



Warwickshire Amphibian & Reptile Team

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Affiliated to the Warwickshire Wildlife Trust (Registered Charity Number 209200)
and the British Herpetological Society (Registered Charity Number 205666)

Patron: Ken Livingstone MP

WART NEWSLETTER: ISSUE NO. 24 AUTUMN 2000

Editor's Notes

This issue of the newsletter goes to extremes – in your own backyard as well as across the water to foreign lands (and bigger lizards). Something for everyone, I hope - even if the list of Belizian reptiles means nothing to you, there are still mentions of monkeys, vampire bats, dolphins and cicadas, and butterflies have crept (or fluttered) into the garden article.

Jenny Parnell is in the Upper Sixth at Rugby High School and had to write a report of her experiences in Belize for her sponsors and the school. Jenny enjoyed the herpetological aspect of the expedition so much that she has now joined WART and thought that other WART members would be interested to read her report. Similarly Jan had to write a reptile report for the expedition organisers and thought that WART members would like to read it.

The eagle-eyed ones amongst you may have noticed that you have had two newsletters titled Issue No. 22 Spring. One of these was obviously not what it claimed to be. The newt-eyed remainder of you (this includes me) won't have picked up the error.

Technical difficulties (OK, more mistakes, but not all mine this time!) resulted in the previous newsletter being late, which meant that the advertised event had passed by. I offer my apologies for these glitches and hope to do better!

WART AGM: *Tuesday 16 Jan at 7.30pm*

Brandon Marsh Nature Centre, Brandon Lane, Coventry

WART members are invited to attend the Annual General Meeting at the Warwickshire Wildlife Trust headquarters. This will be an opportunity to see how WART works, and to have your say about what we're doing. The current Committee members are listed below, and as far as I'm aware are happy to be re-elected.

The WART Committee

Chair	Jan Clemons
Vice-Chair	Andrew Thompson
Secretary	Andi Wolf
Membership Secretary /Treasurer	Howard Eccles
Newsletter Editor	Helen Newell
Ordinary members	Jane O'Dell, Serena Eccles

Is Your Garden Herp-Friendly?

See how many out of ten you can score in this quiz! It is designed to provide for the various needs of amphibians and reptiles: somewhere to breed, food to eat, and hibernation sites, as well as helping to support other forms of wildlife.

1. Do you have a pond? Ideally it should be fish-free, with native pond-plants. At least some of the pond should be exposed to the sun, with gently sloping sides and plants giving cover close to the edge for emerging amphibians.
2. Is there a compost heap? Large compost heaps may be used by grass snakes, both for hibernation and for egg-laying. Heaps are best positioned in the sun, and only disturbed in early October or mid-April to mid-May if grass snakes are present. Frogs and newts will also use compost heaps.
3. Do you have a log-pile? These are good for hiding under, as well as providing creepy-crawly food. If in sun, it may be used for basking by reptiles.
4. Is there a place in your garden that is mostly left unmanaged, where creatures stand a chance of being undisturbed? Perhaps a wildflower meadow, or even a thick patch of shrubbery - maybe the strip behind the shed you can't get at.
5. Do you grow native wildflowers, grasses, shrubs and trees? Plants that occur naturally in this country, and especially if they grow close to your garden (or in the same county), will support the insects that occur locally, which in turn will attract predators (not just herps, but birds for example). Foreign plants generally support less insects, because native insects aren't used to them.
6. Are there any good sunbathing spots? For example, a south or south-west facing bank or rockery. Even if you don't get reptiles in the garden, this can provide a good place for potential amphibian food.
7. Do you refuse to use slug pellets? If you must control slugs and snails, there are other methods – eg. beer traps, or hunting by torchlight on damp evenings.
8. Can you refrain from using pesticides – or keep their use to a minimum? Ladybirds, lacewings, and many other creatures will help control pests if given a chance. “Weeds” may be providing you with wildlife – some butterfly species will lay eggs on clumps of uncut grass (kill them and you may not see that Speckled Wood or Gatekeeper again).
9. Do you know where your nearest ponds are (outside your garden), and have they been surveyed? Remember the wildlife that visits you may also depend on nearby habitats.
10. Have you helped manage your local wildlife habitats? Nature reserves usually rely on volunteers for their management.

Helen Newell

Report on Belize Expedition 2000 by Jenny Parnell

On Saturday 28th July we started our month long expedition. We had a ten-hour flight to Cancun in Mexico and then a further ten-hour bus journey (in an old American yellow school bus!) down to Las Cuevas Research Station (part of the Natural History Museum) in the Cayo district of Belize. The last part of the journey was by landrovers. We spent the night at the research station and caught up on some much-needed sleep. Early the next morning we started the hike down to our campsite and began to set up our hammocks, mosquito nets and tarpaulins, and began making bread for lunch and started constructing a shower screen out of palm leaves. We spent most of the rest of the day perfecting the site and taking trips out in to the surrounding forest. The first night in our hammocks was great, it was even noisier than it was in the day with frogs and cicadas calling. We were woken up several times by howler monkeys and then got up when the scarlet macaws started screeching at 5am. We had our breakfast and set off on a trip to a nearby pond in an area called Millionario, there had been a huge fire here and the fire had carried on burning in the roots for 2 years so it was pretty bare but the pond had become very much a watering hole for the local wildlife. After a couple of hours exploring there we made our way back to the camp, we were still getting used to the heat and the 75% humidity so it was a pretty slow hike!

On our return to the camp we noticed things were not how we'd left them earlier, there were bags ripped open and hammocks cut down. Our first thought was that monkeys had been playing around but then we realised that people had had things stolen. This created a security alert since the culprits were identified as Guatemalan incursionists who had come across the border illegally to collect medicinal plants. The timing of the theft suggests that no confrontation was intended but there was clearly a safety issue and the police, the Belize Defence Force and the British High Commission were alerted. The decision was taken to evacuate the camp as we were advised that it would be unwise to remain in the area.

We were moved out by truck as the entire research station had to be evacuated and we traveled for about 3 hours to a Forestry Station in the Mountain Pine Ridge called Douglas D' Silva. The Belize Forestry Department were incredibly accommodating and gave us the use of two houses in an area called Los Altos. These houses had not been lived in (by humans) since 1994 but in the meantime had acquired new residents in the form of several scorpions, tarantulas and numerous lizards.

We quickly started work on various projects. The first was mapping the local nature trails for a potential publication as a tourist information leaflet. The second was herpetology work, which was surveying and doing transect walks during the day for lizards and snakes and at night wading through ponds doing amphibian work. Another project was on bats and we were fortunate enough to have nearby, a big cave system known as the Rio Frio Caves. Several colonies of Vampire bats and False Vampire bats were found to frequent the caves and abiotic readings and surveys were repeated at different times of the day and night to see whether these had any bearing on why the bats moved around so often. The fourth was on ferns in the area. In one week alone we had found the same number of species on fern in one area as was known to exist in the whole of the UK. Samples of these ferns have gone to the Natural History Museum for confirmation of species and will hopefully be displayed.

Apart from the ongoing project work we had several expeditions and outings. One of the most interesting was a day trip to a place called Caracol, which is the largest Mayan site in Belize. It was completely fascinating and there were tree roots on the tallest part, which just made it easier to imagine that when the site was first found in the 1930's it was completely covered by dense jungle. On another expedition we trekked down a river for three hours both ways. It was hard work but a lot of fun as we had to do quite a bit of climbing, and in some places had to swim through the jungle.

The third week the RHS contingent split off from the Brathay group to head up to the north of Belize in the Corozal district. The first night was spent deep in the rainforest at Pook's Hill an 'upmarket' ecotourist facility, where we had negotiated a considerable discount. The next day we had quite a long journey up through Belize City (where we stopped en route to look at the zoo, which is unique in that it houses only animals native to Belize) and Orange Walk where we stayed overnight.

We met up as arranged with a British herpetologist named Paul Edgar who is working on a project on Fer de Lance snakes at Wildtracks and in the Fireburn rain forest in the Corozal district of Belize. He travelled back up with us to Wildtracks, located in a village called Sarteneja. We visited Wildtracks because for several years, Rugby High School have been raising money to adopt acres of land in the Fireburn forest to protect them against development and deforestation. The next morning we were taken across a large lagoon to Fireburn by boat. We had a bit of a hike to our base, and en route we stopped off for a rest and sat down on a colony of fire ants which proceeded to run up our trouser legs and in our shoes and savagely sting us. When we reached the base we dropped off our kit and Paul took us out to release a 6 foot female Fer de Lance snake which had had a radio tracking device inserted in it. Luckily Fer de Lances are rarely vicious but all the same he had to be extremely careful, as firstly it had been kept in a box for 4 days and was not happy about it: and secondly they are known to kill people in Belize, mainly through people stepping on them. We also assisted Paul as he operated on another two Fer de Lances which he'd caught by the field base. The process involved anaesthetising the snake with ketamine, cutting it open and inserting a radio tracking device about the size of your thumb, into the stomach cavity. The whole process took about 2 hours but most of the time was actually waiting for the snake to go to sleep. With these devices inserted it means that he will be able to monitor the snakes territory and it's behaviour.

We were also able to see some of the acres RHS have adopted. This was incredibly worthwhile and we took photos to take back to school. We packed up our kit in the afternoon and started the trek back to the lagoon. The mosquitoes were horrendous and they swarmed at our faces and bit us through our clothes. Back at Wildtracks we swam in the salt-water lagoon in the moonlight to ease our bites. Next morning we were incredibly late getting up (5.30am) and had about 15 minutes to get to the bus station to go down to Belize city, luckily we made it, but only just!

Here we met up with the rest of the Brathay group and started the next 'reef' phase. We took a water taxi to an island called Caye Caulker, situated in the coral reef off the coast of Belize. This reef is the second largest in the world (after the Great Barrier Reef in Australia) but is also the longest continuous reef in the world. We did several trips to different areas of the reef such as shark ray alley where we swam with sharks and sting rays. Also a place called Coral Gardens where the coral was totally unspoiled and the fish were amazing.

We had several trips out to other islands; one was called Goffs Caye, which only had about 5 palm trees and a shack with a barbecue on it. We also went to a known spot for manatees; they were incredible creatures, incredibly graceful. It is unfortunately thought that these animals will soon die out, as there are very few left, moreover we sighted some wild dolphins swimming by the boat.

On our last day we organised the day for ourselves, some people went out for the day fishing on a big sailboat and some flew over the infamous blue hole and had amazing views of the reef. I personally went to see the sea horses, which lived in the mangroves, the particular area we went to also had the biggest underwater cave system in the world there.

It was the most amazing experience of my life, there was so much to see and so much beauty, it was truly fantastic. I would like to take this opportunity to say a big 'Thank you' for giving me the chance to do this. I am researching into the possibility of going back next year for my gap year to work with Paul Edgar studying Fer de Lances and mapping Fireburn's nature trails. I will have to raise the money to go and so am again looking for sponsorship...every little bit helps!

Jenny Parnell

Herpetological Survey Report -- Belize 2000

Despite its small size, Belize supports over 160 species of reptiles & amphibians, compared to only 12 species in the UK.

Survey work was carried out during a ten day period (3 –13 August) around the small settlement of Douglas da Silva in the Mountain Pine Ridge Area, situated on the north-west corner of the Maya Mountains.

Three main projects were undertaken:

Timed transect walks along tracks and trails, searching consistently for reptiles in order to estimate relative abundance by the numbers of species and animals seen per man hour in two different adjacent habitats. The same transects were used on a daily basis in gallery forest and pine ridge using the same observers.

Behavioural studies of local lizard colonies, including *Sceloporous variabilis* around the dwellings at Los Altos and *Basiliscus vittatus* around the Douglas da Silva dam. Numbers of adults (male and female), juveniles and hatchlings seen were recorded at different times of the day, together with abiotic data such as air and ground temperature, humidity, cloud cover and absence/presence of wind and rain.

A night amphibian survey was conducted at ephemeral ponds to identify species present. We assisted a research team from Edinburgh University who specialised in identifying individual species and their relative abundance by listening to the intensity and frequency of species specific calls.

SURVEY RESULTS

Reptile Survey

Table 1 shows the number of species recorded in Gallery and Pine Forests

TABLE 1

Species Name	Common Name	Gallery Forest	Pine Ridge
CHELONIA			
Kinosternon leucostomum	White lipped mud turtle		X
Trachemys scripta	Common slider		X
LIZARDS			
Ameiva festiva	Middle American ameiva	X	
Norops rodrigeuzii	Smooth anole	X	
Norops lemurinis	Ghost anole	X	
Norops pentaprion	Lichen anole	X	
Norops capito	Big-headed anole	X	X
Norops tropidonotus	Scaly anole		X
Sceloporous variabilis	Rose-bellied lizard		X
Mabuya unimarginata	Striped skink		X
Lepidophyma flavimaculatum	Yellow-spotted night lizard		X
Basilicus vittatus	Striped basilisk		X
Corytophanes cristatus	Smooth-headed helmeted basilisk		X
Ctenosaura similis	Spiny-tailed iguana		X
Sphaerodactylus glaucus	Dwarf gecko		X
SNAKES			
Micrurus hippocreptis	Maya coral snake		X
Ninia sebae	Red coffee snake		X
Bothrops asper	Fer-de-lance		X
NUMBER OF SPECIES RECORDED = 18		5	14

It is interesting to note that more species were present in the Pine Ridge Forest compared to the Gallery Forest. This may be due to the fact that the gallery forest occupies a much smaller area and that the Pine Ridge Forest contained more variability in habitats. Both areas have a different vegetation structure and composition. Only one species (*Norops capito*) was common to both areas, but the individuals seen in the Pine Ridge had more definite radial stripes around the eyes than their counterparts in the Gallery Forest. In conclusion this species list only represents a 'snapshot' of activity in August and further surveys, at different times of the year, would probably add more species, especially snakes.

Timed Transect Walks

The summary shown in table 2 represents approximately 60 man hours over the ten day survey period using the same recorders. The Pine Ridge transect data does not include data for the species' *Sceloporous variabilis* or *Basilicus vittatus*. This comprised a separate study round Los Altos but the presence of the species needed to be included in table 1. However two striped basilisks were seen along the Pine Ridge trail and this data is included in table 2.

TABLE 2

	Gallery Forest	Pine Ridge
Number of man hours	30	30
Number of species recorded	5	13
Mean no. of species/man hour	0.17	0.43
Number of individuals recorded	8	25
Mean no. of individuals/man hour	0.27	0.71
Chelonia recorded		
Number of species		2
Number of individuals		5
Lizards recorded		
Number of species	5	8
Number of individuals	8	15
Snakes recorded		
Number of species		3
Number of individuals		5

As well as supporting more reptile species, the pine ridge area supports more individuals. No Chelonia or snakes were found in the gallery forest. Lizard species encountered during the timed transect walks were found mainly on tree trunks or on the forest floor.

Lizard Colony Studies

Rainfall and temperature appear to be the two key variables governing lizard activity around Las Altos. In the *Sceloporous variabilis* study no individuals were seen when air temperatures fell below 25C or during rain. In the right conditions however, the recording team could over a short time period find over 30 individuals. Individuals encountered were often on the move or basking in open sunny places such as dry stone walls or on the sides of buildings. It was interesting to note that this species was active at relatively high temperatures, when other lizard species were not encountered. Adult lizards comprised 48% of the colony, males outnumbering females (30% to 18% respectively), juveniles 40% and hatchlings 12%. Certain adult individuals could be found in exactly the same places day after day. One particular female was regularly seen on the bottom step of the 'top' forestry department dwelling.

Observations of the *Basiliscus vittatus* colony at the Douglas da Silva dam concentrated on individual animals. The maximum number of individuals seen during a 15 minute survey totaled 18 animals. A large male over 50cm in length showed territorial behavior e.g. head-bobbing and could be found frequently basking on a large boulder next to the water's edge. Smaller females were also observed basking on 'individual' rocks whilst juveniles were more wary and were frequently observed running across the boulders, as opposed to basking.

Amphibian Survey

Table 3 shows the amphibian species recorded over two nights in and around the ephemeral pools at the Douglas da Silva settlement.

SPECIES NAME	COMMON NAME
Bufo valliceps	Gulf coast toad
Hyla picta	Cricket tree frog
Hyla microcephala	Yellow tree frog
Scinax staufferi	Stauffer's tree frog
Rana berlandieri	Rio Grande leopard frog
Smilisca buadinii	Mexican tree frog
Bufo marinus	Marine toad
TOTAL NO. OF SPECIES = 7	

Acknowledgements

Survey work was carried out by the author, Camilla Andrews, Philip Bowles, Amelia Lee, Jenny Parnell, Tracy Saunders & Helen Yates. The help of Toby Gardener and his team from Edinburgh University with the amphibian survey is gratefully acknowledged.

References

Stafford, Peter J. and John R. Meyer (2000): A Guide to the Reptiles of Belize.

Jan Clemons

Contributions for the newsletter should be sent to Helen Newell.
Copy deadline for next issue: 30th January 2001.