Results of bat fauna studies in Chernobyl exclusion zone in 2007–2013 are presented in the article. Inhabiting 14 species (Barbastella barbastellus, Eptesicus serotinus, Myotis brandtii, M. dasycneme, M. daubentonii, M. mystacinus, Nyctalus lasiopterus, N. leisleri, N. noctula, Pipistrellus kuhlii, P. nathusii, P. pygmaeus, Plecotus auritus, Vespertilio murinus) was reported. N. lasiopterus (NT: IUCN v. 2012.2) on the territory of Ukraine was found only in the exclusion zone. The species-dominant are N. noctula and P. nathusii, subdominants – E. serotinus, N. leisleri, P. pygmaeus and V. murinus. Sexual and age composition, relative abundance, bitopic and territorial distribution of the animals are analyzed in the study. It is shown that the highest indices of abundance and species diversity of the bats are characteristic for vast deciduous and mixed forests in west and north-west parts of the region. These territories have to be rated as nature protected areas of Ukraine in the first place.