June 2018, Issue 216

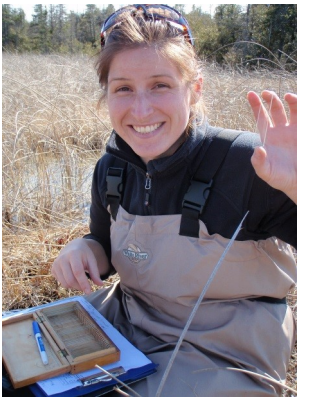
THE NATTERJACK

Newsletter of the British Herpetological Society *Established 1948*

In this issue:

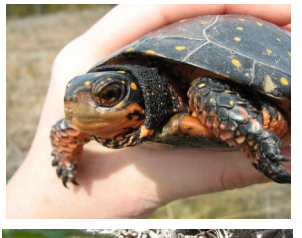
New Editor!

I wanted to introduce myself before you continue to read. My name is Suzie Simpson and I love herptofauna. This is something somewhat shared by millions of other herptoculturists all over the world. Often my friends have been confused by my choice of working with snakes, lizards, frogs and turtles but I have always loved working with these amazing creatures.



My career has involved working with Durrell Wildlife Conservation Trust in Mauritius with the Mauritian Wildlife Foundation working with Telfair skinks. I assisted a PhD project in Canada with freshwater turtles, then bringing me back to the UK and now starting to work with our beloved Adder. I wanted to be a part of the BHS to help with their aim to conserve herptofauna and educate. So I begin with this edition of The Natterjack.

The purpose of this newsletter is to provide information regarding the herpetological world and the community in it. I would like to make, you (the reader), a part of the publications. Your stories and devotion to herptofauna is important to us at the BHS. Therefore, I would like to encourage you to send me your photos, tell me your experiences, adventures, enrichment methods, husbandry, research, conservation and voluntary placements. Let me share your experiences of living with and enjoying these wonderful animals with other members of the BHS.



"Reptiles and amphibians are sometimes thought of as primitive, dull and dimwitted. In fact, of course, they can be lethally fast, spectacularly beautiful, surprisingly affectionate and very sophisticated.'

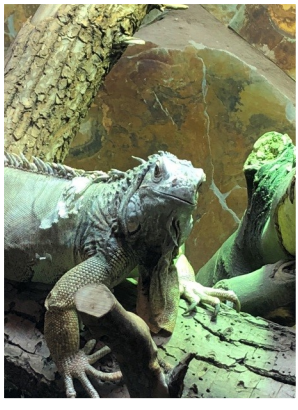
- Sir David Attenborough

BHS, AHH & IHS CONFERENCE DRAYTON MANOR

21st & 22nd April 2018

What a great conference!

This special event was the 2nd annual AHH and BHS conference joint with the IHS and held at Drayton Manor. With an incredible host of speakers and a record number of attendees (approx. 140 people). This meant that the original booked area needed to be upgraded to a larger space to accommodate everyone. In addition, we were able to hold a dinner on the Saturday evening for delegates to attend, relax, chat and dine on a wonderful meal laid on by Drayton Manor.



The weekend was a huge success discussing frog husbandry and bio-active setups through to outdoor vivaria and keeping of reptiles in the UK climate. None of this amazing event would have been possible without the enormous effort contributed by the event team.

We had students from various colleges including Hadlow and Sparsholt College. A successful competition was run for the research students and they submitted excellent pieces. Three students from Sparsholt college, Louis Perreira, Josh and Tim won the competition with a study on the use of vivaria regarding lighting. They were presented prize artwork by Tell Hicks and were very pleased that they had won saying 'They had further plans to continue the research'.

A massive thank you to Darrell Raw who is the founder and originator of Advancing Herpetological Husbandry. Without him, the conference would not have occurred, so thank you Darrell.

"This year we were also able to host an evening meal for delegates, with candles and everything! It was almost romantic...right Ricky?"

- Advancing Herpetological Husbandry

Note from AHH Facebook:

‘To the Grand Meister, Roman Muryn, we offer our most sincere thanks and respect, you planned and executed an event that will go down in history. Well done sir! Chris Mitchell, for so many things...your input to both the organisation and the student competition was invaluable, thank you! Ricky Johnson for leading the student initiative as well as helping anyone and everyone that needed it, James Hicks for sorting out the speakers and scheduling, Clare Rodgers for holding everything together, herding old farts and generally making sure we didn't drop the ball on anything, Paul Eversfield for finding and liaising with our sponsors and Mark Hollowell who not only manages our finances, but is also responsible for the much improved booking system this year, and Darrell Raw who made some pretty pictures and stuck them on posters/schedules and programmes plus did some other stuff - these people made up the AHH/ BHS team, and all did a sterling job supporting Roman and getting all the fine details worked out. You couldn’t ask for a better team!

Dave Arnold and Paul Bartle represented the IHS, ready and willing

to pitch in wherever needed and assisting James Hicks with the Saturday line up.

As often happens with these events, things get away from us and we have to rope in some additional help. Thus, a very special thanks goes out to Sam Perrett of HerpHQ who took over the filming of the event and will be editing it, as well as providing various other services to AHH throughout the year. Your contribution was much appreciated, and we're still intent on roping you into the events team next year! A special thanks also to Ross Deacon, who took on MC duties for the Saturday, allowing James Hicks to focus on the speaker's needs.

Thanks also to the AHH admin team for taking care of things while the rest of us were busy, and providing valuable insight when decisions needed to be made.

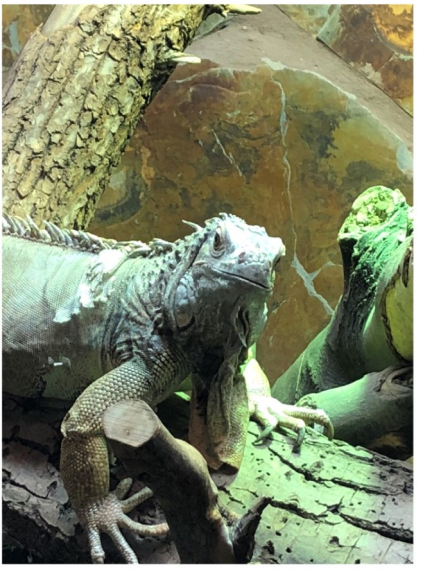
A huge congratulations to the lecture students from Sparsholt College - Jordan Turrell, Jake Scales & Louis Pereira, who presented an intriguing talk on their topic "Investigating the behavioural and zone usage effects of UV-B light for royal pythons (Python regius)" Thank you for participating in our event, we look forward to seeing more from you in the future. Yazmynn Johnstone, Molly Gillies, Phoebe Cagle, Harry Ward-smith & Jennifer Barnes, thank you for presenting your excellent posters, which we know everyone was most interested in. The student initiative was generously sponsored by UFAW (Universities Federation of Animal Welfare) and we hope to grow this initiative for the future.

"Tell Hicks very generously donated a number of prints and his time to the student initiative, as well as keeping Roman in line...a difficult task indeed! Many thanks Tell, you are indeed a legend!

- Advancing Herpetological Husbandry

To our speakers, Nathan Rusli, Mick Webber, Ben Owens, Luiza Passos, Mary Pinborough, Roman Muryn and Fran Baines for Saturday and Chris Mitchell, Tom Wells, Dr Tariq

Abou-Zhar, Andrew Gray, Tell Hicks, Dave Perry and our Keynote speaker, Chris Davis - thank you all for your fascinating talks, they were all wonderful and feedback has been excellent all round. What an amazing line-up!

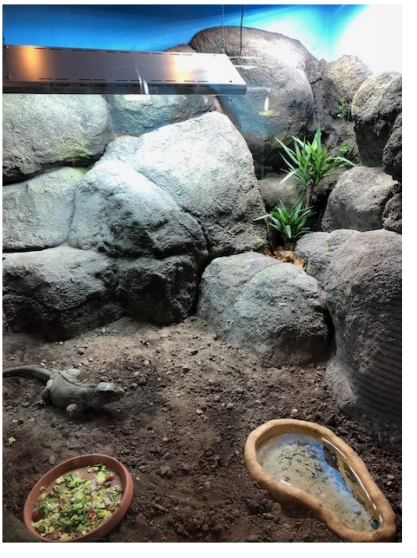


To Melissa Penn and her team at Drayton Manor Hotel, thank you for looking after our guests and us in such a professional and friendly manner. We lacked for nothing under your watch, everything went smoothly and professionally - you were fantastic!

To Chris Mitchell of Drayton Manor Zoo, we owe you a great debt of gratitude. Not only were you instrumental in the successful planning and execution of the event, but you and your team went out of your way to make us all feel welcome and comfortable. Then you went and topped it off with a fantastic speech that had many people buzzing during the break!

Thanks are due our sponsors, Universities Federation of Animal Welfare (UFAW), Microclimate, Arcadia, Bioactive Herps, Peregrine Livefoods, PALS and HabiStat, without whom none of this would have been possible.

We would also like to specifically thank those who came to us from far afield, Dr Markus Monzel and Roman Astheimer of the German DGHT, and Dieter Vernijns of Belgium (a familiar face at these events!). And finally, thanks to all of you who supported us, making the effort to join us for the weekend. It's your enjoyment and encouragement that inspire us to do this and to get cracking for the next one!.'



Thank you everyone!

Thanks to the amazing event at Drayton Manor, we have been able to make an £800 donation to the Asian Turtle Program! The amazing collaboration of this event has meant we can help them with their conservation efforts.

'The aim of ATP is to establish a safe and sustainable future for Asian turtles, and to ensure that no further turtle species become extinct in the region. We implement strategic interventions that directly contribute to the conservation of Asian turtles, helping to ensure efficient use of limited resources, as well as developing capacity, strengthening leadership, and ultimately effecting positive attitudinal and behavioural change within societyAQ.' (ATP website)

More information at: www.asianturtleprogram.org

Indo-Myanmar Conservation

asian turtle program

Asian Turtle Program
Room 1806 CT1, C14 Bac Ha Building,
To Huu St., Nam Tu Liem Dist.,
Hanoi, Vietnam

15th May 2018

Dear British Herpetological Society,

Thank you so much for your generous donation of £800.00 to the Asian Turtle Program received on the 13th of May 2018 through PayPal.

For nearly 20 years, the Asian Turtle Program under Indo-Myanmar Conservation has been working on the conservation of tortoises and freshwater turtles in Southeast Asia with a focus on Vietnam. We have been working towards the aim of establishing a safe and sustainable future for Asian turtles, and thus, ensuring that no further turtle species become extinct in the region.

We assure that 100% of your donation will go to support of the rescue, rehabilitation and release of these turtles in Turtle Conservation Centre. Your support is highly appreciated and will surely contribute to a bright future for the species.

Again, we thank you for your generosity and look forward to working with you again very soon.

With Kind Regards,

The Asian Turtle Program Team

Indo-Myanmar Conservation | Registered with Charity Commission for England & Wales, no. 1126123
UK: 27 Waverley Road, Norwich, Norfolk NR4 6SQ, United Kingdom, registered in England & Wales, no. 7068865
Viet Nam: Room 1806 CT1, C14 Bac Ha Building, To Huu Street, Ha Noi, Viet Nam |Tel: +84 24 7302 8389
Email: indomyanmar@gmail.com | Web: www.indomyanmar.org/ www.asianturtleprogram.org

asian turtle program

Scottish & Southern Electricity Networks | Powering our community

Press Release

30 Apr 2018

Local amphibians jumping for joy at environmental solution

Scottish frog

Southern Electricity Networks (SSEN) has installed a series of special ladders to protect the local amphibian community at its Mybster Substation, which is being extended as part of the Caithness-Moray project.

The innovative solution was introduced following a series of 'frog rescues' at the substation. SSEN Environmental Project Manager, Francis Williams, explains more:

"Before commencing our refurbishment works at Mybster, we conducted environmental surveys on site and at that point there were no frogs or toads recorded. However, the installation of a new drainage system and pond at the site attracted a substantial number of frogs and toads leading to our team carrying out a regular number of frog and toad rescues from cable trenches and gully pots.

"We wanted to find a sustainable solution that would prevent this from happening so contacted a local wildlife expert to come up with a solution."

Trevor Rose, Secretary of the British Herpetological Society, designed and installed specialist ladders in the gully pots to allow the creatures to escape and fitted a solid plastic 'reptile' fence around the pond. Trevor said:

“This is a great initiative by SSEN. Common frogs and toads are considered widespread species and not actually protected by law except against collection for sale and trade. However, we have seen declines in local amphibian populations all over the country and numbers have fallen massively, mostly attributed to hazards created by man, such as habitat loss, urbanisation, changes in modern day farming, road salting, road kill and gullypot entrapment to name a few.

“This contribution by SSEN to safeguard amphibians at Mybster is highly commendable and a great example to industry which we hope will highlight the problem of amphibian entrapment for others to follow suit.”

The frog ladders are the latest in a series of wildlife friendly features introduced at Mybster by SSEN with wildflower seeding, hibernaculum creation and native broadleaf tree planting being incorporated to enhance local biodiversity to date.

Suzanne Mackay, SSEN Project Manager at Mybster, said:

“Within SSEN we take our responsibility for the environment very seriously and as part of this large-scale development have promoted wildlife initiatives wherever possible.

“The number of frogs on site was far more than anticipated and the whole site got behind the frog ladders and barriers to make it a success. We will continue to monitor them during site activities this year.”

“This is a great initiative by SSEN. Common frogs and toads are considered widespread species and not actually protected by law except against collection for sale and trade.”

–Trevor Rose

Bermuda Skink Project

The BHS student grant was awarded to Heléna Turner in 2017 to assist with field equipment, particularly PIT tags needed for her Ph. D research on the critically endangered Bermuda skinks (*Plestiodon longirostris*).

Figure 1. Adult Bermuda Skink (*Plestiodon longirostris*).

This study has been assessing the distribution, abundance and status of the Bermuda skinks. It represents the most comprehensive review and long-term surveying of this species to date. Once common throughout Bermuda, skink populations have been declining since 1965 due to several factors including habitat loss and fragmentation, anthropogenic activities and the introduction of multiple invasive species (Glasspool & Outerbridge 2005).

Figure 2. Skinks caught in pit fall trap (under licence from the Government of Bermuda).

Using one-gallon glass jars as traps and a small amount of cheese or rotten fish as bait, island wide surveys were undertaken between 2015-2017. Skinks were present at 12 sites (31.6%) of those surveyed and 95.6% were found in the east of the Island within Castle Harbour, confirming that in the event of a hurricane the population is extremely vulnerable.

Figure 3. Taking various morphometric measurements.

A total of 253 individual skinks were marked with PIT (Passive Integrated Transponder) tags that were captured and subsequently recaptured 1078 times. The tags are not on-

ly useful for short term on the mark-capture-recapture aspect of the study but will be beneficial for the long term by providing an insight into the population dynamics such as growth and survival rates for the first time with this species.

Figure 4. Bermuda Skink Hatchling caught on Castle Island.

By evaluating the efficiency of a capture–mark–recapture population estimation method and robust-design model we are able to monitor trends in abundance, density, survival and capture probabilities. We found the robust-design model provided precise estimates of abundance (N±SE) at the two largest Bermuda skink sub-populations were 258 ± 4.5 on Southampton Island and 157 ± 4.4 on Castle Island.

Overall, we found the populations did not appear to be stable and fluctuated at both sites over the 3-year period. As a result, we found that reliable trapping estimates can provide accurate early-warning signals in advance of the decline of the breeding population, so action can be taken in time to ensure populations remain stable.

Figure 5. Pit Tagging a skink on Nonsuch Island.

As a result of island wide surveys, skinks were also found on North Cock Rock and South Cock Rock for the first time (Turner. 2017) and for the first time we observed 2% of individuals had bifurcated tails that were captured on island populations most likely the result of increased predation (Turner *et al*. 2017).

Figure 7. Bifurcated Tail observed in Southampton Island Skink.

Our results emphasize the importance of estimating reliable population parameters that can provide timely insights into population trends and the mechanisms driving them, which has important implications for the future conservation and research effort, to help prevent extinction.

Further analysis is currently being conducted to see if sub-populations are morphologically or genetically distinct. The data collected from this study will be vital to be able to assess the current size and status of the population that will be used to inform conservation management and used in the implementation of future monitoring programmes.

Figure 6. Reading the individuals unique PIT tag number.

References

Glasspool, A., and Outerbridge. M. (2005). A population re-survey of the Bermuda skink, Eumeces longirostris cope (1861), on Southampton Island. (Bermuda Zoological Society: Bermuda).

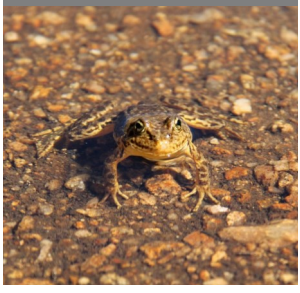
Turner, H., Griffiths, R., Garcia, G., & Outerbridge, M. (2017). Natural History Notes: Plestiodon Longirostris Bermuda Skink Tail Bifurcation. Herpetological Review, 48(1), 198-199.

Turner, H (2017). Geographic Distribution Notes: Plestiodon Longirostris Bermuda Skink. Herpetological Review, 48(4), 812.

eDNA may offer an early warning signal for deadly frog pathogen

Published online at Mongabay

By Sue Palminteri



A healthy mountain yellow-legged frog. Photo credit: Michael Hernandez

When Colleen Kamoroff and her graduate advisor Caren Goldberg collected water samples to look for the DNA of non-native fish species, they could not have guessed the potential importance of their timing.

One month after they sampled water from 13 lakes in California's Sequoia Kings Canyon National Park in 2015, endangered mountain yellow-legged frogs in three of the seven lakes they'd inhabited died in large numbers.

Kamoroff and Goldberg, assistant professor at Washington State University, suspected the presence of the *Batrachochytrium dendrobatidis (Bd)* fungus. Bd, a.k.a. chytrid fungus, causes Chytridiomycosis, which has devastated populations of at least 200 species of frogs and salamanders across the globe.

"I was curious if Bd would be detectable at the lakes I took samples from even though there were no sick looking frogs at the time,"

-Colleen Kamoroff

The fungus feeds on keratin in a frog's skin, causing the skin to thicken and peel. Frogs use their skin to breathe, so chytrid makes breathing difficult and causes the frog to move sluggishly and react slowly to danger. It also damages the nervous system and causes them to behave abnormally, including sitting out in the open rather than protecting themselves.

Chytrid doesn't kill frogs immediately, so they will first hop and swim around, spreading the fungus to other ponds and streams. This also makes infection difficult to detect prior to a major outbreak that can kill whole frog populations. Moreover, once chytrid has infected a pond, the fungus may forever.

Detecting disease through distributed DNA

Kamoroff and Goldberg analyzed the water samples for environmental DNA, or eDNA—genetic material from the skin, hair, scales, or waste products shed by living creatures into the environment and extracted from soil, water or air, rather than directly from a plant or animal. Its lower cost and non-invasive nature has increased interest in using eDNA, both for detecting the presence of particular species and for describing whole

Processing eDNA samples in Sequoia Kings Canyon National Park. Photo credit: Jessica Thompson

communities. To sample for the presence of the Bd fungus, for instance, would otherwise involve capturing frogs and swabbing their skin.

Researcher Colleen Kamoroff, (as seen in picture), collects water samples in Sequoia Kings Canyon National Park in California, USA. Photo credit: Jessica Thompson

Armed with pre die-off water samples, they re-analyzed the samples to look specifically for the fungus that is killing frogs so relentlessly.

"I was curious if Bd would be detectable at the lakes I took samples from even though there were no sick looking frogs at the time," Kamoroff said in a statement. "So I decided to run the eDNA samples I originally collected for the lake restoration project to test for the presence of Bd."

The researchers did not see any sick frogs even at the three lakes where so many frogs died just a month later. Their analysis of the eDNA in water samples, however, found chytrid fungus in all three of those sites, suggesting that they detected it before it had reached a lethal threshold. They did not find the fungus in the four lakes where no die-off occurred.

'The research suggests that eDNA could help managers predict which lakes and other water bodies harbor the chytrid fungus and take action to protect surviving amphibian populations.'

The scientists published their methods and findings in the journal *Diseases of Aquatic Organisms*.

Kamoroff told Mongabay-Wildtech she was surprised that not only were they were able to detect Bd in the water a full month prior to the observed yellow-legged frog die-off, but also that some of the samples contained large quantities of the fungus.

Detecting *Bd* before its prevalence levels reach that lethal threshold (~10,000 zoospores) would enable resource managers to take action to save frog populations that have not developed a natural resistance to Bd infection. These "naive populations" are thus particularly vulnerable to infection. For example, frog researchers have discovered that physically washing frogs in an anti-fungal drug for a few minutes has cured infected frogs, reduced infection levels, or at least increased survival of animals infected with Bd. Taking such action before it's too late could bolster the survival rate in these

'The Batrachochytrium dendrobatidis (Bd, or chytrid) fungus has decimated frog populations across the world and is very difficult to detect until the frogs of a newly infected population start to die.'

populations.

Applying eDNA analysis to other frog populations

Kamoroff said that detecting eDNA in filtered water samples requires equipment similar to that used for extracting and detecting DNA in traditional samples.

"However," she added, "it is necessary to use a 'clean room,' without high-quality DNA samples (toe-clips, mouthswabs, blood, etc.) or qPCR product because the amount of eDNA in filtered water samples can exist in low quantities. It is possible that the high-quality DNA samples and qPCR product could contaminate the eDNA samples."

The critically endangered Panamanian golden frog. The chytrid fungus has decimated many populations of this species. Photo credit: Brian Gratwicke, CC 2.0

Kamoroff also recommended that researchers or resource managers collect large water samples (2 liters per sample) and use filters sensitive to low quantities of DNA. "If managers detect Bd at naive populations," she said, "they can move forward with management options such as anti-fungal baths or captive rearing."

The research suggests that eDNA could allow managers to screen lakes and other bodies of water for the presence of the chytrid fungus and thus help inform efforts to protect surviving populations.

The researchers are expanding their study of Bd through analysis of eDNA from other locations. Kamoroff is working to incorporate eDNA in management, restoration, and research in Yosemite National Park. "This summer, with the help of Dr. Goldberg" she added, "I will be looking at how the quantities of Bd in eDNA filtered water samples compare to Bd zoospore load on sick frogs."

Goldberg told Mongabay-Wildtech that eDNA is working well for detecting golden frogs and Bd in Panama. "These populations are not Bd naïve, so the use of eDNA detection in this system is not necessarily the same," she said, "but we can use it to understand where the pathogen is persisting and how that

relates to where we find golden frogs."

"If we can predict when an outbreak is imminent, we can proceed with management actions such as anti-fungal baths that kill Bd," Kamoroff said in the statement. "Mountain yellow-legged frogs in the Sierra Nevada have experienced a population decrease of over 90 percent in recent years. Environmental DNA could help save these frogs and other species of amphibians around the world from extinction."

'Scientists sampling water for the environmental DNA of fish had the unique opportunity to test the potential of using eDNA to detect the presence of a fungus deadly to frogs while the animals are still healthy.'

Reference

Kamoroff, C., & Goldberg, C. S. (2017). Using environmental DNA for early detection of amphibian chytrid fungus Batrachochytrium dendrobatidis prior to a ranid die-off. *Diseases of aquatic organisms*, *127*(1), 75-79

Help needed…

Brexit, Reptiles and Hamm

Brexit, reptiles and Hamm

If you have ever visited the reptile shows in Hamm in Germany or Houten in Holland – or if you intend to go in the near future, then the Federation of British Herpetologists (FBH) needs your help. The FBH is gathering information about the movement of reptiles between the UK and the rest of Europe.

As it stands today as part of the EU, reptile keepers enjoy free trade with EU member states and are able to take animals between the UK and Europe without restriction. This free trade agreement will likely change dramatically after Brexit, but what the changes will be are entirely unclear at this time. The FBH believes that, for non-CITES listed animals, some sort of trade deal is probable and so nothing much will change. However, in terms of CITES species, a new protocol will come into force. When the UK is no longer part of the EU it will become a 'third country' and import/exports rules will apply.

The FBH is working with DEFRA to collect data on the movement of CITES listed species to and from the EU by UK hobbyist/breeders. An example would be hobbyists moving animals between the UK and the reptile shows at Hamm or Houten. The information required is numbers and frequency, not value. This is only in relation to CITES listed species. If you are willing to be involved in the study, please can you contact Chris Newman at chris-newman@cviewmedia.com

Upcoming Events

Find out about the events planned in the forthcoming year.

The Federation of British Herpetologists are delighted to invite you to our 2018 Conference at Doncaster Racecourse on the 23rd of June

The day will be packed full of talks from leading members in the reptile community, the latest legislation updates, interactive Q&A sessions and will feature displays from some of the worlds lead-

Registration fee: £29.95

Book by calling (01274) 548342 or

Email: Richard@dragonzzone.org.uk

Or online at

https://www.ticketsource.co.uk/the-

10:30—11:00 Arrival & Registration

11:00—11:10 Dave Perry - Welcome

11:10—12:40 Frances Baines & Ramon Muryn - Light and heat in the vivarium

12:40—1:40 Lunch

1;40—2:25 Siouxie Gillet - "Snakes in the City" - The story behind the programme

2:23—2:35 Toilet Break

2:35—3:05 Chris Newman - The impact of recent and future legislative changes in the UK and the EU

3:05—3:35 Q&A Panel - Questions from the floor "What is important to You?"

3:35—3:50 Tea Break

3:50—4:35 Gareth O'Dare (Senior Keeper @ Newquay Zoo) Amphibian Breeding Programs @ Newquay Zoo

4:35—4:45 Toilet Break

4:45—5:30 Steven Bol - Captive maintenance and breeding of the fascinating group of North-American Garter Snakes

5:30—6:00 Chris Newman - 'National Centre for Reptile Welfare' - What is the NCRW and what will it do? How can hobbyists help?

6:00—6:10 Close and Farewells followed by the evening meal

Places are limited so make sure you book early to secure your place.

Your registration fee includes: Free entry into the I.H.S. breeders meeting on Sunday the 24th // Welcome Tea & Coffee // Buffet Lunch // Hot Evening Meal // Displays of NEW reptile products // Preferential rates at local hotels.

For the latest announcements follow The Federation of British Herpetologists on Facebook

Commemorative Symposium: Maxwell Knight, the original "nature detective" and Second World War MI5 agent

Birkbeck College, London, November, 2018

A half-day Symposium about Maxwell Knight, OBE, FLS, naturalist and Second World War MI5 agent, will be held at:

Birkbeck College,
University of London,
43 Gordon Square, London WC1H 0PD

Saturday (date to be decided) in Autumn (November 2018)

The meeting will be hosted by the British Herpetological Society (BHS) and supported by a number of organisations associated with herpetology, entomology and other areas of natural history and conservation. The gathering will last from 1.00 pm (13.00) until 6.00 pm (18.00).

The Symposium will commemorate the 50th anniversary of the death of Maxwell Knight, the famous naturalist and renowned MI5 agent. It will recount and reassess his life and work in the 21st century, with reference to contemporary environmental issues such as species conservation, captive-breeding of endangered species and public education. Literature and specimens from Maxwell Knight's collection, including long-lost manuscripts from his original filing cabinet, will be on display. During breaks and at the end of the symposium there will be a showing of Maxwell Knight's original television/lecture films.

The full programme for this Symposium will be issued later this year. In the meantime, expressions of interest in attending – and offers to participate - should be addressed to:

Professor John E Cooper, FRCPath, FRCVS/Mrs Margaret E Cooper, LLB, FLS, Co-ordinators, Maxwell Knight Commemorative Symposium at:

Wildlife Health Services (UK) ngagi2@gmail.com

Amphibians and Reptiles of Scotland: current research and future challenges

University of Glasgow, Graham Kerr Building,
Saturday 9th June 2018

Arrival time 9.00am, start 9.30am, close 4.30pm.

Register for your free tickets online with the Glasgow Science Festival

With thanks to our conference organising team

Speakers	Talks	Time
Roger Downie University of Glasgow, GNHS, Clyde ARG, Froglife	**Opening and welcome; messages from MSP species champions**	09.30-09.35
	Chair: Roger Downie	
Silviu Petrovan University of Cambridge Froglife	**Using an evidence-based approach to improve the understanding and effectiveness of road mitigation schemes for amphibians and reptiles** Roads fragment habitats and endanger wildlife across the globe. We review multiple projects undertaken in Scotland and England since 2013. We discuss the results using an evidence-based approach to highlight success stories, knowledge gaps and areas of concern, related to species ecology and chemical pollution.	09.35-10.05
Nigel Hand Central Ecology	**The vanishing viper: using radiotelemetry to unlock the secret life of the adder** We pioneered the use of telemetry in the UK to better understand adder spatial ecology, often revealing unexpected results and allowing management plans to be better targeted.	10.05-10.25
Lynsey Harper University of Hull	**Enhancing understanding of great crested newt habitat and environmental influences in Scotland** Threatened by industrial development, Scotland's largest great crested newt population was relocated to Gartcosh Nature Reserve, North Lanarkshire, in Scotland's first ex-situ conservation-based translocation. We report on changes in Habitat Suitability Index (HSI) post-translocation, and viability of this index. We also report on abiotic determinants of this Scottish population and provide guidance for future conservation management.	10.25-10.35
David O'Brien Highland Biological Recording Group	**SuDS and amphibians - are constructed wetlands really benefitting nature and people?** Sustainable Drainage Systems (SuDS) have potential as amphibian habitats, as part of habitat networks and as places where urban people can experience nature. Our eight-year study suggests ways to improve the design and management of SuDS for people and nature, making access to high quality ponds available to all social groups.	10.35-10.50
Chloe Rossi & Iain Hill University of Glasgow	**Under-road tunnel mitigation at Frankfield Loch, Glasgow** This study assessed the efficacy of three amphibian tunnels in a recently developed area at Frankfield Loch, Stepps, Glasgow. In 2016 and 2015 an assessment was conducted on the success of wildlife passage through these tunnels using video recordings. The results can contribute in showing the significance of mitigation measures.	10.50-11.00

Matthew Witt University of Exeter	**Waifs and strays or seasonally resident? Marine turtles in the British Isles** Although not typically considered part of British biodiversity, marine turtles have appeared in records of fauna around our coastal seas for hundreds of years. In this talk we will investigate patterns of sightings and strandings of this taxon demonstrating their regular occurrence, highlighting these animals are indeed part of our maritime natural heritage.	11.00-11.20
COFFEE BREAK		11.20-11.40
	Chair: Chris McInerny	
Rick Hodges Kent ARG	**Long-term monitoring for adders** Long-term monitoring of adders offers prospects for understanding the impacts of habitat management and climate change, as well as providing life-history details. An approach to long-term monitoring will be presented, as work in progress, based on experiences gained on a chalk grassland reserve.	11.40-11.55
Pete Minting ARC	**Great crested newt detectives; citizen science, education and DNA technology** An innovative, Scotland-wide project. Volunteers were trained in amphibian identification and surveying and provided with eDNA sampling kits to test for the presence of great crested newts in ponds. Children also took part, in education sessions at schools and by entering a competition to help create a new, free publication called *Amazing Animals, Brilliant Science; how DNA technology is helping to save Scotland's wildlife*	11.55-12.10
James Stead & Louise Smith Froglife	**Froglife in Scotland** Froglife's Scottish projects to protect and conserve amphibians and reptiles include the Scottish Dragon Finder Project, a 4.5 year project, beginning in 2014, bringing together practical conservation, educational activities and data collection, and the Glasgow Green Pathways, working with vulnerable and disadvantaged young people on practical activities to improve local greenspaces for wildlife.	12.10-12.25
Chris Cathrine Caledonian Conservation	**A novel approach to reptile mitigation in peatland habitats for an underground power line development in Kintyre** Caledonian Conservation Ltd was contracted by Renewable Energy Systems Ltd to undertake ecological mitigation for an underground power line in Kintyre, to connect Freasdail Wind Farm to the National Grid. The site crossed 10 km of remote peatland occupied by reptiles. Mitigation approaches will be discussed in detail, as well as results	12.25-12.40
LUNCH BREAK		12.40-13.45

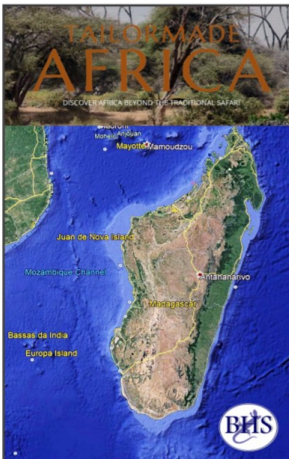
	Chair: Deborah McNeill	
Erik Paterson & Ryan Bird University of Glasgow Clyde ARG	**Amphibians and water quality in East Kilbride** We will present the results of long-term citizen science amphibian monitoring study in East Kilbride. Results will be related to recent work examining water quality determinants of amphibian species presence and abundance within a variety of pond types around the town.	13.45-14.00
Chris McInerny University of Glasgow GNHS, BRISC, Clyde ARG	**The study and conservation of adders in Scotland** Adders remain widespread and reasonably common in parts of Scotland, but there remains much work to conserve and protect the species. This talk describes two conservation projects that have revealed information about adder biology in Scotland and how the species can live alongside humans and human development.	14.00-14.15
Kathleen McMillan Clyde Muirshiel Regional Park	**A study of the reptile populations at the Greenock Cut and management plan** Since 2013 we have surveyed reptile species and populations present at the Greenock Cut. We describe the creation of a habitat management plan to ensure the long-term presence of these animals at the site.	14.15-14.25
Rob Raynor Scottish Natural Heritage	**An amphibian and reptile strategy for Scotland: talk followed by discussion** A strategic approach to Scottish Herpetological conservation is presented, describing the threats and opportunities, the reasons why action is urgent and the challenges we need to meet for their conservation. The strategy recognises that a partnership approach between the relevant organisations is required if we are to achieve our objectives.	14.25-15.25
COFFEE BREAK		15.25-15.40
	Chair: Roger Downie	
Andrew Cunningham Institute of Zoology	**Infectious disease threats to amphibian conservation** Only since the discovery of amphibian chytridiomycosis has infectious disease been considered a threat to amphibian conservation. While a growing number of infectious diseases of amphibians are recognised, only a small number threaten populations or species; however their mitigation is more difficult than for other threats such as habitat loss.	15.40-16.10
CONFERENCE CLOSE		16.10-16.30

With thanks to our conference supporters

And Friends of Angus Herpetofauna

The British Herpetological Society Private Madagascar Tour

30th October - 11th November 2018



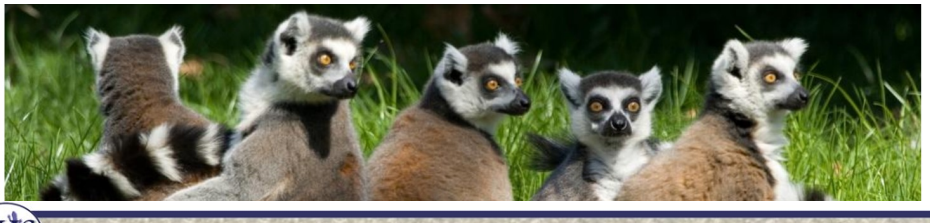
In association with our partner, the Madagascar travel specialists, Tailormade Africa, the BHS Conservation Officer, Jan Clemons, is organising a privately guided trip to Madagascar.

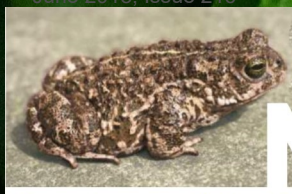
This fantastic trip takes in several national parks and reserves of this truly unique country. The trip has been tailored specifically for the British Herpetological Society. The group will discuss with the managers/guides when in country as to any specific species you wish to find or experiences you wish to have. Every evening we will discuss with your guide about what you would like to do the next day and endeavour to adapt our programme in consequence with their recommendations to make the very most of the trip.

Maximum group size: 15

Itinerary: http://itinerary.tailormadeafrica.com/Itinerary/Overview/f1050b7b-a471-6c3f-d232-5ac63b9ea590

Contact Jan: (07720) 814414 or janclemons2015@gmail.com





THE NATTERJACK

Newsletter of the British Herpetological Society *Established 1948*

To our BHS members,

We are always interested in hearing from you. Please feel free to contact me if you would like to share anything regarding herps. We would love to about your animals, your experiences, their care and husbandry, ideas, training, research and more.

It is important to us that you have that opportunity to share with the wider community, as we all benefit from sharing knowledge and experience.

Kind regards,

Suzie Simpson

Email: natterjack@thebhs.org

Find out more about The British Herpetological Society on our website at:

https://thebhs.org/

Check out our social media pages too:

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