The impact of the moon phases on winter activity of the noctule bats *Nyctalus noctula*

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Noctule bat *Nyctalus noctula* (Schreber, 1774) is a Palearctic species. Its European range spans from the Iberian Peninsula in the west up to the Ural and Caucasus Mountains in the east (Bogdanowicz 1999). Horáček et al. (2000) state that it belongs to a group of species inhabiting a temperate humid zone. Seasonal migrations from the north to the south are associated with wintering of the bats in the regions with milder winters (Strelkov 1969, Heise and Schmidt 1979, Petit and Mayer 2000, Steffens et al. 2004). The orientation method of long-distance migrating bats is still unknown (Holland 2007). However, reports on bat sensitivity to magnetic fields are increasingly frequent (Wang et al. 2007, Holland et al. 2008). Fleming and Eby (2003) postulated bat migration in the social groups however the question that still remains open is how the bat group coordinates its activity.

There are reports on hibernating noctule bats in regions with milder winters (Slüter et al. 1973, Gebhard 1995). For a long time it was thought that this species does not hibernate in the northern part of its occurrence area, but rather migrates to the south. On the basis of a number of recent observations, this thesis seems to require a major correction. Hibernating bats occur in central Europe and during the winter season they may remain active and seeking for food, occasionally (Kańuch et al. 2005). During the last decade the winters in the region were warmer therefore bats could move and be active (Łupicki et al. 2007). The factors that