

A SURVEY OF TORTOISES IMPORTED INTO THE UNITED KINGDOM DURING 1982 — WITH SPECIAL REFERENCE TO OXFORDSHIRE

An Interim Report

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INTRODUCTION

Tortoise importations have been licensed since 1970 under the Animal (Restriction of importation) Act 1964. This act was superceded by the Endangered Species (Import and Export) Act 1976, which implemented Britain's obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) 1973. Tortoise importation data has been collected since 1965 (Lambert, 1980). Tortoise imports into this country during the period 1965 to 1982 were made up of three species, *Testudo graeca*, *T. hermannii* and *T. horsfieldii*. *T. graeca* has always made up the majority of the imported species, with *T. horsfieldii* never making up more than 5% of the imports after 1967, with none being imported since 1972. During the current year (1982) licenses were issued by the Department of the Environment to import 35,000 tortoises, this compares with an average of 145,958 per year for the period 1968 to 1977 (Lambert, 1980) and 50,000 per year for the period 1979 to 1982 (estimated figures). This reduction is as a result of a voluntary agreement between the importers and the D.o.E. All licenses granted this year (1982) related only to the importation of *T. graeca*. The tortoises imported originate from one area of European Turkey (Baltrock, personal communication).

As a result of pressure from conservation and animal welfare groups the D.o.E., acting under the Endangered Species (Import and Export) Act 1976, issued a section 6 directive in May 1982. This direction requires that from the time of import the tortoises must be kept under conditions suitable for their survival in the United Kingdom. The supplier of the tortoise being required to obtain a signed undertaking from the purchaser to this effect.

The 'conditions suitable for their survival in the United Kingdom' were discussed at a meeting held on the 6th April 1982. The meeting at the Nature Conservancy Council, Belgrave Square, London, was attended by representatives from the D.o.E., R.S.P.C.A., Pet Trade Association, and an independant veterinary advisor. The conditions agreed are set out below:—

1. Access to weatherproof accommodation whenever a tortoise is kept outdoors, and overwintering either in hibernation at a minimum temperature of 5°C or in an active state at a minimum temperature of 20°C.
2. Constant access to food and water, except when preparing for and during hibernation. Food supplied must contain fruit and vegetables (especially green vegetables) and must be supplemented occasionally with canned dog meat, vitamins (particularly A, D3, E and B12) and Calcium.
3. Except when confined for hibernation, transportation, veterinary treatment, temporary display for the purposes of retail sale, tortoises will not be kept at a density of more than:
(a) Two per square metre, for animals between 10 and 15cm in length, or
(b) One per square metre, for animals more than 15cm in length.
Tortoises will not be kept on their backs, nor will they be unnecessarily disturbed when hibernating.

The author has undertaken a survey to assess the survival rate of tortoises imported during 1982 and the rate of compliance with the section 6 direction. The survey is based on Oxfordshire and only tortoises supplied directly to pet shops in Oxfordshire, purchased and still resident in the county are included.

520 tortoises were directly supplied to pet shops in Oxfordshire. 370 were supplied by Bio Pet Ltd., Unit B4, Button End Industrial Estate, Harston, Cambridge CB2 5NX and 150 were supplied by Ladydell Livestock Importers Ltd., Hangleton Lane, Ferring, Worthing, Sussex BN12 6PP.

11 tortoises were found dead on arrival at the pet shops, which was the first time they were unpacked after shipment from Turkey, 6 from those supplied by Bio Pet Ltd. (this represents a mortality of 1.6%) and five from those supplied by Ladydell (this represents a 3.33% mortality). The mortality for these tortoises from shipping to arrival at the pet shop is therefore 2.1%.

10 tortoises died in the shop before they could be sold. This represents a mortality of 1.9% for the period from delivery at the shop to point of sale.

Therefore 21 tortoises from the two consignments totally 520 animals died in the period from leaving Turkey to point of sale, this represents a mortality of 4.03%.

205 tortoises (41%) were sold to purchasers living outside the Oxfordshire County boundary. The species and sex of the remaining 315 tortoises were determined:—

Species

<i>Testudo graeca iberica</i>	305 (97%)
<i>Testudo hermanni</i>	10 (3%)

Sex

Males	260 (82%)
Females	55 (18%)

Sex ratio Males : Females approx. 4:1

160 tortoises were weighed and measured, the body mass in grams, length in mm, Carapace length in mm, Plastron length in mm, and width of the fourth vertebral scute in mm were all recorded. All were larger than the 100 minimum length voluntarily agreed by the D.o.E. and the Pet Trade Association. Lengths varied from 140mm to 223mm. Carapace lengths from 180mm to 264mm. Body mass from 180 grams to 2200 grams. Jackson's Ratio', (Jackson, 1980) was determined for each tortoise; the majority fell within normal limits.

The morphometric characteristics will be compared with those published for the wild *T. graeca iberica* populations in W. Turkey and N.E. Greece (Lambert, 1982). The initial impression is that the carapace length frequency distribution in the imported animals reflects that found in the wild population.

88 of the 160 tortoises have been followed up in greater detail to check if the undertaking is understood and being adhered to. The owners were asked a series of questions:—

- 1) Do you understand the undertaking that you signed and do you understand the P.T.A. leaflet on Tortoise Husbandry and Breeding. (This leaflet was provided with each tortoise sold)?.

100% of owners said they understood the undertaking and leaflet with only 4 owners asking any supplementary questions about the leaflet. This response I feel reflects a reluctance to appear ignorant, as close questioning soon revealed large gaps in their knowledge.

2. What food is supplied for your tortoise?

The types of food were split into five main divisions:

- a) Lettuce and green vegetables.
- b) Tomato and cucumber.
- c) Meat.
- d) Fruit.
- e) Other foods. These included green beans, peanuts, cheese and dog biscuits.

73 of the owners supplied Lettuce and Greens. (82.95%).

45 of the owners supplied Tomato and Cucumber. (51.11%).

33 of the owners supplied Meat. (37.5%).

20 of the owners supplied Fruit. (22.72%).

8 of the owners supplied other foodstuffs. (9.09%).

3. Do you provide a vitamin and mineral supplement?

21 owners supplemented the diet as per direction. (25%).

67 owners didn't supplement the diet. (75%).

4. Do you provide shelter for your tortoise?

81 owners provided a satisfactory weatherproof shelter. (92%).

7 owners provided no shelter. (8%).

5. Have you previously owned or do you currently own a tortoise?

25 people had previously owned tortoises.

14 people currently owned tortoises.

6. How long had you had the tortoise before it died or how long have you had your tortoise?

37 tortoises had died, 32 in hibernation and 5 from causes unconnected with hibernation. The average life-span of these tortoises was 5.4 years with a range of 6 months to 25 years.

18 tortoises were still alive, the average period in captivity was 4.3 years with a range of 18 months to 15 years.

Of the 88 tortoises followed up 7 died before hibernation, this represents a mortality rate of 7.95% and 3 were lost (3.4%).

Of the seven tortoises that died, three died from complications associated with abscessated limbs, two didn't eat and died in spite of veterinary treatment, one was found dead after being left out on a cold wet night and one died from an overwhelming infection associated with an under-running infection of the scutes.

Therefore of the 88 tortoises visited 7 died in the period between point of sale and hibernation and three were lost. The accumulative mortality rate is therefore:

i. Shipping to delivery at petshop	2.09%
ii. Delivery to point of sale	1.90%
iii. Point of sale to hibernation	7.95%

Total	11.94%
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