

Factors affecting territorial response in Common wall lizards

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Common wall lizards (*Podarcis muralis*) exhibit a syntopic colour polymorphism in both sexes, with three main morphs differing for the throat and belly colourations (white, yellow and red). In this study, we investigated whether territorial behaviour of males could be predicted by colour morph. Thirty three sexually mature males – 11 for each morph – were collected, kept in outdoor individual plastic cages, and fed for at least three weeks before starting the experiment. Then, each male was paired in its own cage with three males – one for each morph – in three consecutive trials at one day interval. By this procedure, we simulated the natural situation where one resident male finds a conspecific intruder in its own home range. All trials were video recorded to count the number of the aggressive (e.g. bites and running away) and submissive displays used by each contestant. Aggressive response of resident male in the first trial was predicted only by size asymmetries (stepdown ANCOVA: $b=1.51 \pm 0.51$, $t=2.97$, $P=0.006$), but when all trials were considered, only the prior experience (i.e., the outcome in the previous encounter) had a significant effect (stepdown mixed model ANOVA: $b=0.38 \pm 0.10$, $t=3.63$, $P=0.0014$). The effects of colour morphs of the two contestants were always negligible. These results suggest that short-term prior experience may override size asymmetries in territorial contests in this species, and colour polymorphism does not seem to reflect different territorial strategies as it occurs in other polymorphic lizards.