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# **Editorial**

Happy New Year and welcome to a new Natterjack newsletter. Longstanding members will know that there has been an unfortunate break in the production of the Natterjack (or NJ) and, on behalf of your BHS Council I apologise for this. Furthermore, recognition and thanks must go to the former editor, Mika Benny for all of the excellent and dedicated work she put into this publication over the years.

This will now be a bimonthly e-publication (6 per year), although there is potential for special editions to be produced. Furthermore, as an electronic document, with no print costs, not only are we helping the environment and saving the society money, the number of pages we can include has increased. We would welcome any articles or new items you might have.

The NJ now has a different format. The nature of herpetology, in the broadest sense, has changed since 1948, when the BHS was established. Back then, the people involved in the keeping, researching and conserving were often the same!

Now interests are rather more specialised, but all represented among BHS members. This means that the NJ has been designed to reflect these interests and is now split into themed sections;

- Conservation
- Research
- Herpetoculture

So, welcome and I hope you find something here for you. This is your society, so any suggestions or submissions are very welcome whatever your level of experience. Get in touch if you are unsure and we can help you to share what might be really important information!

Thank you for your continuing support.

David Willis and the BHS Council

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# Conservation

Natterjack Editor: natterjack@thebhs.org

# The Natterjack in Britain Today

John Buckley, Amphibian Conservation Officer, ARC Trust.

In 1776 the first record of the Natterjack toad in Britain was made in Lincolnshire, but it was not until 1948 that the full distribution in Britain was

reported. Natterjack distribution at a 10 x 10km-square level was essentially complete by 1970 with more intensive studies finding additional populations within these squares over the next 20 years. The last new population was found in 1993.

Following significant declines, it is now estimated that the remaining populations represent only 20-30% of those in existence a century ago. These populations are monitored annually by local surveyors, site managers and volunteers and details including metamorphic success are summarised in the Natterjack Toad Site Register for the UK.

In 1999 there were 38 known native localities considered to be separate populations. However, since the population structure has been rationalised on the basis of genetic studies there are now considered to be only 13 naturally occurring populations (some with several subpopulations) and 16 successful translocations. However translocations aren't an easy conservation option. The average size of naturally occurring populations is four times that of translocated ones, and more than 77% of British natterjacks still live in natural populations. On this basis the main thrust of conservation effort should be to maintain colonies of natural origin.

Data suggest that the total adult breeding population the UK in 2009 was 4,000 individuals. Seventy percent are found on the west coast bordering the Irish Sea, with slightly more on sites along the Merseyside Coast and North Wales than in Cumbria and along the Scottish Solway. The remaining natterjacks are on sites in East Anglia and the south of England.

Overall the British natterjack population was stable between 1999 and 2009. However, trends differed among the regions. In southern England and the South Irish Sea areas (Merseyside and North Wales) populations overall were rising; in the North Irish Sea region (Cumbria and the Scottish Solway) they were stable; but in eastern England they were declining. Trends of decline correlate with the proportion of years in which no toadlets were produced.

The natterjack toad is a creature of open

habitats. It's an active predator and thrives where there are large areas of bare ground, or very short vegetation, and shallow, un-shaded, ephemeral pools. It burrows to avoid extremes of temperature and dryness and its long breeding season allows for the unpredictable nature of ephemeral ponds. The natterjack's three main habitat types in Britain are sand dunes, upper salt marshes and heathland, the latter where population declines have been most marked.

With increased understanding of natterjack ecology, success rates for post 1980 translocations have improved to an average of 67%, but it remains far easier to re-establish natterjacks at coastal dune sites (75%) than on heathland ones (58%).

Chytrid was first identified in natterjacks at a site in Cumbria and has since been found at many sites on the west coast including in the two biggest thriving natterjack colonies in Cumbria.. It's hard to decide whether declines are due to the effects of chytrid or adverse changes in the habitat. It may yet prove to be the case that whilst chytrid is affecting individuals it's not having an effect on the populations, where the habitat remains good. Despite all conservation efforts natterjack numbers haven't risen over the last decade and we are in the position of having to work hard just to stand still. Fortunately the analysis of data for the 1970 – 2009 shows a way forward. At sites where there is grazing, natterjack populations are faring better than those where there isn't. Conservation effort should now be directed towards improving terrestrial elements of the natterjack habitat now that pond creation and management are well understood.

### **Natterjack Notes for 2012**

### Kent - The Return of the Natterjack

Tony Swandale, East Kent Coastal Warden, Kent Wildlife Trust

Natterjacks became extinct in Kent over 50 years ago, however, Kent Wildlife Trust has been working closely with Amphibian & Reptile Conservation Trust (ARC) to re-introduce the species to the county and, as a result, they are

now breeding at Sandwich & Pegwell Bay National Nature Reserve. This important milestone has only been achieved through the patient work and persistence by successive members of staff and volunteers for a decade.

Extensive habitat restoration works, including the creation of some 20 dune pools of varying depths, has helped provide the conditions required by the toads. We were pleased to report that tadpoles translocated to the site in 2008 and 2009 survived; adult males were heard calling for the first time in 2010 and the females reached sexual maturity by the following year. That year the drought prevented breeding taking place; this year, by contrast, the rain came at the right time! 'Home grown' tadpoles were discovered in two of the ephemeral dune pools in late May. Over two hundred tiny toadlets emerged from the pools before the end of June – thankfully shortly before they dried out.

We would like to gratefully acknowledge the support of Grantscape for their inputs to the reestablishment of both natterjack toad and sand lizards at SPB NNR.

Norfolk – A good year for natterjacks at Holme

Gary Hibberd, Warden, Holme Dunes, Norfolk Wildlife Trust

After a disastrous year for natterjacks in 2011 at Holme Dunes, 2012 started with great promise, with the first full chorus on 10 April. On subsequent nights the grazing marshes reverberated with natterjack calls. This activity translated into breeding success, with 57 spawn strings recorded on 20 April, and a total of 143 in the main pool, plus a further 28 in the other smaller pools by the end of the spring.

Despite the dry spring, rainfall remained high throughout the summer, keeping the natterjack pools half-filled well into July, and all looked set for a bumper year. However, the excessive rainfall and lack of sunshine did bring its own problems as the cooler water seemed to delay tadpole development – tadpoles with just back legs were still recorded well into July, whilst

boosting vegetation growth, which may also have impeded tadpole development as well as reducing foraging opportunities for the adults as the pool edges turned into swampy reed beds. In desperation we scythed a swathe of vegetation mid-summer to try and get some sunlight to the water surface and give them a boost. On the plus side (for the natterjacks) the dragonflies were also hit by the wet weather— and we think that there was reduced predation from them, as well as from the wading birds which found it more difficult to access the pools.

The apparent delay in development means that it was quite late in the summer before we saw the emergence of hundreds of tiny toadlets – around 1 cm long, as well as recording a smaller number of larger toadlets from previous years.

One interesting observation concerns the adjacent grazing marshes (privately owned), which have traditionally not been successful for breeding natterjacks. However, in 2012 there was a massive chorus on many nights from this area, and we think that the continued rainfall may have encouraged the natterjacks to breed there. We were unable to survey this area during the wader



nesting season, however, recent observations have revealed the presence of toadlets in far greater numbers than previously, suggesting that this was the case.

Looking to the future we think that the terrestrial habitat is key and we are reviewing the possibility of introducing a few Dartmoor sheep onto the dune systems to take the vegetation down.

#### Suffolk - Success at some sites

John Baker, ARG UK

Historically natterjacks in Suffolk were found at ten or so sites, coastal and inland. But Eastern England has seen the greatest declines in this species and the natterjack was probably extinct in Suffolk by the 1960s. Conservation effort has hence been reliant on reintroductions. Attempts to establish populations at four sites have not been wholly successful, but the wet late spring and summer weather this year has worked in the natterjacks' favour – large numbers of well-grown tadpoles have been seen at two of the breeding sites.



Adult Natterjack toad © John Baker

#### Cumbria – A Mixed Season

Bill Shaw, Cumbria Natterjack Officer, ARC

The Cumbrian natterjack season started off very promisingly in late March with two weeks of very warm weather. The first calling was heard on the 24th, about a week earlier than normal. This prompted a lot of early spawning, certainly in the south of the county. There then followed a

prolonged cold spell which meant that the spawn did not develop as fast as usual, so a lot of it was predated or got covered in fungus.

With the onset of the rain and rising temperatures came more spawning events, with four having been recorded at some sites.

Tadpole development has been slower than normal as the water temperature has failed to rise because of the constant topping up of the pools by the rain. Currently (mid-July) water levels are as high as in the winter.

There has been good toadlet emergence at Sandscale Haws, Haverigg and Sellafield so far. However, overall the 2012 season has been below average.(An interesting observation has been the predation of spawn by horse leeches, which seem to be spreading.)

# Scottish natterjacks – help us before we croak!

Peter Minting

Natterjacks in Scotland are in urgent need of a helping hand, according to the results of a survey by ARC in 2012. The natterjack is Scotland's rarest native amphibian, with only a few populations found along the Solway coast in Dumfries & Galloway. This year, breeding activity was poor at the majority of Scottish sites surveyed. The introduced population at Mersehead RSPB reserve, which was featured on CountryFile on 20th May, was one notable exception. Here intensive management, including use of temporary ponds within a dedicated enclosure, may have been beneficial.

Overall, the results suggest natterjacks are struggling in Scotland. In 2012, the spring weather was not ideal for spawning but the number of spawn strings and calling males was still low when compared to nearby English sites. Natterjacks have declined at the Wildfowl & Wetland Trust's Caerlaverock reserve, where staff are concerned that the frog-killing chytrid fungus may be to blame. However, research by Sussex University suggests natterjacks can usually tolerate chytrid, which is now fairly widespread in the UK.

In Scotland the majority of natterjack populations are found in upper saltmarsh or 'merse' habitat. Intensive grazing is necessary for natterjacks to thrive, as they feed mainly by catching insects in open areas of short grass. Many areas of merse on the Scottish side of the Solway have become overgrown, a situation which will only be reversed if farmers can be persuaded to graze their stock on the merse. In England one farmer has successfully marketed 'saltmarsh lamb' as a speciality product, which while boosting profits, has also boosted the fortunes of the natterjack.

If the distribution of the natterjack in Scotland is to be maintained, a great deal of effort is required to ensure suitable habitat is available. Local volunteers have continued to provide valuable information, in addition to survey work by ARC. Landowners should be able to apply for funding to manage habitat for natterjacks under the Scottish Rural Development Programme (SRDP). ARC hopes to secure more funding for natterjack conservation and build on the work completed during 2012, which was funded in partnership with Scottish Natural Heritage (SNH).

# Kent Reptile and Amphibian Group (KRAG) Adder Conservation

Gail Austen-Price (KRAG Chair)

The adder (*Vipera berus*) is sadly best known for being Britain's only venomous snake, which in a country that has extirpated most large and 'dangerous' species, is not a wholly fearsome reputation when compared to herptiles worldwide. Unfortunately, despite its protection under the Bern Convention, Wildlife & Countryside Act 1981, and its status as a BAP priority species, this charismatic snake has arguably not captured the public's imagination due to its lack of fur and cuteness, and its imminent demise appears to be passing the world by.

Despite this level of protection, adder populations are declining, and in 2004 KRAG launched its 'Adders in Decline' initiative address the threats of persecution, unsympathetic land management, and the ubiquitous habitat loss

and fragmentation. Although the IUCN Red List recognises this decline, the adder is listed as 'Least Concern' due to its global distribution. However, Zoological Society of London (ZSL), Oxford University and Natural England have teamed up to perform a health check on the genetic diversity of UK populations. This project will hopefully provide useful information that can aid conservation management plans, and possibly provide meaningful statistics that the herp community can wave at policy makers to get them to take notice of the imminent danger of losing this enigmatic snake. In the meantime, KRAG will continue this work locally, and if you would like to get involved details are available on the KRAG website.

# Research

# **Ground-breaking project in Guatemala**

Project Chicchan is a project that facilitates pioneering herpetological research expeditions and training in the tropics. Research is funded through volunteer contributions. Our expeditions focus on regions of the tropics where little or no previous herpetological research has been carried out. Project Chicchan strives to conduct its research in as sensitive manner as is possible and to provide volunteers with a sound understanding of the herpetofauna of the region and a strong comprehension of the surveys techniques used. We hope to inspire the next generation of herpetologists and to positively effect the conservation of tropical herpetofauna. We are currently focussing our efforts on the Tropical Dry Forest of the El Petén region in the north of the country.

Tropical Dry Forest is globally rare and intensively used by humans. Some of the largest tracts are found in the Yucatan Peninsular of Central America. Although the herpetofauna of the Yucatan Peninsular, including some areas of El Petén, is relatively well documented, we know little about the herpetofaunal community at Estación Biológica las Guacamayas (EBG). Surveys have so far been limited to monitoring the populations of the endemic Morelet's crocodile and Central American river turtle and conducting transects

along a 500m stretch of the river bank 15 years ago. EBG staff have also recorded incidental encounters with herpetofaunal species whilst conducting their normal routines.

The area surrounding EBG is interesting for several reasons. EBG is situated at the southern border of the Laguna del Tigre National Park (LTNP), the border of which is delineated by the Rio San Pedro. The LTNP side of the river is characterised by the presence of limestone outcrops that rise relatively sharply from the river bed, the vegetation here is Tropical Dry Forest. The southern side of the river is a vast flat landscape of seasonally inundated grass/swamps and savannah scrub and forms part of the buffer zone for LTNP. To the East the Tropical Dry Forest in bordered by agriculture of the local community, known as Paso Caballos.

The forest itself is heterogenous because as the limestone bedrock undulates the composition of the flora changes. In particular, on the peaks there is very little leaf litter as it gets washed into the troughs by rainfall. Due to this it is reasonable to assume that the herpetofaunal communities within the peaks and troughs are very different.

By surveying various areas throughout all of these habitats Project Chicchan aims to better understand not only the composition of the herpetofaunal communities at EBG, but also what effects the presence of agriculture has on the herpetofaunal community structure at the eastern border of the forest.

To find out more about Project Chicchan and how you can help the conservation of tropical herpetofauna check out our website (www.project-chicchan.co.uk) or email rowland@project-chicchan.co.uk

# The British Herpetological Symposium (BHS)

# 19th - 21st April 2013 at the Natural History Museum, London

In 2011 the British Herpetological Symposium (BHS) was set up and hosted at Bangor University by members of the Bangor University

Herpetological Society. It was decided that the BHS would be run on a biennial basis, changing location each time. The reasoning behind the symposium was to encourage people working on reptiles and amphibians within the UK (and Europe) to come together to share their research, an opportunity that was considerably lacking in the UK until the BHS in 2011. The BHS also aims to encourage collaboration and provide a networking opportunity for students. It was entirely run and set up by students and we will endeavour to follow this trend of being student run throughout its existence. As a way of encouraging students to attend we made it our mission to make the 2011 symposium as cheap as possible, charging a small attendance fee for the two day meeting. In 2013 the BHS will be hosted at the Natural History Museum, London from 19th-21st April, and will be run as a joint meeting with the Amphibian Conservation Research Symposium (ACRS).

The ACRS was set up as a forum for researchers working on amphibian conservation to share their findings, which was set up by students from the University of Manchester. The main goal was to provide an opportunity for dialogue between the academic, zoo and veterinary communities, which was recognised as lacking, with the intention of hosting the event annually at different locations. The aim of the ACRS is to facilitate communication between these groups of often disjunct entities in order to share skills, knowledge, and research requirements with the hope of increasing the success of conservation projects for amphibians.

#### **Keynote speakers:**

- Prof. Roger Thorpe Bangor University
- Prof. Susan Evans University College London
- Dr Trenton Garner Institute of Zoology

#### Important dates

- 25th January 2013 Registration open to everyone.
- 1st March 2013 Abstract submission deadline.
- 15th March 2013 –Registration close.

To be added to the mailing list please email herp.sympoium@gmail.com

# Herpetoculture

### Herp Health with Sean McCormack

Over the coming months we will be hearing from a specialist reptile vet, Sean McCormack, who sees and treats a variety of medical conditions in reptiles and amphibians.



#### **Biography**

"I qualified as a veterinary surgeon from University College Dublin having previously completed a Bachelor of Science degree in Animal Science with an emphasis on biotechnology and habitat/ species conservation. During my veterinary studies I tailored my work placements and elective modules to avian and exotic medicine by seeing practice with Ireland's leading exotic specialist as well as working on the vet team at Dublin zoo.

I started my veterinary career working in a domestic, exotics and zoo practice in Kent which gave me practical experience with a wide variety of species ranging from big cats, birds of prey and parrots to reptiles and large African herbivores. After working in a domestic and exotic pet practice in West London for the past two years, I joined the team at Richmond Vets in Surrey in November 2012. Due to my previous degree which focused heavily on zoology and evolutionary biology, I developed a broad base of knowledge and interest in comparative anatomy and physiology of a wide range of animal species. Through my vet degree and continuing studies since qualifying I have focused on applying this knowledge to veterinary clinical practice.

Over the years I have also kept and bred a variety of reptiles, amphibians and other exotic pets, therefore I have a good insight into the field of herpetology and captive care of reptiles and amphibians. I am a member of the British Small Animal Veterinary Association (BSAVA) and the British Veterinary Zoological Society (BVZS)."

#### Cryptosporidiosis or 'Crypto'

Cryptosporidiosis is a highly infectious disease found in various species caused by a single-celled coccidian protozoan parasite. Cryptosporidium spp. Many different species exist and they are relatively host-specific. In humans the most common species causing illness are C. parvum and C. hominis whereas in reptiles C. serpentes affects snakes primarily and C. saurophilum affects lizards. Chelonia are thought to be affected by a different species entirely although studies have not yet been conclusive. Due to host specificity Cryptosporidiosis in reptiles is not considered a zoonotic disease, or one that can be transmitted to humans from animals, and vice versa. However due to the highly infectious nature of the disease, it is extremely serious and can rapidly spread through a reptile collection with devastating consequences. The parasite itself is a single celled organism with an extremely tough outer shell or capsule, which renders it very resistant to destruction or desiccation in the external environment. For this reason, it can remain infectious for long periods of time even when exposed to high temperatures and drying as well as standard hygiene and disinfection practices.

The parasite has a direct life cycle shedding oocysts in faecal material, which are immediately infectious to the next host that ingests them. Once ingested the parasite invades the outer membrane of cells lining the stomach or intestine depending on host species. In snakes the stomach is affected whereas the small intestinal cells or enterocytes are more frequently invaded in lizards. The favoured site of infection in snakes are the acid and pepsinogen secreting cells responsible for initiating digestion of food, resulting in a decreased ability to digest food items and therefore regurgitation of undigested prey items is a common clinical sign. Over time the stomach lining becomes hypertrophied or thickened as inflammatory changes progress, narrowing the lumen of the stomach and rendering it less elastic, which also leads to regurgitation especially of oversized food items. In advanced cases a visible mid-body swelling can be seen in affected snakes due to this stomach enlargement. In contrast, in lizards the most common clinical signs relate to malabsorption or maldigestion by the small intestine rather than inability to digest the food in the stomach initially, and affected animals therefore show chronic wasting and diarrhoea. Secondary bacterial infections leading to gastritis and gastroenteritis are very common in affected animals due to debilitation and immunocompromise.

Many reptile keepers dread to hear the word 'Crypto' and for good reason, as this is a parasite which can wipe out entire collections of reptiles in severe cases. Cryptosporidium infections can cause severe debilitation and death in many, whilst being a commensal or harmless gut organism in others. Indeed many animals can harbour the infection and be subclinical carriers with no discernible symptoms until the parasite takes over and causes signs of disease at times of stress or debilitation. Due to the direct life cycle the host becomes re-infected very quickly with the next generation of eggs contained in its own faeces and that of other infected animals in close proximity. The importance of this life cycle mode is that infection can spread very rapidly throughout reptile collections unless very strict hygiene and disinfection protocols are put in place. Because some animals may be subclinical carriers with no visible symptoms, by the time an animal is identified as infected the organism may have spread to many others in a collection. Infection can be mild and only cause short-term diarrhoea or regurgitation but in severe cases can lead to chronic diarrhoea, wasting, anorexia, failure to thrive and even death. Other signs of disease sometimes occur such as inner ear infections, reproductive failures and secondary infections such as stomatitis associated with immune debilitation.

The first problem in treating this infection is that it is difficult to diagnose. Quite often it is impossible to detect on routine faecal analysis even with specialised staining techniques, hence the prefix 'crypto-' meaning 'hidden'. Many infected animals turn up negative on faecal tests as the parasite is an intermittent shedder, and can also exist in low numbers in the intestinal lining making it extremely easy to stay undetected. A special acid-fast staining technique is required to detect the parasite on a routine faecal screen so if getting

suspect animals tested one must ensure that the correct technique is used specifically for 'crypto'. Even with this stain however, it is possible to miss the parasite depending on infection stage and whether there is active shedding of oocysts, leading to many false negative test results. Even with the use of stomach and cloacal washes the parasite can go undetected as it remains well hidden within the microscopic crypts of the stomach and intestinal lining and is therefore easily missed on routine screens. Other more reliable tests involve PCR, IFA or ELISA tests that detect parasite DNA and are more sensitive but again this relies on the organism showing up in the sample to be tested. These tests are more expensive as they require more expertise and complicated techniques to carry out. The only certain way to diagnose the parasite is on post mortem microscopic examination of sections of stomach and gut lining.

The second reason it is problematic is that there are no treatments that are 100% reliable or effective. In fact, most reptiles that are showing clinical signs of Cryptosporidiosis are already too debilitated to survive, and the treatments themselves may actually do more harm than good. Various treatments have been investigated including various classes of antibiotics such as sulpha drugs and macrolides, as well as various anti-parasitic drugs namely coccidiostats. Recent developments have shown progress with the use of concentrated bovine serum or hyper immune colostrum preparations but have limited success rates. In some cases, and specifically in large collections, it may be necessary to humanely euthanase infected individuals as their prognosis is so poor, in order to safeguard the remaining non-infected animals. Identifying infected versus non-infected individuals can however be challenging as already discussed.

For these reasons, it is vital that proper quarantine and isolation is carried out on new reptiles when adding to an existing collection. Strict hygiene practices that limit the spread of faecal contamination from one vivarium to the next will limit spread of infection. As such disinfection and avoiding swapping cage furniture and equipment between vivaria will help to limit spread. Harsh bleach, peroxide and ammonia based solutions

are most effective but obvious care should be taken when using such chemicals in any animal facilities. High heat treatment has also been used effectively in commercial scenarios but the practical implications for the private keeper of employing such techniques are restrictive. Feeder insects have also been implicated in the spread of infection through collections in that they often ingest faecal material and act as an unwitting intermediate host. Particular caution must be taken with any wild-caught reptiles or those recently acquired from an unknown or untrusted source, individuals that are failing to thrive or repeatedly refuse or regurgitate food, the latter being a common sign of infection in snakes. Leopard geckoes seem to be particularly vulnerable, although it is debatable whether this is due to genuine species susceptibility or due to the tendency towards large, intensive style husbandry conditions with many animals kept in close proximity at breeding facilities. Indeed, the biggest problems with Cryptosporidiosis in reptiles occur in large collections and breeding facilities so in these situations proper biosecurity measures and strict quarantine and testing policies should be put in place. If you have a reptile that is showing any of the symptoms such as repeated regurgitation, diarrhoea, inappetance, anorexia, weight loss or general signs it is always wise to consult a trusted and experienced reptile veterinarian. Several other diseases can mimic signs of infection ranging from heavy roundworm or pinworm burdens, liver disease and intestinal impactions to more serious internal or metabolic problems. A good reptile vet should be able to outline a clear diagnostic and treatment plan based on the specific history and presentation on a case-by-case basis.

Do you have experience of 'Crypto' or other Reptile or Amphibian diseases? Want to share something regarding another aspect of husbandry? Please let us know!

# Amphibian conservation husbandry course

**3rd - 7th June 2013.** This is a five day intensive course held at Durrell's headquarters in Jersey, designed to expose participants to the latest

theory and practice of amphibian husbandry. Participants will be equipped with the skills and knowledge to establish and manage captive populations and breeding programmes for some of the world's most threatened amphibians.

The course involves lectures, guided tours and plenty of practical sessions to try out newly learnt skills. Designed for curators, zoo keepers, private breeders and others interested in the captive management of amphibians, the following topics will be covered:

- Understanding the natural history of your species
- Water quality, testing and filtration
- Temperature, lighting and UV
- Enclosure design and decoration
- Nutrition and breeding live foods
- Healthcare, disease and biosecurity
- Breeding difficult species
- Supporting in-situ conservation

For further information please visit our website www.durrell.org/Training/Courses/
Amphibian-Conservation-Husbandry-2013/

# **BHS Business**

# British Herpetological Society Annual General Meeting

23rd March 2013, London

Full details: www.thebhs.org/meetings.html

### Correspondence

The British Herpetological Society exists for its members, as well as the reptiles and amphibians of the world! At the BHS Council we would really like to hear more from our members on anything from suggestions and questions regarding the society, to upcoming events you may be organising which might be of interest to others to a simple account of what herp-related activities you have been up to. Photographs are welcome too. We would particularly like to hear from our members in countries other than the UK, and from our younger members.

If you have anything to send, please email it to the Editor at <a href="mailto:naterjack@thebhs.org">natterjack@thebhs.org</a>