# Letter

## Not so humane mole tube traps

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European moles (*Talpa europea*) are solitary, fossorial insectivores that live and feed in an extensive system of underground tunnels (Gorman & Stone 1990). In excavating and maintaining these tunnels they throw up spoil heaps commonly known as 'molehills'. Where moles occur on farm or amenity land, or in private gardens, their molehills and tunnels are generally considered to be a nuisance (Quy & Poole 2004; Baker *et al* unpublished data). While farmers and amenity managers often prefer to use lethal methods for controlling moles (Atkinson *et al* 1994; Baker *et al* unpublished data), householders with gardens generally prefer to take a non-lethal approach. In a recent survey, householders indicated that their most important criterion in selecting a mole control method was that it should be humane, and the method that most of them thought humane was live-trapping and relocation (Baker *et al* unpublished data).

In order to determine the range of mole live traps commercially available, we made an extensive search online and in garden centres and hardware shops. The plastic mole tube trap was the only live trap identified — but it was widely available (see Figure 1). We identified almost identical designs marketed under several brand names. These were marketed as: 'Procter pest-stop humane mole trap'; 'Fito humane mole trap'; 'Unique Housewares humane mole trap'; and 'Katcha humane mole trap'. A fifth brand, 'Eco-talp', was advertised on www.alibaba.com, but we were unable to elicit a response or a price from the Chinese supplier.

**Figure 1**

Plastic mole tube trap, marketed as a 'humane mole trap'. (Photograph courtesy of S Baker).

'Procter' have stopped selling their model directly (apparently because of a lack of demand) but some other outlets continue to offer the Procter trap.

Each tube trap consists of two short plastic tubes which fit together, one inside the other, to produce a longer tube, approximately 25–27 cm long. At each end there is a light metal door loosely hinged at the top by a metal pin and capable only of swinging inwards so that once an animal has entered the trap (by pushing underneath the door) it is unable to leave. The trap can be entered from either end. The internal diameter of the tube is 48 mm (a similar dimension to a mole [Natural England 2011]), and the internal length of the tube between the two doors is 21–23 cm; there is no room to provide bedding material. There are two small 'viewing holes' on the top of each trap to allow the user to see whether there is a mole inside. Given that these tube traps are not operated by springs, they fall outside the spring trap legislation (eg The Pests Act 1954, http://www.legislation.gov.uk/ukpga/Eliz2/2-3/68/contents and the Spring Traps Approval [England] Order 2012, http://www.legislation.gov.uk/uksi/2012/13/contents/made). However, mole traps are anyway exempt from the spring traps approval legislation under the Small Ground Vermin Traps Order 1958 (http://www.legislation.gov.uk/uksi/1958/24/contents/made) (Baker *et al* 2012). Mole tube traps are therefore entirely unregulated. Basic instructions for using the traps are provided on the packaging. Instructions for the Procter model recommend checking the traps at least four times daily; it is not clear whether this means four times in 24 h (every 6 h) or four times during the daytime (every 3 h). Instructions for the other three models say that the trap should be checked "regularly" or "on a regular basis". None of the manufacturers' instructions offer any advice on what to do with the mole after capture and none suggests providing any food. One supplier did however include a separate advice note advising that "it is important… the moles are released a few miles away".

Under UK law there is no general legal requirement to check live traps at any particular frequency (although General Licences for live-trapping certain birds do require traps to be checked once every 24 h, eg GL04, http://www.naturalengland.org.uk/Images/wlc-gl04_tcm6-24149.pdf), and under The Wildlife and Countryside Act 1981 (http://www.legislation.gov.uk/ukpga/1981/69/contents), snares (which are intended to be live-capture devices) also need to be checked at least once every 24 h. However, because The Animal Welfare Act 2006 (http://www.legislation.gov.uk/ukpga/2006/45/contents) covers any animal under the control of man, including a captured wild animal, The Act has potential implications for anyone trapping live vertebrates (of any species other than man) and using any method of capture. Under The Act, a wild animal held in a trap becomes a Protected Animal, and it would be an offence for the person deemed responsible for it to cause it unnecessary suffering. However, The Act



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does not specify how frequently live-capture cage traps should be checked (Natural England 2010). The British Association for Shooting and Conservation (BASC) has issued a code of practice for trapping pest mammals, in which they recommend that cage traps should be inspected at least once a day (http://www.basc.org.uk/en/codes-of-practice/trapping-pest-mammals.cfm). However, Natural England (2011) recommends that mole live traps should be checked more frequently because moles have a high metabolic rate and may die if left in a trap without food "for any length of time". Gorman and Stone (1990) and Mellanby (1971) recommend checking Friesian traps (an older type of large, wooden live trap for catching moles[1]) at intervals no longer than 4 and 8 h, respectively. They also suggest adding to the Friesian trap a nest box with bedding material and food such as earthworms or blowfly maggots, to avoid the mole dying of cold, wet, stress or starvation. (The addition of such a box to the plastic tube traps currently on the market would not be feasible).

At the very least it seems that moles are not well adapted to cope with being live-trapped, but conditions inside the narrow confines of a cold and sometimes damp plastic tube trap, without room for bedding or even for insulating air around them to assist with thermoregulation, and without food, must be far from ideal. In his book, *Molecatching*, Jeff Nicholls (2010), a professional molecatcher, claims (regarding the use of tube traps by members of the public) that despite good intentions of inspecting the trap site when such a trap is in operation this is often overlooked. He goes on to describe the plastic mole tube trap as "possibly the most inhumane trap available for moles".

Another concern regarding the tube trap is that, because the doors swing (rather than being 'sprung' when an animal is trapped), more than one mole may be caught in the same trap setting. The chances of this happening are perhaps doubled by the presence of a door at either end of the trap. While moles are largely solitary, territorial animals, they do sometimes share runs, and males enter female territories during the mating season (Gorman & Stone 1990). (This is a fact taken advantage of by the lethal Duffus, or half-barrel, mole trap which has the capacity to catch and kill two animals in the same setting). If moles meet outside the breeding season, serious fighting may occur (Gorman & Stone 1990), and the capture together of two live moles in a tube trap with no opportunity to escape is likely to lead to serious injuries or death of one or both moles.

The welfare threats related to live-trapping and relocation are not restricted to the time a mole spends in a trap. Unless the animal is caught and released in the same place, eg for research purposes, then another important concern is where it is to be released. This is a clear and unresolved issue for moles, which if released into the territory of another mole are likely to be killed (Atkinson & Macdonald 1994), and if released into unoccupied habitat may have difficulty establishing sufficiently quickly a suitable network of feeding tunnels to survive. Natural England (2011) suggest that releasing a mole into an area with no existing run system could possibly be an offence under the Animal Welfare Act (2006), although there has been no associated case law. While it might be possible to improve a mole's chance of success post-release (Shaw *et al* unpublished data), there has been insufficient research at present to support the relocation of moles. Therefore, Natural England (2011) currently advises that a live-trapped mole should not be relocated, and should be humanely dispatched (although they do not say how). This raises the question of whether it is more humane to catch a mole in a live trap and then kill it, or to kill it in a lethal trap. Because the welfare impact of 'humane despatch' will depend on the method and how it is deployed, and because lethal mole spring traps have never been subject to the spring traps approval system (Baker *et al* 2012), the answer is not clear.

It seems unlikely that an average member of the public would be aware of the potential problems associated with catching and relocating moles, or of Natural England's advice on this subject, or the possibility of an offence under The Animal Welfare Act. With all these things in mind, marketing tube traps as 'humane' is optimistic at best. Furthermore, the information and advice provided with the traps is inadequate and sometimes inappropriate. Other mole live traps (eg perhaps Friesian traps with nest boxes added), with food supplied, may have a role in the careful capture of moles for research where the mole is to be released at the capture site. If, in future, research is able to support the relocation of moles, such traps might potentially also be used in relocations. However, we believe that plastic tube traps for live-trapping moles should be withdrawn from sale, because they compromise mole welfare when used in a way that bears any resemblance to plausible reality and because the relocation of moles is specifically advised against by Natural England on welfare grounds (2011).

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[1] Wooden Friesian traps, mentioned above, are not commercially available although they can be made to order. While these can include a nest box and are therefore potentially better for moles than plastic tube traps, they are expensive (we had some made for £80 each in 2009), and hard work to install and set successfully.



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