

# COMMON REPTILES OF THE GAMBIA

Linda Barnett and Craig Emms

## CONTENTS

|                                  |    |
|----------------------------------|----|
| INTRODUCTION                     | 2  |
| TURTLES, TERRAPINS AND TORTOISES | 4  |
| THREAD AND BLIND SNAKES          | 6  |
| BOAS AND PYTHONS                 | 8  |
| TYPICAL SNAKES                   | 11 |
| COBRAS AND MAMBAS                | 12 |
| VIPERS                           | 15 |
| GECKOS                           | 15 |
| SKINKS                           | 16 |
| AGAMAS                           | 19 |
| CHAMELEONS                       | 19 |
| NILE MONITOR                     | 21 |
| NILE CROCODILE                   | 21 |
| SPECIES CHECKLIST                | 22 |
| FURTHER READING                  | 24 |
| ABOUT THE AUTHORS                | 24 |
| ACKNOWLEDGEMENTS                 | 24 |

Cover: Chameleon

Copyright: Text © L. Barnett and C. Emms. Photographs © L. Barnett and E. Brewer OBE (nile monitor, green mamba).

First Published: 2005.

ISBN Number: 0-9547387-2-1

Printed in the UK by Rare Repro, Hailsham, East Sussex

## **Introduction**

### **The Reptiles of The Gambia**

Reptiles have been with us on Earth for many millions of years. Many people believe them to be slimy, cold, slow and lethargic creatures. Some people also believe that all reptiles are highly venomous and even some scientists and naturalists think that reptiles are inefficient and unsuccessful when compared to more 'advanced' animals such as birds and mammals. None of this is true of course. Reptiles are dry-skinned, warm when they've been in the sun and can be very quick movers (just think of how quick a striking snake can be). Only a small percentage of reptiles are venomous and the vast majority of them carry no venom at all. Reptiles are also every bit as successful as other groups of animals. For example, in southern Africa there are more species of reptiles than there are species of mammals and in many African deserts reptiles far outnumber birds in quantity if not in diversity.

Reptiles can be found almost everywhere you look in The Gambia: inside houses and in hotel gardens, on farmland and in forests, and even in the rivers and the Atlantic Ocean. 74 species of reptiles have been recorded in the country so far including 13 species of tortoise, terrapin and turtle, 17 species of lizard, 41 species of snake and three species of crocodile. One species of lizard, known as Armitage's Skink, has only ever been found in The Gambia. However, much work remains to be done to provide a complete list of the species that make The Gambia their home as there may be lots more species here that have so far remained undiscovered.

### **What is a Reptile?**

The most obvious characteristic of reptiles is their dry, horny skin, which is usually modified into scales (in the case of lizards and snakes), or plates (in the case of tortoises, terrapins and turtles). This skin prevents reptiles from losing too much water from their bodies and drying out, and has allowed them to flourish even in hot, dry habitats such as deserts.

All reptiles are described as 'cold-blooded', although this is a confusing and misleading term. Reptiles are really 'ectothermic', which means that they rely on the environment around them to maintain their body temperature and cannot do it internally as birds and mammals do. You will often see reptiles basking in the sun early in the morning. They are doing this to get warm enough to move around.

Then during the rest of the day they will alternate between patches of sunshine and shade so that they can keep their body temperature at a more or less constant level. This is a very efficient system, requiring a lot less energy than that which is required by birds and mammals that produce their own heat internally. This means that reptiles do not have to eat as often as birds or mammals, and many snakes, for example, can live and grow on only ten meals per year!

In addition to these characteristics, the majority of reptiles also lay eggs. Even the water-living terrapins and turtles have to return to the land to dig a nest and lay their eggs. Only a very few species protect their eggs and hatchlings, including all of the crocodiles and a few lizards and snakes. Some species retain their eggs within their bodies until they hatch, thus giving the appearance that they are giving birth to live young.

### **How to Avoid Snake Bites**

Many visitors from the temperate regions of the world, such as Europe, tend to believe that the tropics are literally crawling with snakes. While it is certainly true that there are more species of snake in the tropics and that those species are much more common than in temperate regions, it doesn't mean that you will spend your time here tripping over and avoiding a plague of snakes!

However, it is not beyond the realms of possibility that you may encounter a snake, especially if you spend some of your time off-the-beaten-track and away from heavily urbanized areas. If you are intending to do this then you should take the following sensible precautions to avoid being bitten by a snake:

- Wear boots and long trousers when walking in the bush. Most snake bites are on the feet and ankles;
- Watch where you place your hands when moving through the bush and always look first before sitting down;
- When walking at night always use a flashlight.

If you come across a snake, then slowly back away and make a noise (perhaps by clapping your hands or banging two bits of metal together). The snake will normally make all haste to get away from you. Never, ever try to kill the snake, as this is when most people get bitten (it's also against the law in The Gambia to kill a snake). Just let the snake go in peace and it will do the same for you.

## **Turtles, Terrapins and Tortoises**

Turtles, terrapins and tortoises are reptiles that are characterized by having shells. These shells are complex structures, composed of an outer horny layer covering a bone case, which is fused to the rib cage. In The Gambia there have been four species of marine turtle recorded on the Atlantic coast (the only species known to breed on Gambian beaches is the Green Turtle), seven species of turtles and terrapins recorded that inhabit fresh or brackish water, and two species of land-living tortoises recorded.

### **West African Mud Turtle**

This turtle appears to be very common and widespread in The Gambia, inhabiting saltwater creeks, freshwater pools, rice fields and even wells in gardens. It has a shell that is hinged at the front, giving added protection to the head and forefeet. The shell is thick and domed. This turtle buries itself in mud during the dry season until the rains bring more water. It feeds on a variety of invertebrates, including snails, and also on larger animals such as frogs, and vegetation. This species, like all turtles and terrapins, has to come onto dry land to lay its eggs. Young West African Mud Turtles have been recorded at the beginning of the wet season in The Gambia.

### **Bell's Hinged Tortoise**

This medium-sized tortoise still appears to be widespread and fairly common in The Gambia, despite the fact that it is often hunted illegally as food. However, it may be confined to the moister coastal region. There is a hinge in the shell of adults of this species at the rear, which allows the rear of the shell to close, protecting the hind feet and tail. Very little is known about the biology of this species in West Africa, although it appears to be active mainly during the rainy season. This is also probably the time of year that it breeds and lays its eggs. Its food appears to consist mainly of vegetation and fruit but it has also been observed feeding on carrion.



West African Mud Turtle



Bell's Hinged Tortoise

Plate 1. Some Turtles and Tortoises of The Gambia

## **Snakes**

Currently there have been 41 different species of snake recorded in The Gambia, nine of which are considered to be seriously venomous. Out of the venomous snakes, only two cobras and the Puff Adder are at all common.

### **Thread Snake**

Thread snakes are small, thin snakes that look fairly similar to earthworms. Two species have been recorded in The Gambia so far. They have tiny mouths quite incapable of biting a human and have very primitive eyes. They burrow underground and are active during the night and day. They follow the scent trails of their main prey (ants and termites), to their nests and they have also been found in bird's nests where they eat fleas. When attacked by soldier ants and termites they coil up and produce pheromones, which prevent the soldiers from damaging them. Thread snakes are most commonly seen by farmers when they are preparing their fields for sowing crops, and are probably common and widespread throughout The Gambia.

### **Spotted Blind Snake**

This is also a very primitive snake that is adapted to burrowing underground, though it is slightly larger than the thread snakes. It has a cylindrical body and an indistinct head with polished, tightly fitting scales. The eyes are very reduced in size and simple, and the mouth is toothless. This species feeds mainly on termites but will also eat other small invertebrates. It is probably common and widespread in The Gambia. The Spotted Blind Snake is sometimes found under stones, exposed during ploughing or seen when it is forced to the surface during the rainy season by floods.



Thread Snake



Spotted Blind Snake

Plate 2. Thread and Blind Snakes of The Gambia

## **Boas and Pythons**

One species of boa, the Sand Boa, and two species of python have been recorded in The Gambia so far. The Sand Boa is a burrowing species that appears to be restricted to the north bank of the River Gambia in Bao Bolon Wetland Reserve, but may well turn out to be much more widespread.

Pythons are medium to large snakes with small, smooth scales. They kill their prey by strangling or constricting it and do not carry venom. Females have the interesting habit of wrapping themselves around their eggs to keep them warm and protect them.

## **Royal Python**

This small but beautifully marked python appears to be widespread but fairly uncommon in The Gambia. It is a gentle snake and unlikely to bite if handled, as it rolls itself into a ball and hides its head, giving rise to its alternative names of Ball Snake or Shame Snake. It is a slow moving, mostly nocturnal snake, preying on small rodents that it searches for in holes in trees and the ground. In West Africa mating occurs in December and January and 4-10 eggs are laid in February to April. The maximum length attained by this species is about 1.5 metres.

## **Northern/Central African Rock Python**

This is a huge, thickset snake that may grow to over 7.5 metres in length, though large specimens are becoming much rarer these days and the normal maximum length appears to be about 3-4 metres. This species still appears to be fairly common and widespread in The Gambia, even on the fringes of large urban areas such as Serrekunda. Rock pythons are normally nocturnal and terrestrial though young juveniles may climb trees. They are also excellent swimmers and often hunt in water. They prey on a wide range of species from small mammals through to antelopes, and their diet may include fish, lizards, crocodiles and birds. If cornered, rock pythons can become aggressive and will try to bite, but they do not carry venom.



Royal Python



Northern/Central African Rock Python  
Plate 3. Pythons of The Gambia



Spotted Bush Snake



Slender African Beauty Snake



Olive Grass/Sand Snake



Herald Snake

Plate 4. Typical Snakes of The Gambia

## **Typical Snakes**

The family Colubridae is a very large group of snakes that contains some of the most successful and common species. Most of them are medium sized and lack fangs, though a few species are 'back-fanged', having fangs located at the back of the mouth. The vast majority of these snakes are non-venomous, though a few species do carry venom and can be dangerous to humans.

## **Spotted Bush Snake**

This is a beautiful, graceful snake that grows to a maximum length of about 85cm. The body is bright green, usually with dark spots and bars. The head may be green or blue and the eyes have golden irises. The belly is greenish white to lemon yellow. This snake hunts amongst the branches of trees and shrubs for geckos, chameleons and tree frogs and is an expert and speedy climber, making it very hard to see amongst the foliage. It appears to be very common and widespread in The Gambia.

## **African Beauty Snakes and Sand Snakes**

Several species of African beauty snake and sand snake have been recorded in The Gambia. They appear to be very common and may often be encountered basking in the sun on paths. When disturbed they tend to shoot off into the undergrowth like uncoiling springs, so it's often hard to get a good look at them. These are very fast and active diurnal snakes. They are back-fanged and carry venom. However the venom is relatively harmless and will probably only cause slight nausea and swelling. They hunt small vertebrates by pursuing and grabbing them, then chewing until the venom takes effect. The prey is then swallowed head first.

## **Herald or White-lipped Snake**

This species is very common and widespread in The Gambia. It is a small snake reaching a maximum length of only 71cm. The head is broad and obvious and iridescent blue-black. The back is olive to green-black above, often with small white dots. The upper lip can be whitish. This snake prefers moister areas where it feeds on amphibians. Although it is back-fanged and carries venom, no toxic symptoms have been recorded in a victim bitten by this species. The snake can be frightening though as it flattens its head when it is disturbed, flares its lips and readily attempts to bite, giving it a viper-like appearance.

## **Cobras and Mambas**

Cobras and mambas are medium to large-sized snakes that have well-developed fixed fangs at the front of their mouths with venom glands. They are usually confident in their abilities and will stand their ground if cornered. Although they are potentially very dangerous snakes, there have been very few bites on humans recorded. This is probably because they are active snakes, which are sensitive to the approach of people and they will often disappear quickly into the undergrowth when disturbed.

### **Forest Cobra**

This is the largest of the African cobras and can grow up to a length of 2.7m. The head and foreparts of the body are whitish to yellow-brown, heavily mottled in black, becoming shiny blue-black towards the tail. The underside is pale white or cream, often marked with dark blotches. When cornered, this snake will raise the front part of its body off the ground and spread its hood to warn you it is ready to strike. In this position it will show varying degrees of white while the other common Gambian species, the Spitting Cobra, will typically show black or pinkish-red markings. Although the Forest Cobra is mainly terrestrial, it is also an excellent swimmer and may climb into low bushes. It mainly feeds on small vertebrates, including fish. This is a common and widespread snake in The Gambia.

### **Green Mamba**

This medium-sized snake is bright green in colour, normally with some dark markings on the back. It has an orange tail. The head is coffin-shaped and the inside of the mouth is white. This is an active snake that is usually seen in trees and bushes where it preys almost exclusively on small mammals and birds. It is extremely difficult to see amongst the foliage and unfortunately has a bad, but un-deserved reputation because of the aggressiveness of its relative, the Black Mamba (a species so far unrecorded in The Gambia). Green Mambas will only bite as a last resort and there have been very few records of bites on humans. The bite can however occasionally cause death. It is unknown how widespread or common Green Mambas are in The Gambia because they are often confused with bush snakes. However, they are fairly common in Abuko Nature Reserve.



Forest Cobra



Green Mamba

Plate 5. Forest Cobra and Green Mamba



Puff Adder

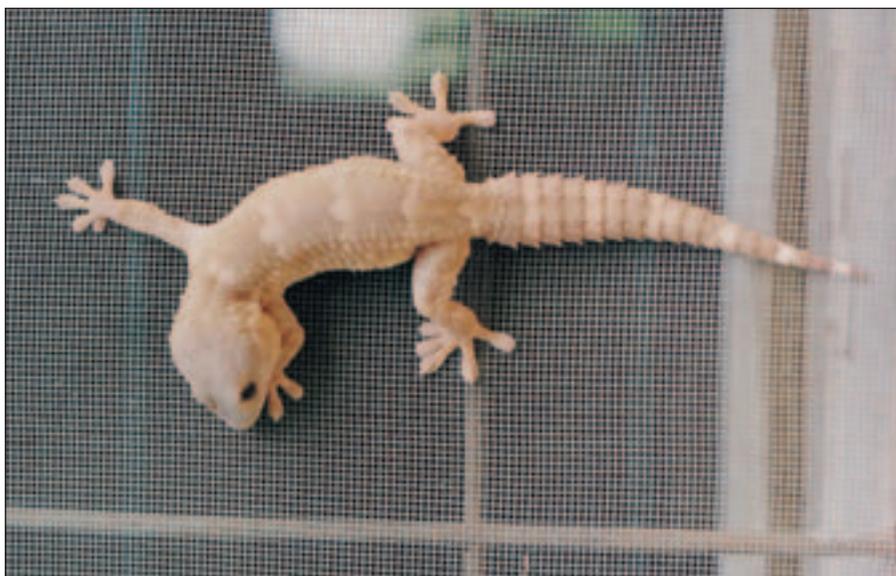


Fig Tree Gecko

Plate 6. Some Vipers and Geckos of The Gambia

## **Vipers**

Vipers vary in size from small to large, and are mainly terrestrial. They catch their prey through ambush, as they are well camouflaged by their markings. When a small mammal passes by they strike and inject a potent venom from large erectile fangs in the front of the mouth.

## **Puff Adder**

The Puff Adder is a fairly common and widespread species in The Gambia. It is a thick, heavily built snake, and has a large, flattened and triangular head with eyes that have vertical pupils. It can grow up to 1.7m in length. The body is yellow-brown to light brown with black, pale-edged chevrons on the back and dark bars on the tail, making it very hard to see when it lies still amongst dead leaves on the ground. The Puff Adder is mainly nocturnal and its habit of lying across paths and readily biting when stepped upon makes it probably the most dangerous snake in The Gambia. It also injects large amounts of venom when it bites. A small amount of this venom can prove to be fatal to humans. This species retains its eggs within its body until they hatch.

## **Geckos**

Geckos are unusual-looking lizards with amazing feet and eyes. Their feet carry millions of tiny hairs that allow them to grip tightly to even the smoothest looking surfaces such as glass or ceilings. Their eyes are very large and usually lidless, the lids being transparent and fixed across the eye. Geckos clean these lids by licking them with their long tongues. They are mainly nocturnal and can be found in a variety of habitats including the inside of houses. Unfortunately geckos are regarded as poisonous by most Gambians but in fact they are harmless and very beneficial to humans because they eat a lot of insect pest species.

## **Fig Tree Gecko**

The Fig Tree Gecko grows to around 30cm in length. It appears to be very common and widespread throughout The Gambia and is commonly found inside buildings. This species tends to congregate around lights during the night-time, eating the insects that are attracted to the light. If a gecko is caught by the tail, the tail will readily disengage from the body and continue to move spasmodically, taking attention away from the escaping gecko. The tail will grow back but often not as perfectly as the original.

## **Skinks**

Skinks are generally small lizards. Four species have been recorded in The Gambia and they are all terrestrial, though they can also be found climbing into low bushes and onto rock and walls. They are active during the day and feed almost exclusively on insects, which are actively pursued. They maintain a high body temperature by shuttling back and forth between sunny and shady spots.

### **Brown-flanked Skink**

This is a small lizard, drably-coloured in browns with a darker stripe along each flank. The Brown-Flanked skink appears to be very common and widespread in The Gambia, where it can often be seen (or more often heard) foraging on the ground amongst leaf litter. It is found in a wide range of habitats from forests to urban areas. A similar-looking species, the Snake-eyed Skink, has been recorded only twice in The Gambia (at Sittanunka on the north bank of the River Gambia and in Abuko Nature Reserve) and can be distinguished from the Brown-flanked Skink by its black throat (the Brown-flanked has a pale-coloured throat). It is probable that the Snake-eyed Skink will turn out to be more common and widespread as more recording is carried out.

### **Orange-flanked Skink**

This species is the largest skink in The Gambia and indeed, in the whole of Africa, growing to about 30cm in length. Females are a drab-coloured pale brown, whereas males in the wet season have a bright, almost fluorescent, orange stripe along each flank. This species appears to be active only during the wet season, perhaps spending the dry season months tucked away out of sight in termite or animal burrows. When the males emerge they can be very conspicuous with their bright flanks and are often seen scuttling quickly across roads. The Orange-flanked Skink appears to be common and widespread in The Gambia in a variety of habitats.

### **Armitage's Skink**

This species of lizard is endemic to The Gambia, which means that this is the only place in the whole world where it has been found. It was first described in the 1920s and since then only four specimens have ever been found. These were taken at Cape Point, at 'a beach near Serrekunda' (which is slightly confusing as there are no beaches near Serrekunda!) and more recently at Kartong. Its biology is completely unknown although it is likely to be active in the day and to forage by burrowing in the surface layers of sandy beaches, perhaps amongst the vegetation at the top of the beach. It is easily identified as it has a cylindrical, shiny body (almost snake-like), a pointed snout and very small and weak-looking legs. It is brown in colour, with slightly darker bands across its back.



Brown-flanked Skink



Orange-flanked Skink



Preserved specimen of Armitage's Skink

Plate 7. Some Skinks of The Gambia



Male Agama



Chameleon

Plate 8. Agama and Chameleon

## **Agamas**

Two species of agama have been recorded in The Gambia, although only one appears to be very common and widespread. This latter species is known here simply as the 'agama' although it also has the alternative name of the 'Rainbow Lizard'. The maximum size of the agama is around 35cm in length. Females, males and juveniles are all a drab brown in colour during the early part of the dry season. Just before the rainy season begins females develop a bright orange patch where each limb meets the body and males are completely transformed with bright yellow heads, vivid blue bodies and a black tip to their tails. This species can be seen just about everywhere on walls, rubble, rocks or big trees. Males in particular are very conspicuous not only because of their breeding colour but also because they have the habit of doing 'press-ups' by bobbing their heads up and down. Their prey includes a large variety of insects but they appear to be particularly fond of ants.

## **Chameleons**

Chameleons are unmistakable lizards. They have compressed, flattened bodies, protruding eyes, prehensile tails and toes that are bound together and opposed. All of these characteristics help them immensely as they spend the greater part of their lives climbing in trees and bushes. The opposable toes and gripping tails help them to move about on thin swaying branches. Their protruding eyes can look in different directions at the same time so they can keep an excellent look out for food or danger. Their flattened bodies also help to camouflage them, giving them a very small profile from the front and rear. Chameleons can also quickly change the colour of their skins. This makes it extremely difficult to see them amongst foliage, even when you are only a few feet away. In addition they have a telescopic tongue with a sticky tip that they can shoot out to a length longer than their bodies, enabling them to pick up insects from flimsy foliage. Their food consists of a wide range of invertebrates, including grasshoppers and beetles.

Two species have been recorded in The Gambia. These are the Senegal Chameleon and the Graceful Chameleon. Both species appear to be relatively common and widespread. Of the two, the Graceful Chameleon is larger, up to 35cm in length. This species is also distinguished by the presence of a coloured pouch (the 'gular' pouch, which is inflated when aroused or angry) under its head and chest, which is usually vivid orange to dull orange-yellow. In contrast the Senegal Chameleon's gular pouch is generally the same colour as the rest of its body.



Nile Monitor



Nile Crocodile

Plate 9. Nile Monitor and Nile Crocodile

## **Nile Monitor**

The Nile Monitor has a stout body with thick limbs, strong claws and a long, powerful tail. Adults are greyish-brown to a dirty greenish-brown in colour, with scattered darker blotches and lighter bands across the body and tail. Juveniles look completely different and are beautifully marked in black and yellow. A similar species, the Savanna or Bosc's Monitor is also found in The Gambia, but is much smaller, brown in colour and often only seen during the rainy season. This latter species is becoming relatively rare as it is heavily hunted for food. Nile Monitors on the other hand are still widespread and common throughout The Gambia, especially in the vicinity of water as they are excellent swimmers. They are also fairly common in some hotel grounds. Monitors will basically eat anything that they can overcome, including insects, amphibians, lizards, birds and small mammals. They will also dig out and eat eggs, including bird, lizard, tortoise, turtle and crocodile eggs.

The Nile Monitor is a huge lizard, growing up to 2.5m in length, and is one of the largest lizards found in Africa. The only species that is larger is another monitor, *Varanus ornatus*, which has not yet been positively identified in The Gambia.

## **Nile Crocodile**

The Nile Crocodile is still relatively common in some parts of The Gambia and is one of three species of crocodile recorded here. The Dwarf Crocodile is now possibly extinct in the country and the status of the African Slender-snouted Crocodile is unknown, though it is probably rare. Nile Crocodiles are the species that you will see if you visit Abuko Nature Reserve or the sacred crocodile pools of Katchikally, Berending or Kartong. Nile Crocodiles can grow to around 6m in length, weigh up to 1,000kg, and have been known to live for up to 100 years in the wild. However, the larger specimens tend to be confined to eastern and southern Africa where they can and do kill and eat people. In West Africa they tend to be smaller in size and records of them attacking people are very rare. They eat a wide range of food, with babies and juveniles concentrating on insects and amphibians, while adults hunt mainly fish, though they will also take snakes, terrapins, turtles and mammals such as monkeys and antelopes. Crocodiles have hardly changed in shape or form over the last 65 million years and are tremendously successful animals. They are very advanced and are in fact more closely related to birds than to any other living reptiles.

## Species Checklist of Gambian Reptiles

This checklist contains all of the reptiles that have been recorded in The Gambia. In the majority of cases we do not know the status (i.e. distribution and abundance) of a species, though in some cases we believe we know enough to take an informed guess. *You can help us by passing on any sightings of reptiles, with their localities, so that we can update the next edition of this guide.* Makasutu Wildlife Trust's contact details are on the back cover.

| English Name                          | Scientific Name                   |
|---------------------------------------|-----------------------------------|
| <b>Tortoises</b>                      |                                   |
| Bell's Hinged Tortoise                | Kinixys belliana nogueyi          |
| Serrated or Forest Hinged Tortoise    | Kinixys erosa                     |
| <b>Turtles</b>                        |                                   |
| Leatherback Turtle                    | Dermochelys coriacea              |
| Green Turtle                          | Chelonia mydas                    |
| Hawksbill Turtle                      | Eretmochelys imbricata            |
| Olive Ridley Turtle                   | Lepidochelys olivacea             |
| African Flapped Soft-shelled Terrapin | Cyclanorbis senegalensis          |
| African or Nile Soft-shell Turtle     | Trionyx triunguis                 |
| American Red-eared Terrapin           | <sup>1</sup> Trachemys s. scripta |
| Stripe-necked Turtle                  | Clemmys leprosa                   |
| Marsh or Helmeted Terrapin            | Pelomedusa subrufa olivacea       |
| Adanson's Hinged Terrapin             | Pelusios adansonii                |
| West African Mud Turtle               | Pelusios c. castneus              |
| <b>Snakes</b>                         |                                   |
| Thread Snake                          | Leptotyphlops narirostris         |
| Thread Snake                          | Rhinoleptus koniagui              |
| Spotted Blind Snake                   | Typhlops punctatus                |
| Sand Boa                              | Gongylophis muelleri              |
| Royal Python                          | Python regius                     |
| Northern/Central African Rock Python  | Python sebae                      |
| Herald or White-lipped Snake          | Crotaphopeltis hotamboeia         |
| Western Forest Egg-eating Snake       | Dasypeltis fasciata               |
| Common Egg-eating Snake               | Dasypeltis scabra                 |
| Boomslang                             | Dispholidus typus                 |
| Smith's Water Snake                   | Grayia smithi                     |
| Thollon's Water Snake                 | Grayia tholloni                   |
| Emerald Snake                         | Ehaphsidrophys smaragdina         |
| Brown House Snake                     | Lamprophis fuliginosus            |
| House Snake                           | Lamprophis lineatus               |
| Braid House Snake                     | Lamprophis virgatus               |
| Wolf Snake                            | Lycophidion albomaculatum         |
| Wolf Snake                            | Lycophidion irroratum             |
| Wolf Snake                            | Lycophidion semicinctum           |
| African Smooth Snake                  | Meizodon coronatus                |

|                                   |  |
|-----------------------------------|--|
| Common Bush Snake                 | <i>Philothamnus irregularis</i>              |
| Spotted Bush Snake                | <i>Philothamnus semivariegatus</i>           |
| Shovel-snouted Snake              | <i>Prosymna meleagris laurenti</i>           |
| Slender African Beauty Snake      | <i>Psammophis elegans</i>                    |
| Olive Grass/Sand Snake            | <i>Psammophis phillipsi</i>                  |
| Rukwa Sand Snake                  | <i>Psammophis rukwae</i>                     |
| Striped Sand Snake                | <i>Psammophis sibilans</i>                   |
| Western Beaked Snake              | <i>Rhamphiophis oxyrhynchus</i>              |
| West African Cat Snake            | <i>Telescopus variegatus</i>                 |
| Blanding's Tree Snake             | <i>Toxicodryas blandingii</i>                |
| Western Purple-glossed Snake      | <i>Amblyodipsas unicolor</i>                 |
| Black Burrowing Viper             | <i>Atractaspis atterima</i>                  |
| Brown Burrowing Viper             | <i>Atractaspis dahomeyensis</i>              |
| Variable Burrowing Viper          | <i>Atractaspis irregularis</i>               |
| Hallowell's Green Mamba           | <i>Dendroaspis viridis hallowelli</i>        |
| Ground Cobra/Garter Snake         | <i>Elapsoidea semiannulata moebiusi</i>      |
| Forest Cobra                      | <i>Naja melanoleuca</i>                      |
| Black-necked Spitting Cobra       | <i>Naja nigricollis</i>                      |
| Puff Adder                        | <i>Bitis a. arietans</i>                     |
| Western African Night Adder       | <i>Causus maculatus</i>                      |
| Carpet Viper                      | <i>Echis ocellatus</i>                       |
| <b>Lizards</b>                    |  |
| Worm Lizard                       | <i>Cynisca feae</i>                          |
| Armitage's Skink                  | <sup>EN</sup> <i>Chalcides armitagei</i>     |
| Snake-eyed Skink                  | <i>Leptosiaphis nimbaense</i>                |
| Brown-flanked Skink               | <i>Mabuya affinis</i>                        |
| Orange-flanked Skink              | <i>Mabuya perrotetii</i>                     |
| Bosc's or Western Savanna Monitor | <i>Varanus exanthematicus</i>                |
| Nile Monitor                      | <i>Varanus n. niloticus</i>                  |
| Agama                             | <i>Agama a. agama</i>                        |
| Weidholz's Agama                  | <i>Agama weidholzi</i>                       |
| Graceful Chameleon                | <i>Chamaeleo gracilis etienni</i>            |
| Senegal Chameleon                 | <i>Chamaeleo senegalensis</i>                |
| Brook's House Gecko               | <i>Hemidactylus brooki angulatus</i>         |
| Banded Gecko                      | <i>Hemidactylus f. fasciatus</i>             |
| Fat-tailed Gecko                  | <i>Hemitheconyx caudicinctus</i>             |
| Painted or Western Dwarf Gecko    | <i>Lygodactylus gutturalis</i>               |
| Gecko                             | <i>Tarentola annularis</i>                   |
| Fig Tree Gecko                    | <i>Tarentola ephippiata</i>                  |
| <b>Crocodiles</b>                 |  |
| African Slender-snouted Crocodile | <i>Crocodylus cataphractus</i>               |
| Nile Crocodile                    | <i>Crocodylus niloticus</i>                  |
| Dwarf Crocodile                   | <sup>E</sup> <i>Osteolaemus t. tetraspis</i> |

### Key to Symbols

I = introduced species; E = possibly extinct; EN = endemic, found only in The Gambia

## Further Reading

Barnett, L.K., Emms, C., Jallow, A., Cham, A. M. and Mortimer, J. A. (2004) The Distribution and Conservation Status of Marine Turtles in The Gambia, West Africa: A First Assessment. *Oryx* Vol 38 (2), 203-208 (technical paper).

Barnett, L.K., Emms, C. and Santoni, C. (2001) The Herpetofauna of Abuko Nature Reserve, The Gambia. *Herpetological Bulletin* 77, 5-14 (technical paper).

Branch, B. (1998 – 3rd Ed.) *Field Guide to Snakes and Other Reptiles of Southern Africa*. Struik, Cape Town (contains many West African species, excellent field guide).

Chippaux, J.-P. (2001) *Les Serpents d'Afrique Occidentale et Centrale*. IRD Editions. Paris, France (in French, excellent illustrations).

Spawls, S., Howell, K. Drewes, R. and Ashe, J. (2004) *A Field Guide to the Reptiles of East Africa*. A & C Black, London. (contains many West African species, excellent field guide).

## About the Authors

**Dr Linda Barnett** was born and raised in Cambridge in the UK. She is a research scientist and professional ecologist with a PhD in genetics. Linda has lived and worked in The Gambia since 1999, first as the Research and Development Officer with the government Department of Parks and Wildlife Management, and more recently as a founding member and the Research Director of Makasutu Wildlife Trust. Linda is also a professional wildlife photographer.

**Craig Emms** was born in Coventry in the UK. His life-long interest in wildlife began as a volunteer on a nature reserve in Warwickshire where he eventually became the warden. Since gaining a Masters of Science Degree in Ecosystems Analysis and Governance, Craig has worked with wildlife around the world including Europe, Scandinavia, Africa and remote islands in the Atlantic and Indian Oceans. Craig has lived and worked in The Gambia since 1999, first as an independent wildlife researcher and lately as a founding member and the Executive Director of Makasutu Wildlife Trust.

## Acknowledgements

This guide has been produced as a part of a Darwin Initiative project funded by DEFRA of the UK Government and awarded to the University of Warwick in the UK and Makasutu Wildlife Trust in The Gambia. We are also grateful to Stella Brewer-Marsden for allowing us to use some of her late father's photographs in this guide.