Shell shock
the continuing illegal trade in tortoises
Every year, tortoises suffer major welfare problems when they are captured in the wild and transported illegally for the UK pet trade. They do not make suitable pets and nine out of ten die within four years, when their owners are unable to provide the environmental conditions they need to survive. Despite international controls designed to protect tortoises, RSPCA investigators have seen them being offered cheap to UK tourists and potential pet traders abroad, and believe they may be being imported easily. This, coupled with their increasing rarity value, has led to fears of an alarming growth in the illegal trade. Unless regulations are properly enforced, the population of some tortoise species could face severe decline.
UK tortoise trade

Intensive trade, combined with habitat destruction, resulted in dramatic declines in tortoise numbers during the 1970s. Fears that the trade was unsustainable led to a 1984 European Union (EU) ban on the commercial import of certain protected species (see box) – causing an immediate decline in the legal trade. It is now illegal in the UK to import or sell live wild-caught protected species of tortoises or products made from them without a permit for commercial purposes. Breeders can sell only captive animals bred from parental stock in their care. New-born animals must be identified with a microdot and adults with a microchip or other appropriate method.

But as tortoise numbers have declined, their selling price has increased in line with their rarity, and this may have contributed to an increase in their illegal trade. Before 1983, Mediterranean tortoises sold for about £10 each – now they can change hands illegally for up to £200.

The UK pet trade concentrates largely on two protected tortoise species – Hermann’s (*Testudo hermanni*) and spur-thighed (*Testudo graeca*) – both of which are prohibited from international trade under EU law implementing the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES – see page 5).
**Protection of tortoises**

**CITES** is an international conservation agreement administered by the United Nations Environment Programme, with 154 member countries. Species are listed in three appendices indicating the level of protection from international trade they require.

### Appendix I:
Species threatened with extinction. Trade is strictly controlled and authorized only in exceptional circumstances.

### Appendix II:
Vulnerable species that may come under threat of extinction through indiscriminate trading, and other species that may suffer the same fate because they are similar. Trade is strictly regulated to minimize the risk.

### Appendix III:
Species whose trade is regulated by at least one CITES member, which has asked for the cooperation of other

From 1975 tortoises were included in Appendix II, but the trade continued. High levels of EU imports and the high mortality of tortoises kept in captivity led to a 1984 ban on the commercial import, export, keeping and sale in the EU of three commonly-imported species, including the spur-thighed tortoise – except for captive-bred or exempted animals sold under licence.

EU regulations implementing CITES were updated in 1997 to improve enforcement and implementation. Species are listed in four annexes. Annex A species cannot be imported for commercial purposes – this covers 12 tortoise species, including the spur-thighed tortoise. The EU regulations are enforced in the UK by the Control of Trade in Endangered Species (Enforcement) Regulations 1997 (COTES).

Commercial trade in more than 24 species was prohibited under EU regulations in 1998 and 1999, as a consequence of tortoises not surviving long in captivity.
Fears of an increase in illegal trade revealed by RSPCA investigations

Despite protection for tortoises under EU law, the RSPCA has uncovered important new evidence giving cause for concern that illegal import and trade to the UK of live tortoises may have grown in recent years.

Morocco

Although Morocco ratified CITES in 1976, there is no Moroccan legislation to make the sale of tortoises illegal there. But it is illegal to export wild-caught tortoises without a licence from Morocco to the UK. Non-RSPCA investigations in Morocco in the early 1990s found 264 products made from the shells of spur-thighed tortoises on sale in souvenir shops between 1990 and 19951, but, few live specimens were on sale.

But a 2001 three-day undercover RSPCA investigation in Marrakech sparked fears that Moroccan trade in live tortoises may have increased dramatically since then.

In the space of only two hours in a small area of the main market, over 500 spur-thighed tortoises were seen on open sale at £1-£13.30 each, many in very poor condition. When RSPCA investigators posed as traders at the market, the price of the tortoises was dropped to less than £1 for bulk purchases. They were told getting a large number of tortoises would not be a problem. Tourists were also being targeted, vendors being quick to point out that transporting live tortoises to the UK was easy, with no paperwork needed. Tortoise shell products, such as musical instruments, were available as well as live tortoises.

Extract from RSPCA investigation report, March 2001

Market in the area of Place Djeema el Fna, Marrakech

In a two-hour period and in a very small area we saw a vast amount of animals and animal products for sale, including 534 spur-thighed tortoises – at 30-200 Dhm each or £1-£13.30 – and 20 tortoise carapace musical instruments. It is likely that we saw only a small representation of the total trade in Morocco. We were told on various occasions that exporting the items to the UK would not be a problem and that no paperwork was necessary.

Almost without exception the live specimens seen were in extremely poor condition and in many cases dying – one hatchling actually died while we were examining it. The animals were grossly overstocked in small wire cages with little or no provision for food and water. Some were kept in full sunlight, others in complete shade.

They were displayed at the very front of the stalls... any hint of interest was instantly picked up by the stall keepers who offered them for sale and openly advised that the specimens were taken from the wild and could be taken to the UK with no paperwork. There were no offers to transport them on our behalf – it would be our responsibility to take them out.

Ordinary tourists are likely to be particularly easy targets for these tortoise vendors. The conditions the tortoises are kept in are pitiful and the prices temptingly low. Unwary people – ignorant of UK CITES legislation – can be lured into what they see as a humane purchase.

The criminal element is also likely to be attracted to these markets – a £1 tortoise could sell for over £100 in the UK pet trade. Our recent UK investigations have highlighted the determination of certain individuals to bring tortoises into the UK and the apparent ease with which they have avoided detection by Customs.
UK

Recent RSPCA investigations in the UK have pointed to the apparent ease with which tortoises may be imported from their countries of origin.

Baby tortoises smuggled in child's pocket

Two tiny spur-thighed tortoises – said to have been bought for £10 each on a Tunisian beach – were discovered in a Birmingham house by an RSPCA inspector after a tip off from a concerned member of the public.

The hatchlings were kept in a plastic bucket without uv light, heating or water. They had been given a few lettuce leaves to eat.

The householder said beach traders had told her how to take the tortoises back to the UK and that her daughter had brought them into the country in her pocket.

The tortoises were rehomed to a specialist carer.

Rare tortoises driven into UK in camper van

Customs failed to stop a camper van that returned to the UK from Morocco containing eight spur-thighed tortoises.

The tortoises had been bought in a Marrakech market for a total of £20 and smuggled through Eurotunnel without any paperwork in a cardboard box.

They were discovered by RSPCA investigators and police officers at a Yorkshire address in March 2001 following a tip off.

Inspectors found the eight tortoises – six adults and two juveniles – kept in a cardboard box. They had no heating, lighting or water and had simply been given fruit to eat.

Three generations of the same family admitted illegally importing the tortoises and received written cautions.

Sadly, one tortoise died after it was seized. All were underweight but the remaining seven are progressing well under the care of a specialist vet.

Wild-caught tortoises seized after children show them to friends

A member of the public called the RSPCA after children were spotted taking two spur-thighed tortoises around a Hertfordshire street to show friends.

The caller became concerned after hearing that the juvenile tortoises had been brought back from Morocco.

When an RSPCA inspector visited the family’s home with police officers in June 2001, he discovered the tortoises roaming free in the garden.

The owner claimed a member of her family had bred the tortoises, but she was unable to provide any proof. The tortoises were formally seized by Customs officers at Heathrow Animal Reception Centre.

An expert at the centre identified the tortoises as wild-caught and after the owner failed to provide proof of legal ownership they were eventually passed into the care of the RSPCA.

The investigating inspector said, “There is no doubt in my mind that these animals were smuggled into the UK. Not only are there grave concerns for the future of this species as numbers are depleted by illegal trade, but also there are very real concerns about their chances of survival in captivity.

Members of the public must realize they are breaking the law by buying and bringing protected tortoises into the UK – and that unless they have a great deal of experience, they are highly likely to cause animal suffering.”

The two tortoises are now in the care of an experienced RSPCA inspector who will monitor them for some months before finding them a specialist, permanent home.
Welfare from life in the wild to captivity

From the moment of capture, tortoises taken from the wild are at risk of suffering. Taking them from their natural environment and transporting them to a country with a completely different climate to be kept in captivity has considerable welfare implications.

Capture
Tortoises are caught by a number of methods, including:
- using hooked sticks, nets and nooses
- digging out burrows
- chasing.
All have a serious impact on them physically and may cause extreme fear and stress.

After capture they can be packed in boxes in close proximity to each other – this, combined with the stress caused by the close proximity to humans and lack of hiding places, makes them vulnerable to diseases.

Transportation
Mortality during transportation varies dramatically, depending on the condition of the tortoises at the outset, how the animals are handled and on the duration of the journey. Their size may also be important – smaller individuals do not have reserves to stand long periods without food and water. Most die as a result of emaciation, severe dehydration and parasitosis. Missing body parts and damaged tails as a result of crude hunting methods also hasten death.

Investigations into shipments of tortoises have revealed major welfare concerns. A consignment checked by a CITES inspector at a Dutch airport in 1997 contained over 800 tortoises packed in layers on top of one another. It was feared almost 400 would not survive, and 50 were already dead. Many had broken shells, were bleeding and/or had missing legs and most were severely dehydrated. Tortoises packed in this way are often crushed to death by the weight of the other animals.

In captivity
Physiological changes during capture, handling and transportation predispose animals to the effects of stress, such as trauma, nutritional imbalance or infection.

But tortoises in any case find it difficult to adapt to captivity. They must have the correct diet, level of humidity, quantity of water and climate to build up enough fat reserves to take them through hibernation.

A survey of pet shops to investigate the mortality of spur-thighed and Hermann’s tortoises following importation showed that within the first year an average of 26.5 per cent died. Older specimens fared even worse – 48 per cent died. Within four years 92 per cent were dead.

Decomposed tortoise discovery
RSPCA and police officers found a badly-decomposed tortoise surrounded by rare tortoise species when they raided the home of a former zoo-keeper.

It had been dead for at least two days and was surrounded by cardboard boxes containing rare tortoises. Others were found in boxes in an unheated garage. None had food, water or uv light and were kept on newspaper covered in their own excrement.

Their owner was found guilty in October 2001 of causing unnecessary suffering to 39 tortoises, including 14 spur-thighed tortoises, 16 Hermann’s tortoises, five marginated tortoises and four radiated tortoises. All are given the highest protection under Annex A of EU trade regulations.

He received a two-year conditional discharge and was ordered to pay £12,000 costs.
Why tortoises make bad pets

It is virtually impossible to replicate the environmental conditions found in the wild for tortoises kept in captivity.

**Body temperature**
Tortoises cannot generate heat internally and do not have sweat glands to allow heat loss through perspiration. They depend on external means of regulating their body temperature – burrowing into cool earth, bathing in water, basking in the sun or lying on warm rocks. In extreme climates they may hibernate in burrows or rock crevices to survive the winter months or seek shelter during the hottest times of the day.

Body temperature is a critical factor in maintaining metabolic processes. Too high or low temperatures affect their digestion. If they cannot absorb nutrients from food, they will suffer weight loss, vitamin deficiencies and eventually death. Low temperatures have also been found to result in severe pneumonia.

In order to survive, tortoises are highly adapted – physically and behaviourally – to their local environment in the wild. Because their tolerance range is small, any environmental changes they encounter in captivity can quickly lead to lethal changes in body temperature. Individual tortoises of the same species from different areas will be adapted to their specific microclimate and food resources, and may therefore need very different conditions from one another in captivity.

**Humidity**
Tortoises need also to be fully adapted to the humidity of their local environment in the wild in order to regulate the intake of water. Mediterranean spur-thighed tortoises typically need 30-50 per cent humidity. Low humidity can lead to an increase in bone disease and respiratory and eye problems in tortoises.

**Water**
Tortoise owners sometimes fail to see water as a high priority. Rather than providing tortoises with constant access to water, a survey of tortoise keepers visiting a veterinary clinic found 23 per cent admitted tortoises only had the opportunity to drink when given a bath, such as before and after hibernation. But lack of water provided for reptiles may cause infectious diseases or gout and bladder stones.

**Diet**
Spur-thighed tortoises mainly feed on local vegetation in the wild, with their diet having a protein content as low as one to five per cent. The provision of either commercially available standard food high in protein or meat-based pet food is unsuitable for herbivorous tortoises – as a diet rich in protein can lead to an accumulation of uric acid in the blood, causing gout and shortened life span. High protein and high fat foods given to spur-thighed tortoises in captivity can also lead to terminal renal problems and artificially accelerated growth, causing deformed shells and premature maturity in hatchlings.

Feeding herbivorous tortoises meat also puts a substantial strain on their digestive systems. Giving them only cucumber or tomatoes provides too much phosphorous, which could lead to long-term effects such as metabolic bone disease. A deficiency in vitamins A and C weakens cell membranes and connecting tissue and can cause mouth rot and large-scale lesions of the skin that lead to secondary infections.

The dosage of dietary fibre is also vital for Mediterranean tortoises, with plants in their natural habitat consisting of up to 40 per cent dietary fibre.

**Light**
The appropriate quality and quantity of light is essential for reptiles, especially species active during the day. The provision of adequate uv radiation is also vital. Poor lighting when keeping Mediterranean tortoises in captivity can lead to problems such as rhinitis and mouth rot.

**The law**
It is an offence to import, buy or sell most species of tortoise without a licence or certificate in the UK.
What the RSPCA wants

Governments must act now to prevent a growth in the illegal trade in tortoises.

The RSPCA wants:

- increased monitoring and enforcement of the law in both importing and exporting countries to stop the illegal trade in tortoises altogether

- the government and travel industry to make efforts to increase understanding among tourists that they are breaking the law if they import protected tortoises into the UK without the required permits

- greater public awareness about the unsuitability of tortoises as pets and the serious welfare consequences of the illegal tortoise trade.

Endnotes

1 Highfield and Bayley 1996
2 Altherr and Freyer in press
3 Maas 2000
4 Moritz 1995
5 Lauif 1997
6 Maas 2000
7 Lawrence 1986
8 Wiechert 2000
9 Schmidt 1993
10 Kirmair 1994; Shallman 1996
11 Hafeli and Zwart 2000
12 Innes 2000
13 Dennert 1999
14 Kölle 2000
15 Kölle and Hoffman 1997
16 Kölle et al. 1999
17 Kölle 2000b
18 Wiechert 2000
19 Jarofke and Lange 1993; Kölle et al. 1996; Dennert 1999
20 Dennert 1999b
21 Kirmair 1994