



UK CAPTIVE-BREEDING OF EUROPEAN TORTOISES 1997-2000: SUPPLY AND DEMAND

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DEMAND FOR TORTOISES

I am unaware of any quantitative literature on the demand for European tortoises in the UK at the present time, hence it is worth recording preliminary information on Scottish demand and extrapolating this to the UK as a whole.

Any quantitative assessment of current demand must take price into account. Although disposable income has risen enormously, tortoises, now that they are no longer imported, are comparatively very much more expensive, costing from £100 plus to about £200 for individuals up to 2 years old. These prices compare with half a crown (12.5p) for *adult tortoises* when I was at school. Taking inflation into account this 12.5p becomes around £5 — a far cry indeed from £100-200! Much of the difference between these prices reflects the fact that tortoises are now all supposed to be captive-bred *and supply does not begin to meet the demand at present*.

The comparatively high price has put tortoises beyond the reach of many 'tortoise people' who had one previously and would like another now if they could afford one. So present demand is very much smaller than formerly. Conversely, if captive-breeding takes off — as appears likely — then a better balance between supply and demand will

result in a substantial fall in price. This in turn will result in a much increased demand for tortoises as these fall into the affordable price range of many more 'tortoise people'.

I pointed out the strength of the demand for pet European tortoises in Scotland at the October 2001 meeting of Council, and I am sure the strength of this surprised many of those present. Part of this is worthy of repetition. In the four months to 21st September 2001, seven hundred and twenty-three 'tortoise people' in Scotland were in touch with me. I said, in order to put this figure in numerical perspective, that I did not think that in that period I was in touch with anything like 10% of the Scots 'tortoise people'. It is impossible to give a figure, but I would suggest, as an attempt at an informed guess, 5%. That would imply that there are some 14,500 'tortoise people' in Scotland. Many of these may not currently own a tortoise for the reason given above — lack of availability.

The figures become even more interesting when tentatively applied to England, which has a population some ten times that of Scotland. The potential figure for the number of 'tortoise people' (as defined above) for England would be much greater than a simple x10 of the Scots figure because there is a much greater interest in

'exotics' in England than in Scotland. Even without making any allowance for this extra factor, it seems reasonable to talk of at least a potential 160,000 'tortoise people' — and probably a great deal more — in the UK as a whole. This figure, as it must be stressed, remains a guesstimate and the true figure could be very much larger.

It is important to realise that these 'tortoise people' are not reptile people. They are almost invariably quite separate from the reptile-keeping fraternity. 'Tortoise people' are a breed apart.

Tortoises and the Society

I also pointed out to Council — here is a large potential market to tap for Society membership, one which we should not largely ignore as at present. If only 1% of the guesstimate figure joined the Society that would be an extra 1,600 members. Of course, to attract and keep these as members we would have to be relevant to their needs with regular good articles on all aspects of keeping tortoises. I attempted to start a 'Tortoise Group' through the *Natterjack* some years ago but at the time had no takers. If anyone is now interested in running a tortoise group within the Society I would be pleased to hear from them. I have again (December 2001) tried to go some way towards catering for tortoises by the creation of a 'Tortoise Corner' in the *Natterjack* which I hope will receive your support.

SUPPLY OF CAPTIVE-BRED TORTOISES

As part of my investigation into how far captive-breeding of European tortoises could be expected to be able to supply the legitimate demand - and so cut illegal imports - I asked DEFRA to provide me with recent figures relating to the issue of Article 10 certificates for captive-bred European tortoises. I had originally asked for 10 years data but apparently this was a huge task due to the way their records are maintained and the capabilities of their current software, but they kindly agreed to provide data for the last four years. This information is set out in Table 1. They did not, incidentally, have data on captive-breeding of *horsfieldi*.

These data are very interesting. However, several caveats should be noted:

1. DEFRA do not separate *graeca* into its 'components'. All the North African races/ species (other than *kleinmanni*) are grouped together with the European (*graeca iberica*) as *graeca*. However, it seems safe to assume that the overwhelming majority of the hatchlings reported are (*graeca iberica*), i.e. the European race, as it is the one much more widely kept and bred.

2. I am advised that in the early years the figures may be somewhat exaggerated by breeders ordering too many certificates based on numbers of eggs laid, not all of which hatched. DEFRA state that they are not likely to give out certificates on that basis nowadays. Hence, if anything, the growth in captive-breeding has been even more dramatic than the data would suggest.

3. As people come to understand and be fully aware of the Regulations, the number applying for Article 10 certificates will increase. It is not known how important this factor is quantitatively.

4. A small number of certificates are issued again, i.e. duplicated for the same tortoise following further sales.

DEFRA's present software is not sophisticated enough to be able to deal with these variables. My own opinion is that these variables are of a fairly minor nature and do not detract from the clearly recorded growth in captive breeding as detailed in Table 1.

Year	<i>graeca</i>	<i>hermanni</i>	<i>marginata</i>
1997	1179	789	139
1998	750	748	135
1999	1284	1280	206
2000	1289	2119	418

Table 1. Total number of captive-bred European tortoises 1997-2000 based on DEFRA licensing.

Whereas the number of *graeca* bred has remained fairly static between 1997-2000, the numbers of the other two species have increased dramatically. It is worthwhile to consider the data for the three species separately:

A. '*graeca*'

At a time when, as one might expect, the numbers of captive-bred tortoises are increasing by leaps and bounds, the number of *graeca* being bred has remained relatively static over the last four years, apart from a marked fall of 36% to 750 in 1998, the reason for which is not known to me (Table 1). The percentage increase over the four years 1997-2000 is only 9%.

B. *hermanni*

In contrast there has been an almost threefold increase (168.5%) in the number of *hermanni* captive-bred over the same period - from 789 in 1997 to 2119 in 2000. As with *graeca* there was a fall in 1998, but unlike *graeca* the fall was small (5%). The 1999 figure represents an increase of 71% over the previous year and the figure of 2119 for 2000 is a further increase of 65.5% over that figure.

Hermannii, starting in 1997 from a figure of only some 2/3 of *graeca*, has become the main species bred over the four year period.

C. *marginata*

Equally interesting is the number of *marginata* now being bred. The figures are very creditable for a tortoise which was seldom kept in captivity in this country. There has been a threefold increase from 139 to 418 over the period 1997 to 2000 (200.7%) as well as a doubling (103%) between 1999 and 2000. Again, as with the other species, there was no increase, indeed a slight fall, between 1998 and 1999 (3.6%) — very similar to the 5% fall in *hermanni*. This contrasts with the 36% fall reported for *graeca*.

BHS role in captive-breeding

It would be interesting to know the input of BHS members in these figures. It is proposed to update and comment on these figures on an annual basis in future and I would like to be able to highlight the BHS contribution. By the time you read this I will be collating the figures for 2001, so if you have not already sent these to me in response to my request for this information in the *Natterjack*, I would appreciate receiving any data members may wish to provide as soon as possible. As stated



A nesting Hermann's Tortoise moving the most recently laid egg. Note the greatly elongated claws on the hind feet of females. These function like rigid fingers in digging the nest and in moving the eggs around to prevent the hard-shelled eggs from falling on top of one another. Photograph by author.

in the *Natterjack*, anonymity is guaranteed where requested.

The role of captive-breeding in conservation of European tortoises.

One reason for giving 'ball park' figures for 'tortoise people' above was to allow consideration of how far captive-breeding of tortoises is meeting or is likely to meet the UK demand for European tortoises. At the current figure of 3826 tortoises bred in the year 2000, and assuming there is no increase (whereas there is likely to continue to be a large annual increase), approximately 40,000 captive bred tortoises will have been bred over the 10 year period to 2010. This has to be viewed not only as a major achievement in our country, but as now making a significant contribution to meeting the demand at prices currently being charged for young tortoises.

The future

There is a further aspect not considered above. This is the development of commercial tortoise farming which is going to be a — possibly the — most significant factor in the future supply of captive-bred tortoises. There are already large-scale tortoise farms in central Europe and commercial farms are now appearing in the UK. These will be a topic of a future article.