Species specific identification and husbandry requirements for chelonia in UK collections

A variety of tortoise species are now frequently seen in practice. Accurate species identification is vital to ensure that correct husbandry conditions and nutrition are provided for these animals. The following article will describe species specific husbandry requirements for both hibernating and non-hibernating species seen within general practice in the UK.

Key words: tortoise, identification, husbandry, mediterranean, african, hibernation

Introduction

In the past 20 years the number of tortoise species seen in general practice has increased. Many of these kept species are popular due to the fact they do not require CITES (Convention on International Trade in Endangered Species of wild fauna and flora) paperwork for sale purposes. The attraction of these species to many keepers is that some are non-hibernating. This appeals to people frightened of hibernation. Accurate identification of the species is vital because of species-specific husbandry requirements; for example, non-hibernation of certain species such as Sulcata and Leopard tortoises. Confusion in species identification resulting in inadequate husbandry has unfortunately, in recent years, led to the authors seeing many examples of adverse consequences on the health of these animals.

Accurate species identification is particularly challenging in juveniles as the characteristics of many species do not develop straight away. Further complications in identification can arise due to abnormal growth and distortion of the shape of the tortoise from poor husbandry (Figures 1a/b). See Appendix (page 12) for an explanation of anatomical terms.

Mediterranean hibernating species:

Hermann’s tortoises

Hermann’s tortoises, Testudo hermanni, are CITES Annex A listed, requiring an article 10 license for sale. An Annex A tortoise without a license may be gifted but not sold.

Historically, these tortoises are often thought to be the commonest and most popular hibernating species in the pet trade within the UK. The Hermann’s tortoise at present is divided into 3 sub-species:

- The Eastern subspecies, Testudo hermanni boettgeri
- The Western subspecies, Testudo hermanni hermanni
- The Dalmatian subspecies, Testudo hermanni hercegovinensis.

Hermann’s cover a wide distribution predominantly Southern France, Spain and Italy (Western subspecies), Serbia, Kosovo, Macedonia, Romania, Bulgaria, Albania and Greece (Eastern subspecies) and Bosnia and Herzegovina, Croatia and Montenegro (Dalmatian subspecies).

They are identified by the absence of a caudal thigh spurs and the lack of a hinge between the abdominal and inguinal scutes. The representative feature is a prominent spur on the tail tip. The plastron has two melanistic stripes running parallel from anterior to posterior and these can be broken or faded in places (Figure 2).

Mediterranean spur-thigh tortoises

Spur-thigh tortoises, Testudo graeca, are CITES Annex A listed, requiring an article 10 license for sale.

The characteristic feature of the spur-thigh group is the single prominent spur on each caudal thigh. There is also an obvious hinge between the abdominal and inguinal scutes on the plastron. This is more obvious in females. Regional subspecies differences in this group are vast. Size, colour, shape and spur appearance all are indicators of origin. The authors’ opinion is that identification and differentiation is
significant between those that originate north of the Mediterranean Sea and those that have their origins in North Africa.

For example, the Algerian spur-thigh *Testudo graeca graeca*, also known as Whitei; although being in stature one of the largest varieties of spur-thighed is also one of the most delicate in terms of health. They are particular prone to Upper Respiratory Tract Disease (URTD). Most female ‘Algerians’ at maturity are approximately 3kg. They have a high domed carapace and large white caudal thigh spurs (Figures 3a/b). The Iberian tortoise, *Testudo graeca iberia*, predominantly from Turkey and surrounding countries is of smaller stature, known for the aggressive and energetic nature of its males, generally dark in shell and skin appearance with good-sized dark coloured caudal thigh spurs. It should be noted that spur-thighs that have a North African origin require a much shorter hibernation period. The authors’ recommendation is no longer than 8 weeks even in mature individuals, as opposed to the recommended 12 weeks with all other healthy Mediterranean species.

**Margined tortoises**

Margined tortoises, *Testudo marginata*, are identified by the flared marginal scutes seen in adult animals and triangular markings on each of the larger plastron scutes (Figure 4a and 4b). These are CITES Annex A listed and require an article 10 licence for commercial sale but no licence required in order to possess or gift them.

**Horsfield’s tortoises**

Horsfield’s tortoises, *Testudo horsfieldii*, are technically not a member of the Mediterranean group although they require similar husbandry. They are also known as Russian tortoises or the Burrowing tortoise. They are CITES Annex B listed therefore require no commercial license and so are available for sale widely in the UK pet trade. They are probably the most popular tortoise at the moment for sale. Distinguishing features include the rounded dorso-ventral profile of the shell which enables them to turn around and exit their burrow. In the wild they spend most of the day deep within this burrow, only appearing for a few hours each day to feed. Captive reared individuals are often seen with excessive growth for their age and associated growth-related abnormalities. There is a lack of a hinge between the abdominal and inguinal scutes of the plastron. The background carapace colour is yellow-green with variation of the melanistic markings. Wild caught individuals appear darker in colour than captive ‘force-grown’ animals.

In Horsfield’s tortoises all four feet have four claws (Figure 5), where-as in most other species there are five claws on the forelimbs and four on the hind. However, the authors have seen some Hermann individuals with four front claws so caution is advised.