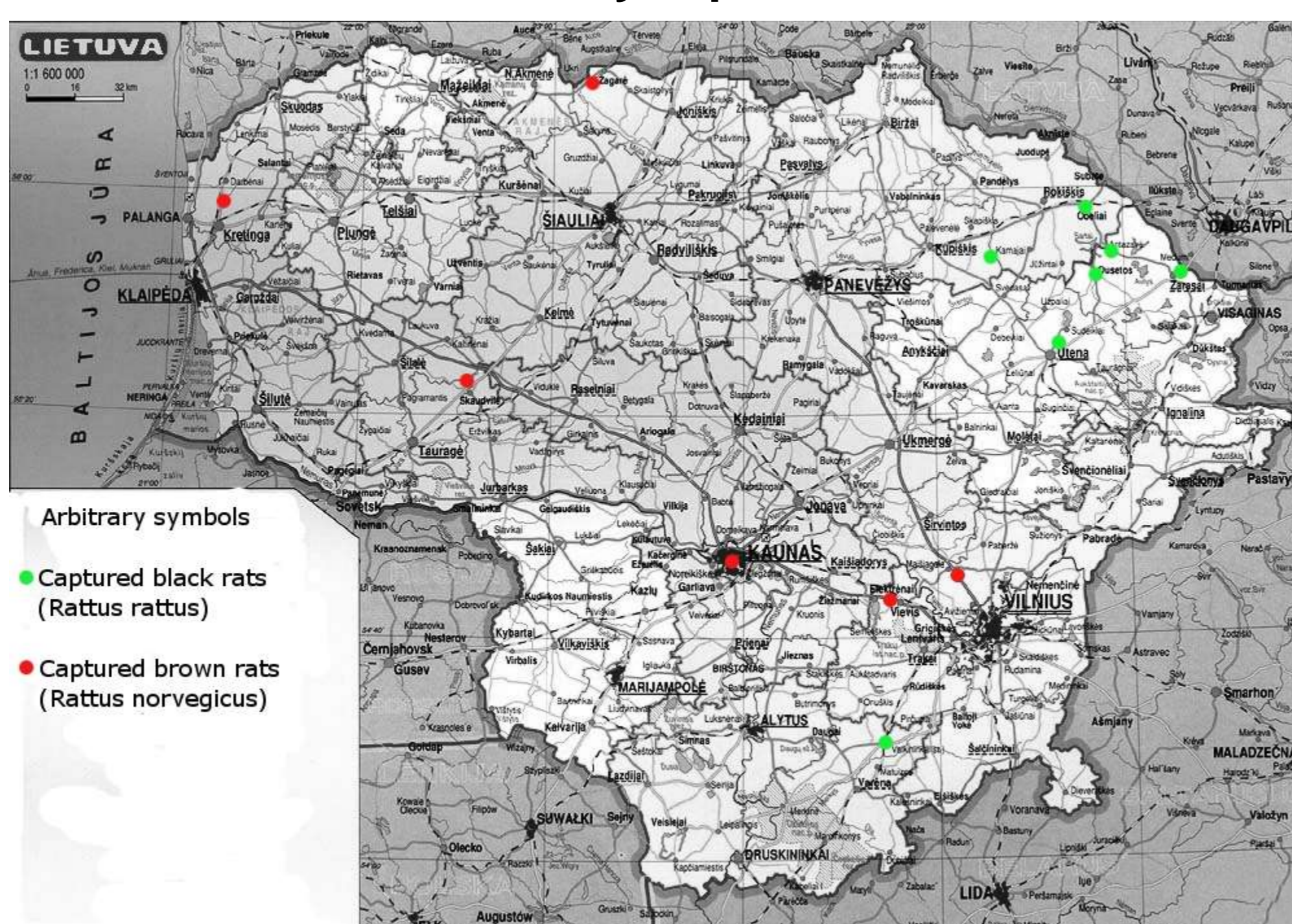
Rats distribution by literature review



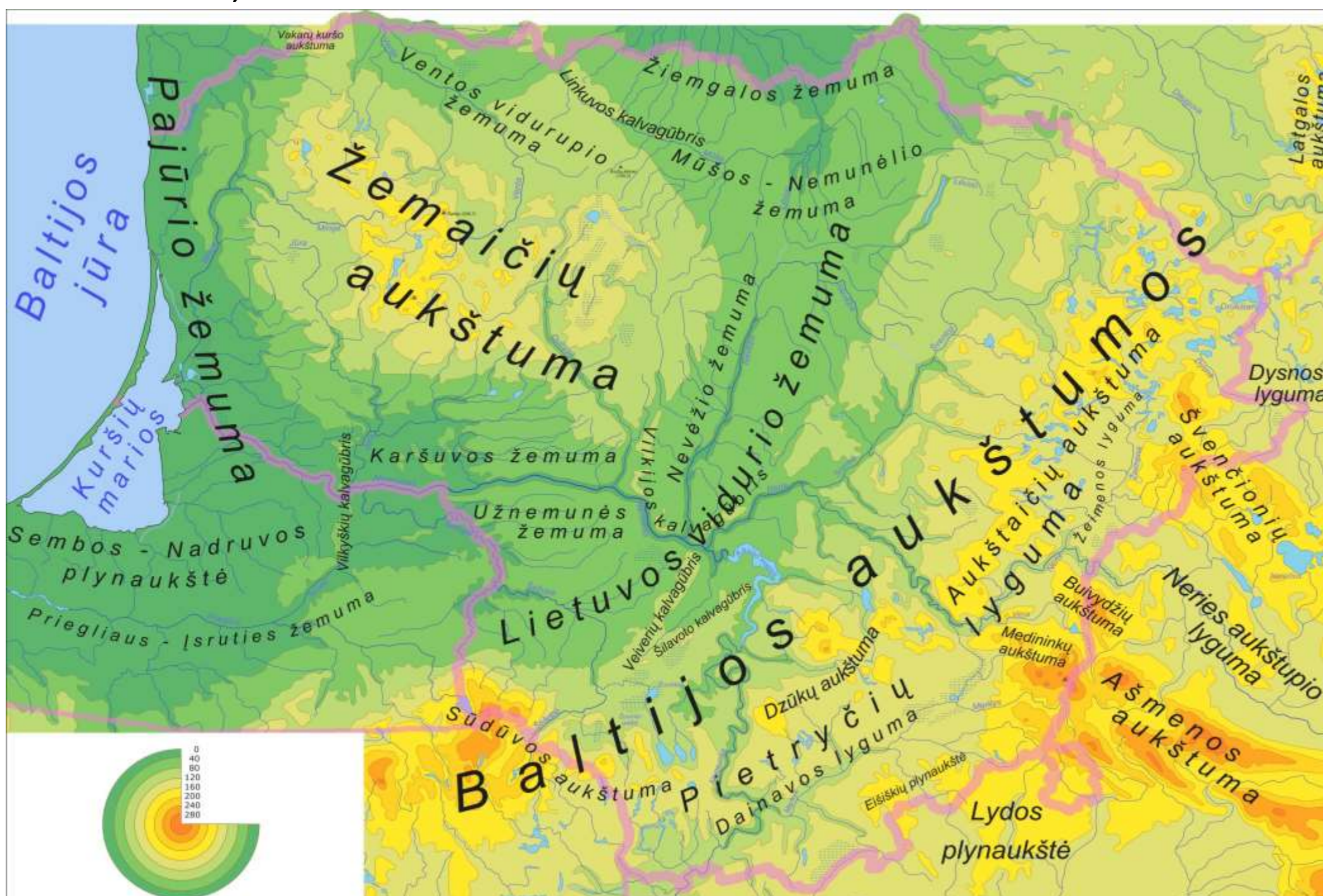
Rats distribution by questionnaire data



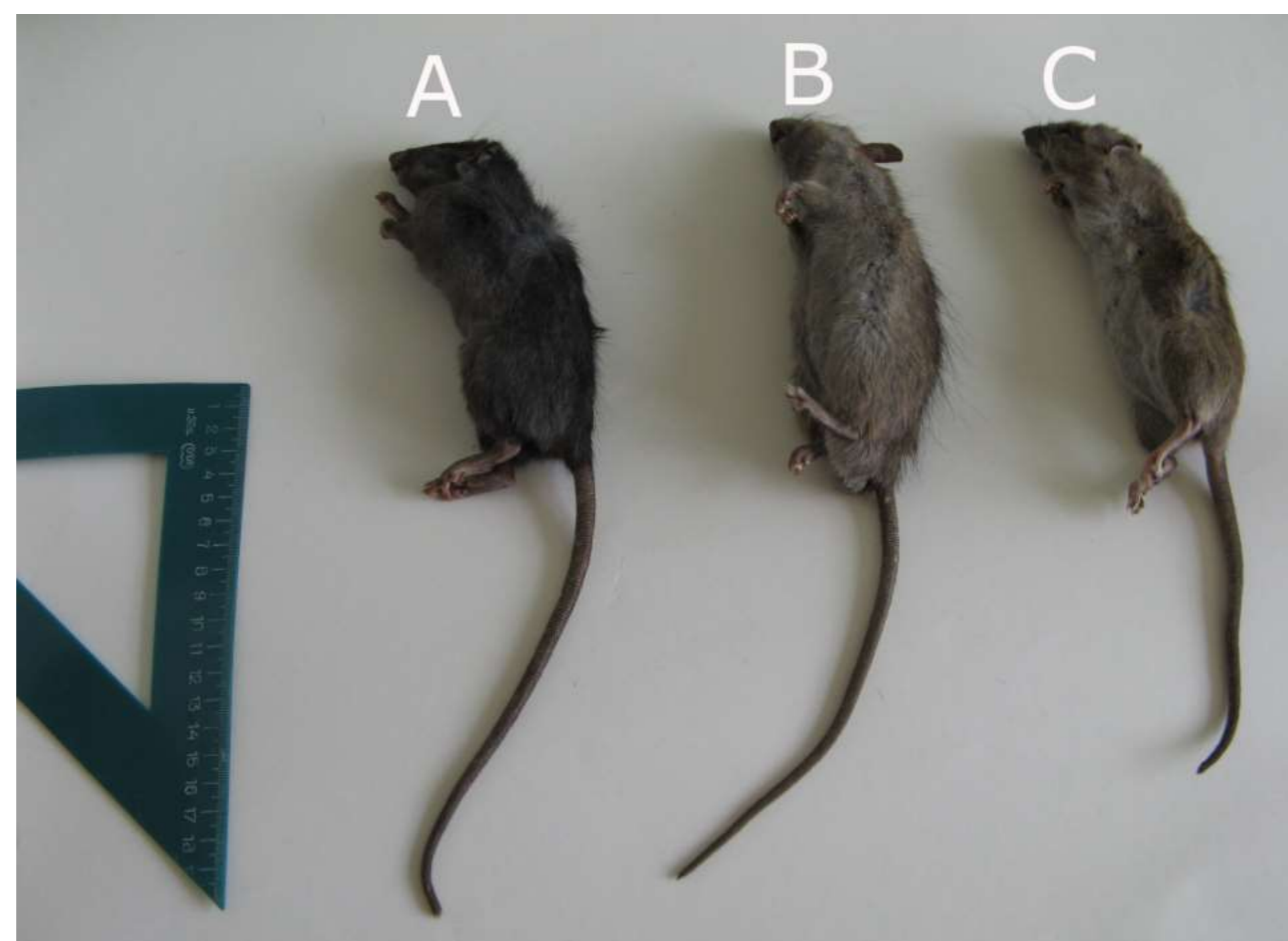
Rats distribution by capture in 2010-2011



Lithuanian physical geography map (the distribution of rats in Lithuania could be influenced by the geomorphological conditions)



Captured rats: A – black rat (*Rattus rattus*), B – black rat brown color morph (*Rattus rattus alexandrinus*?), C – brown rat (*Rattus norvegicus*)



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Thankful all who response questionnaire and help advertise questionnaires. Thanks all respondents who has answered and distributed the questionnaire.

Like in the rest of Europe, in Lithuania black rats were prevalent from ancient times. Brown rats started spreading to Europe just about XVI century. Stronger, highly reproductive and more aggressive brown rats expelled black rats from better habitats. In 1830 E. Eichvald, professor of Vilnius University, wrote that black rats become less frequent in Lithuania and are often found in the fields only. By data of N. Likevičienė, only black rats inhabited northeast Lithuania in the sixth decade of the XX century. Other parts of Lithuania were inhabited by both species of rats. After 20 years only brown rats were trapped in several places. Black rats receded to northeast direction. Similar process was observed in other countries of Europe.

The aim of this investigation was to investigate the present distribution of brown and black rats in Lithuania. Three different research methods were used to obtain data: literature review, trapping of rats and the questionnaire.

Scientific publications published from last ten years only were used for literature review. Information about 23 distributions sites of rats was found: 10 distribution sites of brown rats (sites were located mostly in northwest and south Lithuania), and 7 sites of black rats (located in northeast and south Lithuania) and 6 sites of both rats species (located in southwest, south and southeast Lithuania).

16 brown and 42 black rats were trapped in 13 sites of Lithuania in 2010-2011. Black rats were captured in 7 sites (in northeast and south Lithuania), brown rats in 6 sites (north, west and central Lithuania).

Rat questionnaire was published in the website www.publika.lt. 162 respondents answered the questionnaire, 111 of them have seen rats in their houses or farm buildings. Three questions were addressed to ascertain which rats species were seen. When answers were inconsistent (i.e. species is described like brown rat from one answer, and black rat from the other) then such data were neglected. 68 questionnaires were accepted as reliable, yielding 33 probable distribution sites of brown rats and 35 probable distribution sites of black rats. Respondents indicated they have seen black rats mainly in northwest (Telšiai, Šiauliai, Kelmė and Radviliškis districts), more seldom in northeast (Zarasai and Ignalina districts) and southeast (Šalčininkai, Vilnius and Švenčionys districts) Lithuania. According to the questionnaires, brown rats are evenly spread across the country. Respondent data may be questioned, therefore in the future we are going to use trapping method. Currently we still lack data on the rat distribution in central, southwest and west Lithuania.

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