

IDENTIFYING INDIVIDUAL TORTOISES

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The Department of the Environment requires that captive-bred European tortoises *Testudo graeca/ibera*, *T. hermanni*, and *T. marginata* have micro-chips inserted when they reach a size of 100mm (4") flat shell length. They also require that the breeding stock be micro-chipped.

This raises two key questions:

(1) **do pet tortoises need to be individually identifiable?** [The *raison d'être* is presumably to distinguish such legal tortoises from illegal (i.e. smuggled tortoises)]. The onus is on those who aver that this need does exist to demonstrate its **practical** usefulness. Unless there are to be random checks of privately-kept pet tortoises, there does not appear to be any justification for micro-chipping/individual recognition.

If it can be shown that they do need to be individually identifiable then the second question is: **how best can this be achieved in practice?**

The present legislation in relation to micro-chipping would appear to be a typical 'red tape'-type requirement. It is unsatisfactory in that there is no way of knowing if the tortoises are chipped on reaching 100mm flat shell length. One must assume – in the absence of evidence to the contrary – evidence which the Department will have, as it issues the individual CITES paperwork and requires that on chipping the paperwork be returned to the Department for amendment – that only a small proportion of tortoises are ever micro-chipped. In other words the current law is being flouted. Laws which do not have the support of the community and which cannot be policed are unsatisfactory.

Reasons for people not carrying out the required micro-chipping are many and varied. They include: feeling chipping is cruel, having no competent vet with any knowledge of tortoises (let alone microchipping) within a reasonable distance [I write this as one with many MRCVS in the family], not wishing to make the outlay, [under the 1999 revision to the legislation the onus is on the purchaser to (a) buy the chip, (b) to pay the vet to insert it, and (c) under proposed new charges for CITES-related work, pay the Department to issue a new certificate]. Common sense dictates that many/most people will not bother.

Many animal species have been shown to have distinctive markings or patterns which are unique to each individual. Among reptiles and amphibians my own work with LAK Singh on tail 'finger-printing' in the gharial (*Gavialis gangeticus*) in the 1970's and last year's work on a population of over 500 natterjack toads (*Bufo calamita*) using dorsal stripe/throat markings (Bustard, in prepn.) are two examples in which all members of a population can be distinguished individually.

It has been suggested that for *T. graeca* and possibly for *T. hermanni* the pattern of dark markings on the pale background of the plastron (lower shell) is unique to each particular

tortoise and hence can be used to identify it (British Chelonia Group). This work has been based on adult tortoises. If this is correct, there is no need to micro-chip the adult breeding stock which can be plastral finger-printed with a copy of each photograph held by the DOE, if it so wishes *and is prepared to undertake this work at its own expense*. To charge the breeder for co-operation is unacceptable.

Recently the DOE has stated that a plastral photograph will be adequate for baby tortoises until they reach the mandatory 100mm shell length when micro-chipping has to take place. One wonders why, if a plastral photograph is satisfactory for the first few years of life, it is not deemed to be satisfactory thereafter. In particular one wonders why this is not acceptable for adults (see above) where the technique is less debatable.

I know of no scientific research on changes in the plastral 'finger print' with growth, so instigated work on *T. hermanni* hatchlings. In, any *hermanni* the black markings develop on new growth areas. This in itself does not invalidate the method as clear growth rings are laid down in testudines and the finger print is concerned only with the area present at the time of hatching, if the method is to be used as a whole of life individual record. Due to the growth rings it is a straightforward matter to identify the original area of each scute. What still needs to be determined is whether the pattern, present at birth, remains unchanged on that area of scute throughout life. This is the focus of my current research, in which, commencing with hatchlings, individual tortoises are plastral photographed at six monthly intervals. If it can be demonstrated that this birth pattern remains throughout life then we have a simple yet effective, method of individual tortoise recognition and there would be no need for intrusive surgery.

If there is a legitimate need to identify individual tortoises in order to separate legal and smuggled animals, and if plastral 'finger-printing' is shown to be a reliable method, then the DOE can require that (a) all breeders deposit with them a photograph of the plastron of all their breeding stock, (b) supply a plastral photograph of each tortoise sold (both to the purchaser and to the DOE), and (c) that a copy of this photograph remains with the exemption certificate throughout the tortoise's life.

Incidentally, there can be no question of these photographs being used in conjunction with a smuggled tortoise in order to legalise it as they will not match. It has been suggested that chips may be recycled in this way.

These are purely personal views. Mike Hines has sent out a circular seeking opinions on these topics and he will be publishing the results of his survey in due course. Mike has seen this in advance of publication for the benefit of his survey. It is, of course, important, if the Society is to play its proper role, that the Society has a position on these matters and I will be raising this at Council.