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*Animal Welfare* 2015, 24: 1-14  
 ISSN 0962-7286  
 doi: 10.7120/09627286.24.1.001

## **Potential welfare impacts of kill-trapping European moles (*Talpa europaea*) using scissor traps and Duffus traps: a post mortem examination study**

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### **Abstract**

Moles are widely trapped as pests on farms and amenity land in Britain. Spring traps for killing mammals generally require welfare approval in the UK, but mole traps are exempt. Previous research demonstrated wide variation in the mechanical performance of mole traps. In this context, we aimed to produce new data on the welfare impact of kill-trapping moles in the field. We collected 50 moles trapped in southern England (November 2008–August 2009). Captures peaked during the peak in male breeding activity, when captures were almost exclusively male. Post mortem and x-ray (radiation) examinations were conducted to determine injuries and likely cause of death. No moles sustained damaged skulls or upper cervical vertebrae (which could cause unconsciousness immediately). The primary identifiable cause of death for all but one mole was acute haemorrhage; this contrasts with the findings of the only previous such study, in which only one mole showed clear evidence of haemorrhaging. Some moles may have asphyxiated although it was not possible to determine this. Moles most likely became unconscious before death, but times to unconsciousness, and death, can be determined only through killing trials and further investigation is urgently needed. This should be done through the spring traps approval process; this could improve the welfare standards of trapping for many thousands of moles each year. Mole trapping for long-term population control might be better targeted after the peak in male breeding activity, when females are more likely to be caught, but this would threaten the welfare of dependent young underground.

**Keywords:** animal welfare, European mole, sex bias, spring trap, trap, wildlife management