



THE NATTERJACK

Newsletter of the British Herpetological Society *Established 1948*

EDITORIAL

Hurray! it's Spring.

We have some interesting events happening over the next 3 months; many supported by BHS. Come along and feed your passion on reptiles and amphibians and gain new ideas on Terrarium setups and modern husbandry techniques at the "Darkness into the Light" event at Drayton Manor on 13th & 14th May.

Don't forget to also register for the Amphibian Conservation Research Symposium in June, See the multiple adverts and notices in this issue and plan your visits.

We have a very important and topical entry on safe pond dipping which all members, especially parent with young children, should read & understand.

As many members know, the Education Committee has run a phone help-line from 9:00 am to 9:00 pm for over 14 years. One of the common queries is about feeding pet snakes. Statements such as "my snake always appears to be hungry", "I was told to only feed my snake one mouse a week", "my snake is not growing", "my snake eats a mouse every-other-day" and so on...

Some keepers don't seem to realise that you do not only feed Pinkies to snakes; as they grow they need bigger items of food! It may be common sense to many but with the frequent quote "when I bought the snake I was told to feed it one pinkie a week" we repeated a lot of information. To save confusion (and our time) we designed an information sheet that you can read on page # 15.

If you would like a separate .pdf copy to give to people please e-mail your request to Kim at: education@thebhs.org

Please note Kim has been co-opted as the new NatterJack Editor, all submissions for the NatterJack should in future be sent to her at: education@thebhs.org

***PLEASE SEND ANY ARTICLES YOU THINK WOULD BE OF INTEREST TO THE BHS MEMBERSHIP. THEY CAN BE SUMMARIES OF TRIPS YOU HAVE BEEN ON, ACCOUNTS OF YOUR LOCAL HERPETOLOGY OR ACTIVITIES OF YOUR LOCAL GROUP. IT DOESN'T HAVE TO BE ACADEMIC OR COMPLEX, JUST PASSIONATE, AND PICTURES ALWAYS HELP!
E-MAIL AS A WORD FILE AND HIGH QUALITY .JPEG FILES***

Addition's and Corrections - Issue 213

Apologies to Ann, the photographs in her Corn snake article – all illustrations are © Ann Seabright.





The Agile Frog

A Summary of the Captive Breeding

Reintroduction and Conservation Efforts in Jersey 2014

Tim Liddiard

Natural Environment Team

States of Jersey, Department of the Environment

Background

The agile frog *Rana dalmatina* has seen a population decline in Jersey since the early 1940's and by the late 1980's only two small populations remained in the south west of the Island. One of these, at Noirmont, was lost following an agricultural pesticide spill in 1987.

The Department of the Environment has been carrying out habitat management and spawn protection projects since the early 1990's but it is since the advent of captive breeding at Durrell, in tandem with historic protective methods that annual counts on spawn clumps have increased exponentially. 2014 proved to be another productive year with the first clumps of spawn being found in the third week of February. A total of 116 agile frog spawn clumps were found in the breeding ponds at Ouaisne, Noirmont and Beauport (see graph on next page).

The 2014 season didn't see the water shortages in May/June in the main breeding ponds as were seen in 2012 + 2013. A total of 10 spawn clumps were harvested from the wild and delivered to Durrell for headstarting resulting in a total of approx. 4,000 tadpoles being released to the wild in June 2014. This process both increases the survival rate of the young metamorphosing frogs and allows an amount of control in spreading the animals' genes between sites.



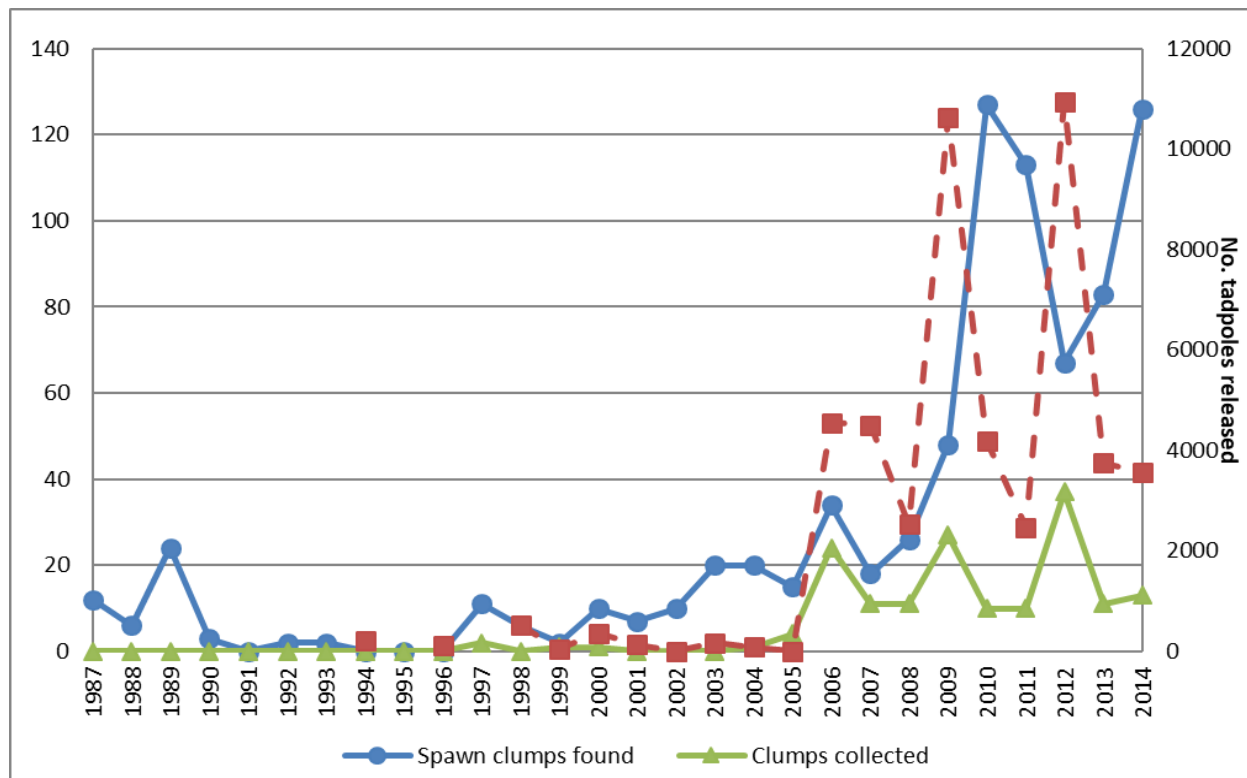


Figure 1 - Total Number of Spawn Clumps counted, collected for headstarting and tadpoles Released 1987 - 2014

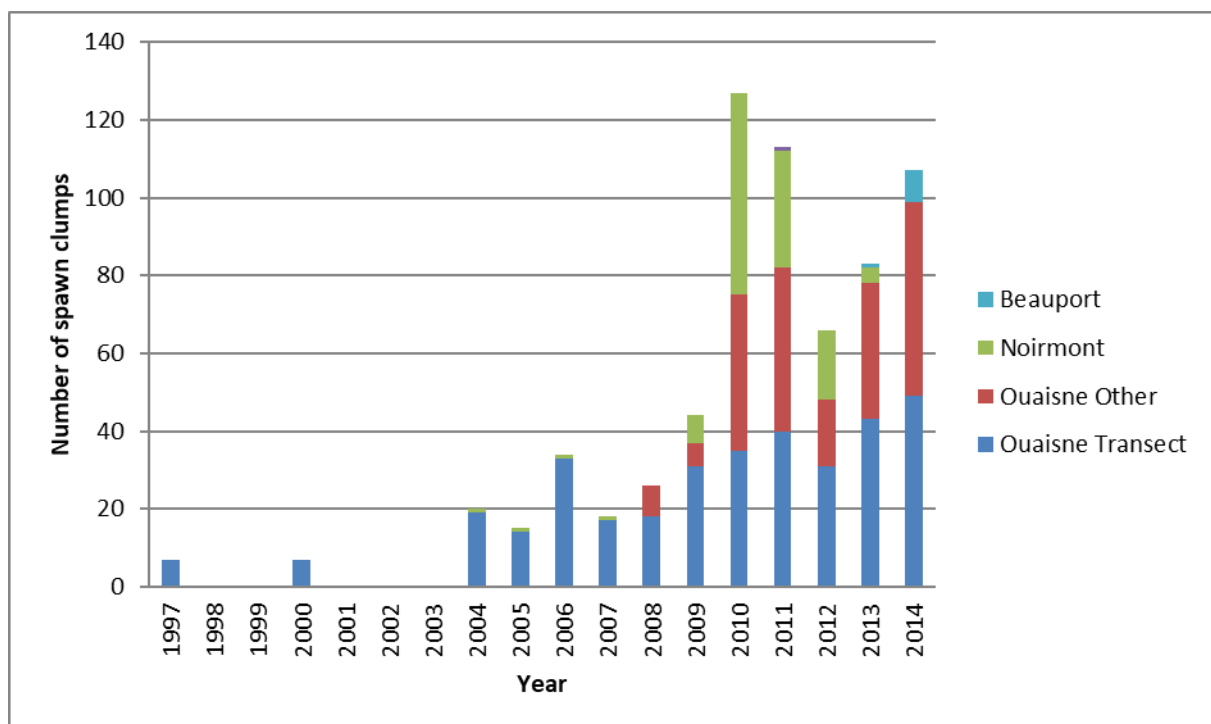


Figure 2 - Total number of spawn counted on site 1997-2014

Captive Breeding

In 2014 preparation of the spawn receptor tanks at Durrell started in mid-February. Each year the aim is to collect a total of 10 clumps for captive breeding (in 2006, 2009 and 2012 a higher number were collected in response to drastically low water levels in the breeding ponds) .

The clumps are chosen for collection based on the risks associated with the individual clumps in relation to the likelihood of their becoming damaged or destroyed by desiccation, disturbance or predation.

At Durrell, the clumps are placed in a stable environment where the temperature is controlled via the air conditioning using data collected using dataloggers from the wild over a period of three seasons. The result is that the captive population are kept in conditions mimicking the wild, starting the process as clumps in water of 12 degrees and ending their captive period at 20/22 degrees.

The tadpoles are raised until they are almost ready to leave the water, at which point their requirement for space greatly increases.

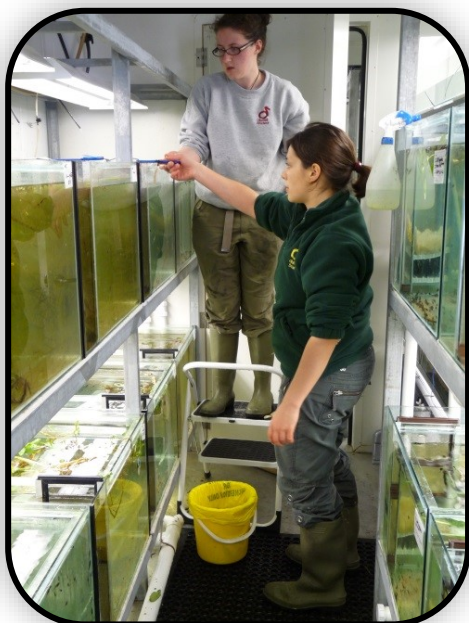
Algal growth is promoted within the aquariums by introducing aquatic plants collected from ponds.

The ideal density has been found to be 1 tadpole per litre/water as more than this results in a quicker growth but at uneven rates, potentially causing weaker offspring and problems with scheduling release events, when an even age is aimed for.



The Custom Built Agile Frog Breeding Container

The day to day management of the captive breeding process is very time consuming and thanks are given to the British Herpetological Society for the financial aid they provided for the project in 2014 which helped fund a student to carry out this work.



Durrell Staff Working inside the Breeding Container

Breeding ponds

Management of the breeding ponds leading up to the spawning period involves a number of tasks dealing with the threat from invasive non-native species, creating new or reprofiling existing ponds and providing artificial anchors to encourage spawning.



It was exiting to witness Beauport pond, created in 2011, becoming a key breeding location for agile frogs with five spawn clumps, compared with just one in 2013.

Also, at Ouaisne, and after a long period of absence, the main pond (shown as 'Ouaisne Other' on the above graph) is again being used with over twenty spawn clumps in 2014. Biosecurity measures are in place to contain the New Zealand Pigmy weed in the main pond and the density of BAP plant species, as well as agile frog spawn clumps as yet do not appear to be negatively affected.

The network of sustainable breeding populations across the south west of the Island is increasing and new ponds are being considered at Beauport and Noirmont.



Agile froglet



Tadpoles being 'bagged up' ready for release



Ready to be driven to their new home

Acknowledgements

The Agile Frog Conservation project is producing very positive results with numbers of frogs and spawn clumps being counted increasing on an annual basis. It has been recognised that various stochastic events have the potential to deliver a negative impact on the success of the project at short notice and this is a reminder to us all to remain vigilant against threats on which we may have an influence (e.g. increasing site biosecurity) and remain hopeful that future weather patterns ensure the timely provision of breeding ponds and slacks.

The valuable input and advice from experts in their fields is much appreciated and thanks are given to the Durrell Institute of Conservation and Ecology and Amphibian and Reptile Conservation for their help in identifying targeted research projects and assisting in their delivery and recommendations. Thanks to Dr Simon Townson and the British Herpetological Society for financial assistance in 2014. There is no doubt that this network of knowledge and experience has been a great benefit to the project's success.

Addendum

Table 1. Breeding success update for 2016: spawn clumps laid and headstarting.

Frog Log 2016		
Ouaisne	58	clumps
Ouaisne Main Pond	78	clumps
Noirmont	19	clumps
Woodbine	0	
Beauport	0	
Total	155	
Headstarting		
To Durrell	10	clumps received
Releases		
Noirmont	1400	tadpoles released
Beauport	1500	tadpoles released
Woodbine Corner	1200	tadpoles released
Total	4100	



Pond Dipping



A weekend & holiday activity that never goes out of fashion is "Pond Dipping". The danger in present circumstances is that, if you "dip" more than one pond with the same net, you can transfer infections from one pond to another. The greatest dangers, as all BHS members should know by now, are the amphibian killers - **Chytrid Fungus & Ranavirus**.

A simple, but very effective way, of preventing the spread of any infection is to sterilise your net, container & boots **after every session**; whether it be one pond or many that you visit in a day.



- ★ Obtain a clean trigger spray bottle and some **THIN** household bleach.

- ★ Carefully fill the spray bottle with 50 ml of bleach and top-up to 500 ml with tap water.

- ★ Label the bottle **10% BLEACH** with an indelible pen on both sides.

- ★ After use spray your net and the



lower handle generously with your dilute bleach until it begins to drip from the net, then soak your container and wellies (including the soles).

★ Then, allow it to dry completely in the air

★ your net is now safe to use in another pond !

Because you are using bleach please observe some basic safety precautions:

- ♦ Wear gloves whilst pouring bleach into the spray bottle.
- ♦ When spraying your net(s) ensure your back faces the wind so bleach does not blow in your eyes.
- ♦ Ensure nobody is nearby or down-wind whilst using the spray.
- ♦ Avoid getting bleach on your clothes as it will fade the colour.

Richard Butler & Kim Le Breuilly 2016



Pond Dipping at Woodheys



KEY

- 1 Broad Bodied Chaser
- 2 Arrowhead
- 3 Yellow Flag Iris
- 4 Common Pond Skater
- 5 Whirligig Beetle
- 6 Water Spider
- 7 Common Duckweed
- 8 Water Milfoil
- 9 Ramshorn Snail
- 10 Water Boatman
- 11 Water Scorpion
- 12 Pond Snail
- 13 Newt
- 14 Immature Newt
- 15 Frog
- 16 Tadpole
- 17 Diving Beetle
- 18 Dragonfly Nymph
- 19 Leech
- 20 Canadian Pondweed
- 21 Water Spider



Equipment

Useful equipment for pond-dippers includes wellies, other waterproofs, white plastic trays, pots or ice-cream tubs, sieves, magnifying glasses, white plastic spoons for handling creatures, notebooks, pencils, identification guides and pond nets.

Aims: To learn how to find and identify pond animals and plants, developing a respect for them.



How to pond-dip

1. Approach the pond quietly as you may see birds, frogs or mammals around the edge of the pond. Spend some time looking for activity on and below the surface.
2. Then get things ready and half-fill the plastic trays and pots with pond water.
3. The first pond net sweeps, long and gentle, can be in the open water. Empty the net contents by turning the net inside out into the plastic tray then observe and record your findings. Some things don't look like animals at first, so you may have to wait until they start to move!
4. Next sweep the net gently around the submerged plants, being careful not to damage them. Look at your catch in a new tray of water.
5. Now sweep the net along the stems of the emerging plants around the edge of the pond. What did you see?
6. Then the net can be swept along the bottom of the pond, taking a very small amount of mud and washing this in the net before emptying the contents into a new tray of water.

Pond Life Code

Remember the animals' welfare too! Keep all creatures immersed in water. Return all animals to the water as soon as possible, ensuring that snails, worms etc. are washed from the sides of your containers. Frogs, toads and newts should not be kept under water for long periods as they can drown.



NatureSignDesign
www.naturesigndesign.co.uk



13th - 14th May 2017

Advancing Herpetological Husbandry and the British Herpetological Society

In Memory of

Hans Dieter Philippen and Henk Zwartepoorte



From the darkness, into the light

A series of lectures examining advancing husbandry trends

<https://www.facebook.com/events/1170195916412509/>



Photo © Aaron Burns

Venue:
Drayton Manor Park Hotel
Drayton Manor Drive
Tamworth
Staffordshire
B78 3TW
United Kingdom
Tel: 01827 285551
Fax: 01827 286661

Registration fee: £40.00
Book at: <http://www.thebhs.org/>

AGENDA:

Saturday - start 4pm, zoo tour and husbandry workshops, social in the bar

Sunday Speakers - begins 09:00:

08:30-08:50 - Arrival tea, coffee and cookies/pastries

08:50-09:05 - Introductions, BHS + AHH

09:05-09:50 - Chris Mitchell - Introduction to Drayton Manor Park Zoo

09:50-10:35 - Fraser Gilchrist - The European Studbook and *Smaug giganteus* conservation

10:35-10:45 - 10 minute recess

10:45-11:30 - James Hicks - Advancing Agamid Husbandry

11:30-12:15 - Katy Upton - Filling in the Blanks – an update on Paignton Zoos LVI department

12:15-13:00 - Buffet Lunch

13:00-13:45 - Will Thomas - Reproduction, Revenue and Reptiles

13:45-14:30 - Jim Collins - CITES issues and a vision of the Post Brexit hobby environment

14:30-15:00 - Tea, coffee and cookies/pastries

15:00-16:00 - Frances Baines - Environmental Lighting in Captive Habitats

16:00-17:00 - Bar will be available for socialising





DICE
University of Kent

School of
Anthropology
and Conservation

ACRS

Amphibian Conservation Research Symposium

What: Amphibian Conservation Research Symposium

Where: University of Kent, Canterbury, Kent, UK

When: 23rd to 25th June 2017

Keynote speakers:

Helen Meredith (Amphibian Survival Alliance)

Phil Bishop (IUCN SSC Amphibian Specialist Group)

Jean-Marc Hero (Griffith University)

Find out more, and register at
www.amphibians.org/acrs

Key dates:

March 2nd – abstract deadline (posters, oral presentation)

April 2nd – registration closes

Sponsored by



OTHER MEETINGS & EVENTS – DATES ANNOUNCED FOR 2017

25th June - Arras is just a 1 hour drive from Calais



FBH Conference - **24th June** @ Doncaster Racecourse

IHS Breeders Meeting - **25th June** @ Doncaster Racecourse

IHS Reptile Show - **3rd September** @ Doncaster Racecourse

IHS Reptile Show - **5th November** @ Doncaster Racecourse



A HAND-MADE THANK
YOU CARD FROM THE
CHILDREN AT WEST
PENNARD PRIMARY
SCHOOL PRESENTED TO
ROM MURYN FOR AN
ENJOYABLE EDUCATIONAL
EXPERIENCE.



FEEDING RODENTS TO PET SNAKES



It is recommend that you NEVER use live rodents as food for snakes (or other reptiles), they can do a lot of damage to a snake in a confined space, especially if left overnight in a vivarium.

Snakes should be fed on defrosted rodents of a suitable size that is relevant to the size of the snake (see charts) and have been defrosted at room temperature over a few hours. The time it takes to defrost rodents will vary with size, small items will be defrosted in an hour whilst a large rat may take 6+ hours to be defrosted. You should NEVER accelerate the defrosting by soaking in hot water, use a hair dryer or microwave the mouse or rat.

- ◆ Ideally, you should never feed a snake in its usual enclosure.
You are effectively teaching your snake that

Open Door + Hand = Food.

So every time you open the cage it will associate your hand with food and strike at you ~ even when there is no food and you just want to get it out to handle it or clean the substrate.

You should feed your snake on newspaper on the floor or in a lockable plastic tub so there is no learnt behaviour of 'Hand so Bite'.

If the snake goes to the rodent and starts to eat it - FINE !

The four common reasons for not spontaneously eating are:

- (1) the food is too cold *or* (2) the food is not moving *or*
- (3) the snake is dehydrated *or* (4) the snake is too cold.

As the majority of small snakes do not feed in water or eat wet prey items you need to place the rodent in a sealed plastic bag with as much air as possible expelled from it.

Place the bag in warm water for 5 to 30 minutes (depending on size) so that the rodent appears warm to the snake.

If it still shows little or no interest in feeding use the warmed, defrosted rodent held by the base of the tail with proper "feeding tongs" - move the rodent across the eye-line of the snake as many snakes have a strike response to warm, moving items of food. If this fails, move the rodent closer and pass it around the head of the snake and try and provoke it into striking at the food. It may take 30 minutes or more to get a new snake to strike. You need to be patient and persevere!

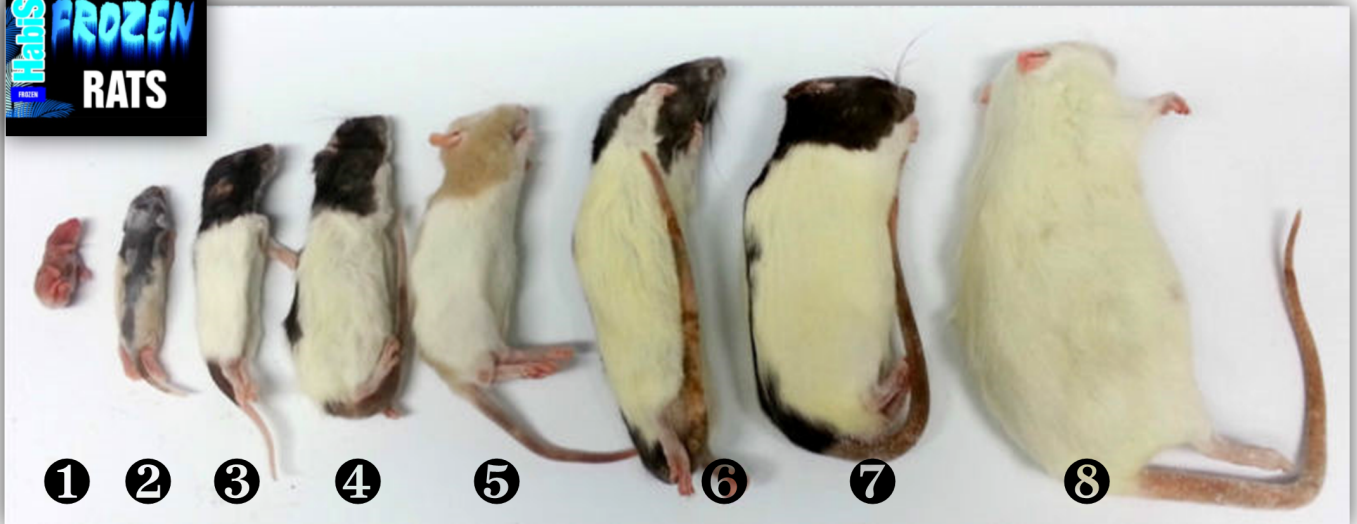
What size rodent to buy and feed?

Rodents are often sold by a rough description of size but this is slowly disappearing and mice and rats are now being sold by approximate weight. We have used the on-line comparison of description and weight ranges used by Euro Rep Ltd.

	Name	Weight [grams]
❶	Small Pinkie	1-2
❷	Large Pinkie	3-4
❸	Fuzzy	4-6
❹	Hopper	6-10
❺	Small	10-15
❻	Medium	15-22
❼	Large	23-30
❽	X-Large	>35

For snakes under 4 feet - measure the widest part of the head of the snake - - - the rodent should be approximately twice as fat as that measurement.





	Name	Weight [grams]
①	Rat Pup	4-10
②	Rat Fuzzy	10-25
③	Small Weaner	25-50
④	Large Weaner	50-90
⑤	Small	90-150
⑥	Medium	150-250
⑦	Large	250-350
⑧	Large +	>350
⑨	X Large	>450

For larger boas, pythons & snakes over 6 feet the rodent should be no fatter than widest part of the body of the animal.

You should ideally only feed one rodent every 7 days to a snake under 6 foot. Do not handle a snake after feeding for 48 hours, otherwise, the food item may be regurgitated.

Providing you supply the correct temperature gradient a snake will digest a meal in approximately five

days; you must then allow another two days for the remnants of the meal to pass into the lower digestive tract and hopefully defecate the remainder.

For larger snakes such as boas and pythons you can extend the feeding frequency to every 10 days, 2 weeks or even 4 weeks depending on size & species.

Do not be afraid of offering a snake a meal that appears “too big” to you.

Snakes have a jaw that has a front joint enabling it to consume food vastly bigger than a mammal can.

A "normal" meal for a snake should take about 10 minutes to ingest and swallow.



If the snake eats quicker than this, or displays signs of hunger less than 5 days after a meal, then the rodent you gave it was too small.

If it takes longer than 30 minutes to swallow, or it is regurgitated, the food is too large.

Next feed, offer a rodent the next size bigger or smaller as appropriate.





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Snakes will not feed if they are about to shed their skin. This will make the feed-every-7-days routine out of sync. Once a snake had shed it will usually be quite hungry, so feed it the day after shedding and then carry on offering it food every seven days.

What actions you can take if the snake **STILL** does-not feed . . .

Some snakes do not feed every week, especially in the winter months.

Maintain weekly weight (and possibly length chart). If the weight of your snake is not being lost, do not worry too much but weekly checks of its weight is important.

- a) Ensure your snake is properly hydrated
- b) Check that there are no ulcers, sores or growths in or around the mouth; if present consult a specialist vet
- c) Leave your snake with its' food in brown paper bag loosely closed at the top and replace bag in the vivarium overnight
- d) Dip head of rodent in (cold) chicken soup from a can - yep, it really does work with many species of snake!
- e) "Brain" the food .- with a sharp blade cut a hole in the head of the mouse from eyes to ears, ensure you cut open the skull and squeeze some brain and blood out. Place the brained mouse and snake in a secure ventilated container over-night
- f) Insert food into opened mouth. It may take 2 people to do this, 1 to hold the snake still and the other to **GENTLY** open the mouth and insert the head of the rodent into the oral cavity. Don't force the rodent down the snake, allow it to eat and swallow at a natural rate.
- g) Assisted feeding - this is essentially force-feeding your snake. For small hatchlings place a pinkie leg into the mouth and if it will not start to eat gently push the mouse part with a solid plastic or metal item down a straightened snake. A useful tool is the blunt handle-end of a small snake sexing probe.



Injuries to Snakes Caused by Live Rats & Mice



Live rat left in vivarium with this poor
Python regius overnight



Rat bites to Boa Constrictor

The Probe set (shown on the previous page) costs roughly around £18.00. Alternatively use a Pinkie Pump like the one illustrated here. This one was around £30.00 on eBay.

- h) If all of the above methods do not work or your snake is losing weight then you must consult a Specialist Reptile Veterinarian or a reptile specialist snake keeper.
- i) Failure to get treatment for your snake is a contravention of the Animal Welfare Act 2006 ~ Section 5: The need to be protected from pain, suffering, injury and disease.



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The material must be acknowledged as BHS copyright and the title of the publication specified.

Richard Butler & Kim Le Breuilly - February 2017

BHS Photographic Competition 2017

Congratulations

To **Danni Thompson** for winning 1st and 3rd prizes, a total value of £175.00 worth of products from Peregrine Livefoods *and*

Elliot Pelling who won 2nd prize, a total value of £75.00 worth of products from Peregrine Livefoods.

Full size HQ images can be viewed on the BHS website.



Zoo Signs



Council Business 2017

Summary of Minutes of the Council Meeting on February 4th 2017

Given ongoing developments with open access and online publishing, BHS Council is continuing to review the provision of publications to members. Following a consultation of the membership, the Herpetological Bulletin will continue to be available in both online and printed formats. The Herpetological Journal will also continue to be available in both formats until 2020, with a view to moving towards online-only provision after that date. At present, providing the print-option Herpetological Journal to members is heavily subsidised and future subscription rates will aim to cover all printing and postage costs. Both the Herpetological Bulletin and Herpetological Journal have buoyant submission rates and the editorial teams continue to strive to process all papers quickly and efficiently.

Thanks to Trevor Rose, there is a steady stream of orders coming for the BHS 'amphibian ladders' that can reduce amphibian mortality in gully pots. The new BHS website continues to be developed and will be launched shortly together with more promotion for the BHS Facebook group. A memorial conference is being planned to celebrate the life of the well-known Dutch herpetologist Henk Zwartepoorte, who sadly died in 2016. This will be held at Drayton Manor Park in the Midlands. BHS will also be sponsoring the Amphibian Conservation Research Symposium at the University of Kent in June 2017, and members will be able to register at a discounted rate. The Captive Breeding Committee organised another successful meeting in Amersham. The Education Committee is planning another photographic competition for the AGM, and BHS polo shirts are currently being ordered.'

Vacant Council Posts

Secretary - 5 year term. Tasks include receiving membership subscriptions and monitoring/maintaining the membership database (via BHS Website), liaising with subscription agencies (for institutional memberships), arranging Council meetings and maintaining Minutes, recording secretariat expenditure, maintaining BHS Constitution and membership forms, answering general enquiries by email or post. Other tasks currently handled by the secretary include mailing of publications and handling back-issue requests and other book sales, however some tasks are being divided among serving Council. Small annual honorarium available. Fuller job description available on request from education@thebhs.org

Treasurer - The BHS needs a new Treasurer as we are saying farewell to Michael who can no longer undertake the role. If you, or someone you know, would like to get involved with this role (which has a stipend) please get in touch prior to voting at the AGM. If you are interested in applying for either of these posts please contact the BHS Chairman, Dr. Chris Gleed-Owen