

# Vernal Behaviour in the alpine marmot (*Marmota marmota* L.): preliminary data

Foieri A.\*, Lenti Boero D. & Bocca M.\*

\*Parco Naturale Monte Avic; ^ Independent researcher, before retirement: University of Valle d'Aosta, Italy

E-mail address: [d.lentiboero@gmail.com](mailto:d.lentiboero@gmail.com)

**Introduction.** The role of vernal behaviour might be crucial in understanding the social factors influencing population dynamics (Armitage 1965, Lenti Boero 1992). Our study presents preliminary data regarding vernal behaviour of *Marmota marmota* L. in Western Alps.

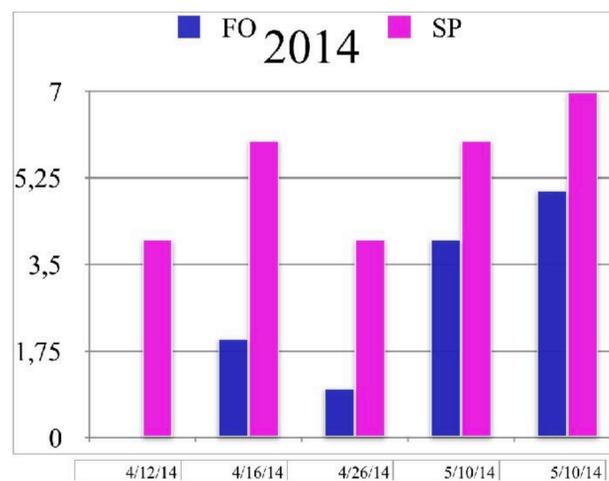
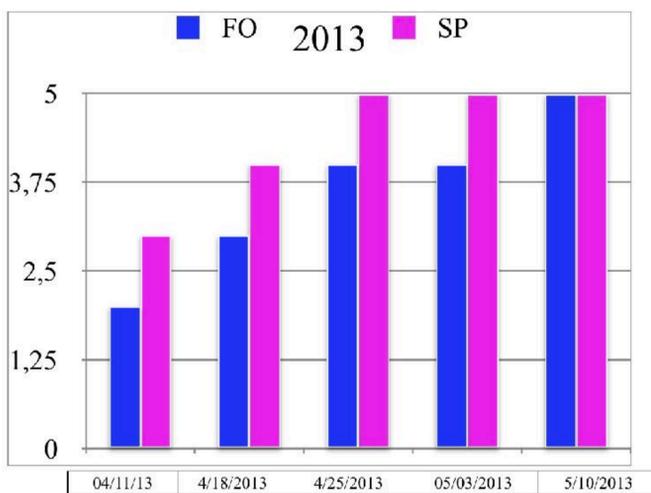
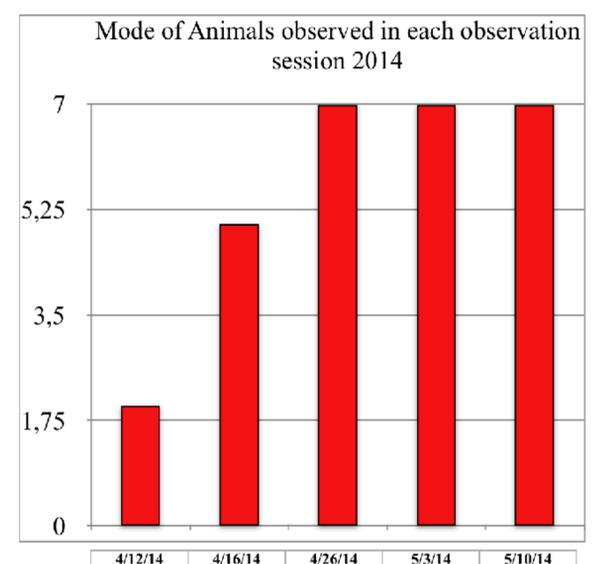
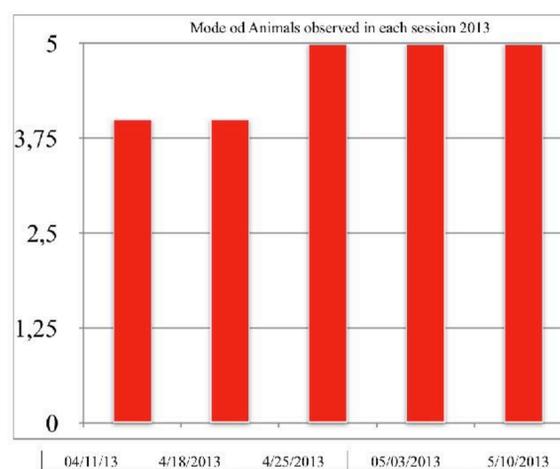


**Methods.** Two hibernacula were located in the study area facing South, at the Parco Naturale Mont Avic, Valle d'Aosta, Italy, between 1880 and 1900 m.a.s.l. From mid March three camera-traps were positioned in proximity and surveyed every three days to check the emergence date. **Observation techniques:** In both 2013 and 2014 five observation sessions were performed from emergence until mid May for a total of 35 observations/h. During each session scan samplings on non-marked marmots were performed for a total of 3.5 h. per session. Immergeance was ascertained at the end of activities (end September) by visual inspection of hibernacula and their closure. In two following surveys in 2015 and 2016 it was possible to document the rare mating behaviour outside the burrow.



After emergence 3 adults/subadults and 2 yearlings in 2013 and 4 adults/subadults and 3 yearlings in 2014 non marked marmots were observed.

## RESULTS



The time budget was primarily allocated to foraging and spotting behaviour



Before immergence camera-traps documented hay transportation several times (left). Hibernacula were progressively closed from inside (right).

**Discussion.** After emergence time budget was primarily allocated to foraging and spotting behaviour, spotting seemed predominant in accordance with the prevalence of defence against intruders in early season (Zelenka (1965)). Pro-social behaviour, marking and agonistic acts were seldom observed. Hibernation schedule and behaviours are consistent with the ones reported by Zelenka (1965) for the same species *Marmota marmota* L. in the colony of Munt La Schera, Switzerland.