An experimental test of sexual selection on colour and morphology in green lizards (Lacerta viridis)

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Morphological traits and elaborate colouration may play important roles in inter- and intrasexual communication, but sexual signalling has been little studied in reptiles. We conducted experiments of female choice and male competition in green lizards (Lacerta viridis), a species from which no information on sexual selection is available. We performed 24 mate choice trials using a total of 57 males, and allowed 12 males to compete in all potential pairwise combinations. Correlated aspects of morphology and colour were condensed into principal components. Only the body shape of males predicted the outcome of female choice trials. Females preferred males with longer body and narrower head. However, both morphology and colour seemed important in male competition. Larger males with higher blue and UV chroma on the throat as well as UV chroma on abdomen were more successful in the trials. If males were more alike in the above mentioned characteristics, the trial took longer and the individuals were more aggressive during the contest. Our results suggest that the expression of multiple ornamental colouration and morphological traits of green lizard males may serve as inter- and intrasexual signals advertising individual quality honestly.