

## TURTLE CONFERENCE REPORT



The Sixth International Freshwater Turtle Breeders' Conference was recently hosted in the UK for the first time. It was organised by the Austrian-based group, Chelonia 2002 and the British Herpetological Society, being sponsored by ZooMed and hosted by Peregrine Livefoods. Here Dave Perry reports on the event.

**F**RESHWATER TURTLES now represent one of the most endangered groups of reptiles in the world, mainly because they are being increasingly exploited for food in the Far East, on an almost industrial scale, causing populations to plummet. Chelonia 2002 was set up specifically to assist with the breeding and conservation of this highly specialist and diverse group of reptiles. Its members have been responsible for breeding a total of over 150 species, many for the first time in captivity.

Sixty delegates travelled to the UK from all over the world, some from as far afield as the USA and China, to hear presentations from a number of the top authorities on turtle biology and conservation. Topics covered included classification, biology, captive breeding, conservation and farming, with a special emphasis being placed on the breeding and conservation of the Asian genus *Cuora*.

The schedule was packed, with sixteen speakers contributing over the two days. After a welcome from Harald Artner, the founder of Chelonia 2002, the first morning was dedicated to a special symposium on *Cuora* turtles. Peter Paul Van Dijk (from Washington, DC) started by reviewing the taxonomy of these Asian box turtles, presenting the latest information on advances in DNA research



The focus of the meeting was on Asian box turtles



that is rewriting the classification of this group.

Traditionally, taxonomy has been based on how an animal looks, or features in its skeleton or behaviour that help to determine its relationships. DNA studies – based instead on the genetic code – are now revealing that long-standing beliefs cannot always be relied on, and that species thought to be very similar may not be closely related after all. This has vital implications in terms of understanding the genus.

With captive breeding being a key priority now for the conservation of freshwater turtles, many of the presentations at the conference centred around techniques for success in this area. Marcel Walz (Spain) and Harald Artner (Austria) revealed their set-ups and left those of us who live in the UK wishing for a warmer summers that would allow us to utilise the outdoor enclosures that seem to be so successful.

### Asian turtle farms

John Lau presented a different perspective on captive breeding. With the demand for turtles as food and traditional medicine in China currently being so high, wild populations are being decimated, and turtles are even being imported from other countries to meet the demand. This market has also fuelled the appearance of many turtle farms. Although the fate of the animals in these farms sits uncomfortably with any lover of reptiles, there can be no doubt that they are successfully generating significant numbers of what are now some of the rarest species in the world.

These populations provide hope that some of these animals can be used for conservation efforts in the future. John Lau showed pictures of farms breeding both the three-striped box turtle (*Cuora trifasciata*) and Zhou's box turtle (*Cuora zhoui*) - two extremely rare species. The scale of these facilities is virtually

▲ It's not all about lighting and environmental issues, as Matthias Goetz from the Durrell Conservation Trust revealed. Dietary changes can prove to be important in terms of breeding success

▼ Breeding of American box turtles was also covered



## Chelonia 2002

Chelonia 2002 Freshwater Turtle Breeding Center is an international organization located in Austria. It was founded in 1998 by Harald Artner, its past and present director. Its goal is to investigate the captive breeding of freshwater turtle species from all continents and to spread the resulting knowledge among its members. This highly valuable information is of course also used to support turtle conservation projects worldwide.

The organisation's main goal is to breed the freshwater turtle species of the world. So far the centre, its members, partners, affiliates, and friends have managed to breed over 150 freshwater turtle species, including a significant number of world first-time breedings among them!

### CHELONIA 2002 OFFERS A NUMBER OF SPECIAL BENEFITS EXCLUSIVELY TO ITS MEMBERS:

1 We assist in forming as many breeding groups of freshwater turtle species within our community as possible. Our members have already established a significant number of highly productive freshwater turtle breeding groups and we provide effective assistance in obtaining additional specimens, increasing the genetic diversity of such groups. A special coordinator helps to assist members with this task.

2 Each year, we organise a two day meeting, featuring high-quality presentations by internationally renowned speakers. Previous meetings have been held in Paris, Venice, Budapest, Rotterdam and Valencia, with our members enjoying free access to these events.

3 Several times a year, special workshops on selected freshwater turtle groups are held in various European cities. Members again have free admittance.

The aim is to share as much information and experience as possible, in a straightforward manner, among our members. Details about how to become a member can be found at the organisation's website: [www.chelonia2002.com](http://www.chelonia2002.com)

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unimaginable. One of the farms described by Lau is five storeys high and houses tens of thousands of turtles, reflecting the demand for them. It is to be hoped that John can continue his work with these commercial farmers so that in the future, they will contribute directly to the conservation effort of such species.

### Breeding success

The conservation theme continued after lunch with talks on successful captive breeding of various species. Matthias Goetz from the Durrell Conservation Trust on Jersey gave an account of their efforts to breed the spiny turtle ►



(*Heosemys spinosa*). This species had been maintained for over nine years with no eggs being laid. After careful study and dietary changes though, nesting took place soon afterwards, emphasising that a number of different factors are necessary to achieve breeding success.

Paul Coleman (UK) and Arnold Frauneder (Austria) gave accounts of their successes with *Cuora flavomarginata*, *Terrapene carolina* and other North American box turtles. Both have had great success with some very different techniques, and these will hopefully be explored in detail in a forthcoming issue of *Practical Reptile Keeping*.

## Searching the Amazon

The last talk of the day is always a hard spot to fill but Jan Michels from Germany had no difficulty in keeping the audience riveted. Jan spoke about his journeys to the Amazon rainforest in search of the red headed river turtle (*Podocnemis erythrocephala*) and red side-necked turtle (*Rhinemys rufipes*).

Searching for a fairly small turtle in the vastness of the flooded Amazon is a true challenge and Jan has a unique approach, relying on snorkeling! The tannin-stained waters, offering poor visibility, are ideal for groping about on the river bed looking for turtles, if you ignore the fact that that you might grab a stingray or caiman by accident, or swim into a shoal of piranhas!

After the day's proceedings had concluded, an informal meal at the Lion and Lamb, a traditional English pub in nearby Great Cranfield, introduced the many overseas visitors to traditional English fare. This provided a backdrop for new friendships to be formed, with much discussion taking place, and helped to further cement the global network of freshwater turtle enthusiasts.



Above: Jose-Maria Lopez's set up for breeding Florida box turtles



▲ A watchful American box turtle in the wild

▼ A group of *Podocnemis* turtles bask in the wild on a log in South America. They will slip back quickly into the water if disturbed.

## Illuminating presentations

The second day started with Oliver Roempp (Germany) and Jose-Maria Lopez (Spain) talking about their individual breeding projects with *Acanthochelys*, a group often described as swamp turtles, and North American box turtles. Once again we saw how having a climate conducive to keeping animals outside can be a significant advantage. Jose's enclosures are all designed to mimic the wild habitat of his box turtles, even down to the types of plants growing within them. These fantastic enclosures combined with the agreeable climate means that these turtles breed very successfully in these surroundings.

Another highlight of the second morning was the presentation by veterinary surgeon Frances Baines on the role of sunshine in the lives of reptiles. Frances is world-renowned expert on the

study of ultraviolet (UV) light and the part it plays in reptilian biology, and many readers will be familiar with her excellent website resource at [www.uvguide.co.uk](http://www.uvguide.co.uk). Her work involves more than just looking at the simple role of UV however, and encompasses all of the benefits that sunlight brings for reptiles.

If we are to continue to improve the captive husbandry of reptiles then getting the lighting right is an absolute must, and the work that Frances does is pivotal to our understanding of what is required. The presentation was so fascinating that it continued right through the scheduled tea break with a demonstration of a new Excel-based tool that she is developing in conjunction with some of the major zoos in the UK. This tool will eventually be available to the public and will allow keepers to get information about lighting in the captive environment that is specific to the species that they are keeping, taking into account the animal's behaviour, habitat and requirements. ►





Frances had also bought along an incredible display, illustrating the work that she does. There were demonstrations of lighting test rigs, lighting distribution patterns and much more. It is incredible that lights that look so similar to us can be so different for reptiles. It confirmed just how important it is to select lighting very carefully, in order to ensure the welfare of our animals. With what seems a constant flood of unknown lamps appearing in shops, this becomes even more important as many of these are untested and of dubious quality. Cheapest really isn't always best when it comes to reptile lighting.

## Dangers of escapees

Jose-Maria Lopez returned to show how pet turtles can create problems if they are allowed into the wild. This subject has been brought sharply into focus recently with the news of the EU consultation on non-native invasive species. (See last month's issue for full details – Ed). Many of the turtles commonly kept as pets originate from North America.

While in the UK they can potentially survive our winters, they cannot reproduce as our summers are not hot enough. Hard winters will kill a percentage of the population each time, but in southern Europe however, the situation is very different. The warmer climate means that populations of non-native turtles may not only survive, but they could also breed successfully, and may start to compete with native turtle populations.

Jose outlined the efforts of Spanish conservation projects to trap and control these populations, as well as captive breeding projects involving native species. Many responsible wholesalers have stopped selling these potentially problematic, large growing species.

Other presentations included the biology of the fascinating matamata turtle from Mark Hollowell (UK) (see our February and March 2011 issues for more information on Mark's studies – Ed) and the tradition of turtle keeping in Buddhist temples and how this could be used to aid conservation, which was given by Paul Eversfield (UK).



Lighting expert Frances Baines



▲ Paul Eversfield introduces Dr. Artner's presentation

Delegates were also able to view a display of turtle related products, including many from the ZooMed who sponsored the conference, including tanks, foods, equipment and lighting. There was also a display of specialist books.

The two days of presentations should have left you jaded and exhausted, but the content was so varied and interesting that the time seemed to have passed in a flash. After a farewell message from the Harald Artner of Chelonia 2002, delegates left to travel home, a journey half-way round the world for some.

Even the delegates from Germany said that the event had been so well run and such a success that it could have been organized by Germans; we are fairly sure this was a complement! The next conference will be held next year in Germany and the event will return to the UK in 2016. ❖



Zoo Med has been providing quality products for reptile keepers around the globe for 35 years and probably ranks today as the best-known reptile brand worldwide. The company produce a wide range of reptile care products including substrates, vitamins, accessories, foods and of course lighting, including the famous "Reptisun" tubes - the world's first-ever UV reptile fluorescent tube. Gary Bagnall, CEO, said "At ZooMed, we are reptile enthusiasts and fully support captive breeding efforts. We were aware of the work by Chelonia 2002 and BHS members and so were pleased to help make sure that this international conference went ahead."



Peregrine Livefoods is the UK's largest reptile product wholesaler. Supplying shops, zoos, wholesalers and wildlife parks, they are UK distributors for ZooMed, Lucky Reptile and T-Rex, as well as stocking a wide range of other brands. In addition to equipment, they also offer frozen food, captive-bred livestock and livefood, which they breed themselves.

Although they do not sell direct to the public, they can supply goods to any retail store in the UK and will help to find a reseller if you are having problems locating a particular product. Director David Perry said "We have provided sponsorship for a range of projects including the Kempton Park Reptile Expo and a turtle room at Jersey Zoo. We believe that wholesalers should support events and projects wherever possible, as a vibrant reptile keeping community is vital for the future of the hobby. We were delighted to be able to support an international conference of this nature."



Established in 1947, the British Herpetological Society is one of the most prestigious such societies of its kind in the world. The society's Herpetological Journal is ranked as one of the leading scientific publications devoted to herpetology.

By means of publications, specialist committees and meetings, the society actively supports:

- Conservation activities targeted at native British species
- Field studies and conservation management work worldwide
- Scientific research
- Responsible captive breeding and maintenance of reptile and amphibian species

Exchange of knowledge and expertise between enthusiasts and herpetologists both in the UK and around the world