

# Road mortality of amphibians in Western Ukraine (Lviv province)

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Key words: roads, amphibians, mortality, migrations, Ukraine

There are very few publications concerning amphibian and other animal road mortality in Ukraine. There is a need to start active investigations on the topic in Ukraine, as the scale of animal mortality on the roads increases with the development of motor transport and subsequent traffic intensity. Our investigations were held on the main roads of Lviv province in Western Ukraine these included two roads of Pan-European importance. Over 1200km of road going through lowlands, mountains and river valleys were investigated during April – November 2006. 60 places of amphibian mortality were found; with a total of 3555 individuals from 13 species being observed. These were *Triturus cristatus*, *T. montandoni*, *T. vulgaris*, *Bombina bombina*, *B. variegata*, *Pelobates fuscus*, *Bufo bufo*, *B. viridis*, *Hyla arborea*, *Rana temporaria*, *R. arvalis*, *R. ridibunda* and *R. esculenta*. The Common Toad and Common Frog were the most numerous species and made up over 90% of all casualties. Three key factors of amphibian mortality were analyzed with the corresponding parameters of impact level. The factors were: the number of killed individuals (under 20, 20-50 and over 50 individuals), traffic intensity (under 1000, 1000-5000 and over 5000 vehicles per day) and the distance between the road and breeding place (up to 100m, 100-500m and over 500m). 10% of the investigated places were found to be under the high level of impact, 56% – middle and 34% – low. The given criteria are proposed to be used for establishing the level of road impact on amphibians. The seasonal dynamics of amphibian migrations were also investigated in details in a sample area within the region. The examples of the most abundant species (*B. bufo*, *R. temporaria*) show that, despite species differences, general migration patterns display three peaks during the season occurring in second half of April, July and September–October.