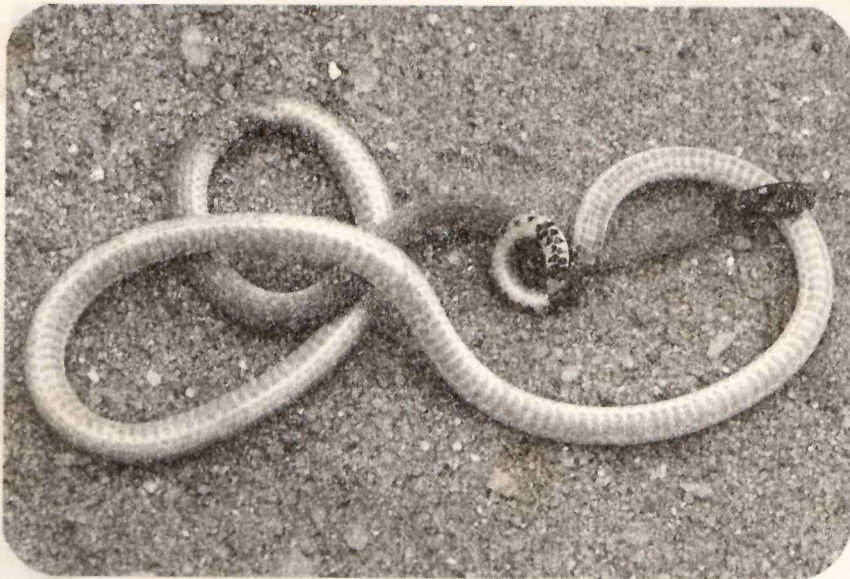


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Cover

Slender coral snake (*Calliophis melanurus*)

Venomous. Most of Peninsular India (except its northwest part). Diet unknown.

Length: 14"

Photo : P. Ramesh

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BOARDS OF DIRECTORS

1992 Annual Report

INTELLIGENCE IN SNAKES*

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The brain in snakes, as in other reptiles, is small. Snakes and other reptiles are mainly ruled by instinct. But, even in instinct, snakes are inferior to birds. Having said that, one must hasten to add that the subject is far too complex to be disposed of in three short sentences.

Literature on the subject is scanty, not comprehensive, not clear. Experiments have been conducted, but the methodologies followed are controversial and the experiments rarely replicable (which is a crucial test for scientific evidence), the results unconvincing.

Anecdotal accounts are there to point to the learning ability of snakes. It has been noticed by some snake keepers that some species of snakes recognized their cages or hiding places even when these are taken to new surroundings. Grace Olive Wiley, the famous "snake woman" and the owner of the Long Beach serpentarium in California, found that some of her rattle snakes behaved as though they recognized her. According to Clifford H. Pope (*Snakes Alive and How They Live*, 1949) one of Wiley's rattlers, Huckleberry Finn, arched its back only while being stroked by her and it often crawled up to coil by her chair when it was led into the lawn. She had won its confidence by consistently gentle treatment. This venomous snake was so tame that it would lie coiled in her lap "like a contented old cat" while she sewed in the evening.

Dr. Raymond Ditmars, the famed herpetologist, found from experience with cobras how quickly they learnt things – one individual learned to turn away from its keeper when he used to approach it for its daily treatment (*Ibid.*).

* Excerpted from *400 Questions Answered About Snakes – with particular reference to snakes in India* Chennai Snake Park Trust. Proposed for publication in Mar.2010.

Experiments by W.N. Kellogg and W.B. Pomeroy of the University of Indiana with water snakes kept in a water-maze showed the extent to which the snakes could negotiate the maze by their learning skills.

While accounts by known herpetologists like these could be accepted at their face value, the credibility and acceptability of similar anecdotal accounts by most others have to be questioned ruthlessly.

There are also problems in distinguishing between learning ability and intelligence or reasoning power. Many animals learn to do things by a process of trial and error but this does not prove intelligence or reasoning power. Snakes cannot be an exception to this. But, even here, accounts pointing to the contrary are not lacking.

In *The Herpetological Bulletin* 2003 – No.86, Robert Bustard writes of five adult Arizona mountain kingsnakes kept in a glass tank covered by a sliding glass panel. It was observed that, on four successive nights, all the snakes escaped and on each occasion had to be rounded up and put back into the vivarium. A close watch showed the strategy adopted. “The large male emerged from cover as dusk fell, climbed up into the glass ledge near the top of the tank immediately below the vivarium lid, and by a combination of pressing its body against the glass and making sideways movements of its body all in one direction, slid the glass lid back. It then moved out of the vivarium followed shortly thereafter by the other four snakes”. The author adds: “The fact that one of them ... managed to escape by sliding the glass of the vivarium lid is unremarkable. What is noteworthy is that having once managed to slide the lid back and escape it was able to repeat the performance at will... It was obvious from watching it that the snake was carrying out a precise set of movements which resulted in a rapid escape, not effecting escape by trial and error as must have happened on the night of the first escape. Hence the components of what began as a trial and error escape routine were learned as a result of the single ‘trial’ on the first escape night, and used successfully to effect escape on each of the three following nights”. But such odd observations do not help us to frame a consistent and credible hypothesis.

No conclusions about snakes applicable across the spectrum can be drawn from the stray observations in captivity or in the wild in regard to particular individuals or particular species.

Gordon M. Burghardt, Dept. of Psychology, University of Tennessee (see paper in *Biology of the Reptilia*, 1977 ed. Carl Gans vol.7) rues that even among the severely limited behavioural studies on reptiles in general, snakes have been almost completely neglected. “As there are almost as many snakes as lizards and many more species than either turtles or crocodylians, our ignorance of this major and highly successful group of animals is most unfortunate”.

ORIENTATIONAL RESPONSE OF *AGAMA AGILIS* OLIVIER TO EXTREME TEMPERATURE

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Abstract

Role of behavior and posture orientation has been studied in thermoregulatory behavior of desert lizard *Agama agilis* Olivier. It has been observed that these lizards manage to survive the extreme high temperature of Thar Desert by various posture maneuvers. Posture orientation has been found to be different in the morning at low environmental temperature as compared to the noon and afternoon at high ambient temperature. Implication and significance of various posture maneuvers has been discussed. It has been concluded that these orientational responses play multiple roles in the survival strategies of *Agama agilis* Olivier.

Keywords

Agama agilis Olivier, Posture, Orientation, Thermoregulation, Desert lizard.

Introduction

Lizards are poikilothermal reptiles and their body temperature fluctuates according to that of the environment. Their various physiological activities depend on body temperature which has to be maintained within a range (Adolf, 1990; Cowles and Bogert, 1944) by various physiological, biochemical, and morphological responses (Templeton, 1970; Gvozdkik and Castella, 2001). These responses include orientation and color change. *Agama agilis* Olivier, the brilliant ground agama of Thar Desert inhabits the rocky areas of Jaisalmer, where the temperature rises up to

51°C in the summer. These animals survive the winter by hibernation avoiding the temperature which may go down to 4°C. The present study has been aimed to see the orientation responses of *Agama agilis* Olivier to extreme high temperature.

Materials and Methods

The study is based on field investigations on *Agama agilis* Olivier in Jaisalmer, Rajasthan located in the Thar Desert of India. This lizard is well distributed all over the desert and abundant in places where the food (insects) is abundant. The site chosen for the present study is located about 12 km from the city of Jaisalmer near the village Amar Sagar. This site provides a very congenial habitat for this lizard as the area is rocky as well as sandy and possesses a good amount of vegetation. Orientational behaviour of *Agama agilis* Olivier was observed in the summer season from March to September in two consecutive years 2008 and 2009. Observations were made in the morning between 07.00 AM to 10.00 AM when the atmospheric temperature is lower (22°C – 29°C) and during after noon time between 12.00 noon to 06.00 PM when the ambient temperature was high (34°C – 51°C). Specific observations were recorded by still photography using Canon camera.

Results

During the study period a record of temperature was maintained as presented in the Table below. The table shows that there is large fluctuation in lower and higher temperatures. In morning hours no attempt is made by *Agama agilis* Olivier to avoid contact with the surface of stone or earth and all the limbs, tail and ventral surface of body are in contact with the earth or rock. Color of body in both male and female in the morning remains dark brown with black stripes. During the afternoons, following maneuvers in the posture have been observed.

- (a) Avoiding the contact of the body with earth surface by raising limbs, tail and head.
- (b) Male positions itself at the top of the shrubs
- (c) Female either hides in the burrow or under the shrubs
- (d) The gap between rock or soil surface and the body is increased by raising the trunk above the ground.
- (e) The fore-limbs are oriented in such a way as to keep the scaly surface in contact with the rock while the vascular surface of palm and soles faces away.

- (f) It was further observed that the body color of male becomes light sandy with white patches on trunk while color of tail becomes lemon yellow.

Table 1. Average monthly temperature in study area

Sl. No.	Month	Year 2008 (Temp. °C)		Year 2009 (Temp. °C)	
		Maximum	Minimum	Maximum	Minimum
1.	March	34.8	16.2	37.9	20.5
2.	April	34.4	21.8	37.6	30.0
3.	May	40.3	26.0	43.7	26.6
4.	June	40.0	27.6	38.7	27.4
5.	July	42.1	29.2	39.8	32.8
6.	August	33.6	29.3	35.7	25.7
7.	September	36.1	25.2	36.5	26.3

Discussion

It is observed that in morning *Agama agilis* Olivier comes out after sunrise from hiding places such as burrows. Due to low environmental temperature in early morning hours (range 20°-30°C), its body temperature is also low. Like other reptiles, this lizard also basks in the sun to maintain the body temperature best suited for various metabolic processes. The morning temperature of rocks and soil surface is normally 20°- 30°C and hence the basking behaviour is shown by both male and female lizards by orienting themselves in such a way so as to make complete contact with the surface and obtain full solar heat. In this process the animal's body gets sufficient heat to activate various biochemical-enzymatic mechanisms in the body. Similar finding have been reported by Karsten *et al.* (2009) in panther chameleon, *Furcifer pardalis*. It is also speculated that basking in sun, besides maintaining the body temperature, may also be useful in vitamin-D synthesis in the body. It has been found that the temperature in morning is generally within its normal physiological range hence the animal relishes the morning environment and does not avoid the sun-light.

The morning coloration is the usual body color showing no adaptive features. This also indicates that the morning temperature is appropriate for this lizard. In the mornings both male and female *Agama* show dark brown color with white stripes and black bands on the dorsal surface. Male always occupies the highest point in the

territory (mostly rocks) and orients its dorsal surface towards the sun light, so that it could absorb maximum solar energy. Such type of basking behavior has been reported in many other lizards (Cowles and Bogert 1944, Bartholomev 1966, Bartlet and Gates 1967). Perching on the high rock surface possibly also enables the animal to have a wider view of its territory, essential for defense and protection. In the noon, environmental temperature rises occasionally up to 51°C in summer months and the temperature of rocks and sand may even increase up to higher levels which may not be suitable for physiological and biochemical mechanisms. During adverse climatic conditions of these hours of the day, the animal uses various maneuvers to maintain its body temperature at the possible optimum levels.

Orientation of *Agama* to increase the gap between its body and soil surface is an attempt to minimize the impact of heat radiating from the rocky soil. Positioning itself on the high points on shrubs, also seems to be a further attempt by the animal to avoid the heat radiated from the rocks. While moving on the hot surface (soil or rock), they walk very fast with the help of palms having phalanges on forelimbs and hind limbs raised above the surface in order to minimize the contact with the ground. While standing still the body does not touch the substratum and the tail also remains raised in the air. The digits remain free and lifted upwards in the air so that only the palm comes in contact with the soil or rock surface. Further to reduce absorption of heat from sun light, the animal changes its color to light brown with dispersed white patches on body and tail with light lemon yellow color as the lighter colour of body will absorb less heat. At the temperature of 41° - 51°C, female *Agama* rests in burrow or shady places under the shrubs.

Females rarely go out during the post meridian hours of the day and remain hidden in the burrow or under the shrubs. The plausible explanation for such a behavior seems to lie in the morphological difference between males and females. The limbs of females are shorter and hence cannot raise the body high enough and so they cannot avoid the heat radiated from the rocks to the same extent as the males. Further, the females have less capacity of color change (Harris, 1964). These drawbacks may force the females to remain hidden during the hot afternoon hours.

As discussed earlier, the rocks and sand absorb more heat from sunlight as compared to the nearby shrubs. This phenomenon is exploited by the male which mostly positions itself on the shrubs. This behavior, on the one hand, protects the

animal from the heat radiated from the rocks and also enables the animal to keep a better look-out for predators. Body pigmentation has also been seen to change with rising temperature of the day. The animal orients itself on the shrub in such a way as to expose to the sun its lighter ventral surface which absorbs less heat than the darker dorsal surface. Huey and Slatkin (1976) while discussing the cost and benefits of posture maneuvers in lizards, has raised certain doubts whether the strategies are economically beneficial in view of energy utilized in the thermoregulatory strategies. In view of the observations recorded over a period of two years, it can be concluded that in the extreme environment of Thar Desert, survival gets priority over the energy economics.

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**RECORD OF ALBINO INDIAN FLAPSHELL TURTLE
(*LISSEMYS PUNCTATA*) FROM ADYAR WETLAND,
SOUTH INDIA**

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Albinism (Latin 'albus'=white) is a form of hypopigmentary congenital disorder characterized by the lack of melanin. Albinos have all characters similar to their species except that the cells are unable to produce melanin. These animals could have either pure or partial albinism. An albino has fully pink, white, yellow or small patches of white on its body. Being white does not make an animal, albino, as some individuals are often confused with leucistics. The albinism is due to inheritance of recessive alleles and mostly occurs due to inbreeding of individuals. The albinos have a high risk factor of acquiring skin cancer, lack of vision, predation and hence the chances of survival of an albino is quite low. There have been so many records of albinos in a variety of animals but there have been very few records of albinism in turtles in India.

A half grown albino common mud turtle, now Indian flapshell turtle *Lissemys punctata* (see Fritz, & Havaš, 2006) specimen with bright yellow colour throughout except the limbs and neck which were chrome yellow was reported in the Ambajheri Tank at Nagpur. The plastron had the usual colourless appearance. An albino Indian Flapshell turtle (*Lissemys punctata*) was sighted in Chennai on 23rd November 2008 in the waters very close to the Adyar Estuary. The live specimen weighed around one and a half kilograms. The approximate curve carapace length was between 30-50 centimeters. Another albino Indian Flapshell turtle has been reported from Gujarat (Vyas, 1997), but this is probably the first record of sighting an albino form of Indian Flapshell turtle in Adyar Wetland.



Fig. 1. Albino Flapshell turtle recorded in Adyar wetland. Photograph by Anand

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**FIRST LOCALITY RECORD OF STOUT SAND SNAKE,
PSAMMOPHIS LONGIFRONS BOULENGER, 1896 FROM
UJJAIN DISTRICT, MADHYA PRADESH.**

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The Stout sand snake *Psammophis longifrons* Boulenger, 1896, an uncommon species was recorded from Ujjain district of Madhya Pradesh. Snake Research Organization is presently working on the faunal diversity of Ujjain district (22°50" to 23°46"N and 75°80" to 76°16"E, area 6091 sq. km., altitude 491.75 m. ASL) located in the plateau of Malwa. Intensive faunal survey is going on, and data of various animal groups are being collected.

The species is known to occur in Maharashtra, Gujarat, north of Mumbai (Thane and Damanganga districts), Nagpur, Valsad/Bulsar and Panchmahals (Whitaker & Captain, 2008). Sharma (2000) first showed its distribution in Madhya Pradesh, but did not mention a specific locality. This is the first precise locality record of *Psammophis longifrons* Boulenger, 1896 from Madhya Pradesh. Ingle (2008) did not enlist this species in the inventory of herpetofaunal diversity of Ujjain District, Madhya Pradesh.

The Stout Sand Snake *Psammophis longifrons* Boulenger, 1896 was collected from Garh Kalika (23°20'N-75°77'E) a wild area near river Kshipra of Ujjain district. It was moving through the branches of *Cassia fistula*. The specimen was collected by me on August 21, 2007 (17.40 hours). It was a juvenile specimen uniform pale brown in colour, and the scales of the vertebral row were black-edged and formed a narrow chain along the entire back.

This is a long, stout-bodied and smooth scaled snake, outer edges of belly scales are rounded, head is elongate and tapers towards front; head is slightly broader than neck, large eyes have rounded pupil. Tail is long and predominantly brown back. The natural history of the species is poorly known. It probably eats lizards and geckos (Whitaker and Captain 2008). The specimen showed the similarity in its dietary habits as suggested by Whitaker and Captain (2008). It feeds on the geckoes of *Hemidactylus brooki* and *Hemidactylus flaviviridis* species at Reptile conservation & Research centre at Ujjain.

Characters of stout sand snake *Psammophis longifrons* Boulenger, 1896 male from Ujjain district of Madhya Pradesh

Characters	Measurements (in cm.)
Snout-vent length	70.14 cm
Tail	28.16 cm
Total length	98.30 cm
Supralabials	8, 4 th and 5 th touching the eye
Scales in	17: 17: 13 rows
Ventrals	170
Subcaudals	82

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ON THE DISTRIBUTION OF THE SLENDER CORAL SNAKE, *CALLIOPHIS MELANURUS* (SHAW) IN NORTH KERALA, SOUTH INDIA

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Coral snakes are small, brightly coloured, venomous snakes of the family, Elapidae which includes the cobra. About 97 species of coral snakes are known, most of them native to Central and South America. Majority have a pattern of brightly coloured rings or bands that are black, yellow, and coral red, although the colour and pattern of some tropical species vary. Even though most species are small in size, North American species average around 60 cm. in length, but specimens of upto 150 cm have also been reported. Aquatic species have flattened tails, to act as a fin, aiding in swimming around in the water (Encarta Encyclopedia, 2007; Wikipedia Encyclopedia, 2009; Reptile Data Base, 2008).

Coral snakes vary widely in their behaviour. Most of them are very elusive and spend the vast majority of their time buried in the ground (fossorial) or in leaf litter. When threatened, coral snakes usually curl their tails into a tight spiral and hold them upright or wave it, exhibiting the startling colours of the underside. This behaviour is thought to attract predators to the tail rather than to the more vulnerable head (Whitaker, 1978). Most coral snakes feed on small snakes and lizards. Like other members of the family to which they belong, they have a pair of short fangs fixed in the front of the mouth through which they inject lethal venom that acts primarily on the nervous system. Although not aggressive, coral snakes will bite readily when irritated or restrained. Many species of non-venomous snakes mimic coral snakes in colour and pattern probably to discourage predators.

Even though *Elapidae* is a large family of poisonous snakes constituting more than 60 genera and 320 species. Coral snakes are represented by only 7 genera namely *Calliophis* (Oriental coral snake), *Hemibungarus* (Asian coral snake), *Leptomicrurus* (Blackback coral snake), *Micruroides* (Western coral snake), *Micrurus* (Common coral snake), *Salomonelaps* (Solomon's coral snake) and *Simoselaps* (Australian coral snake) with a diversity of 97 species.

Among these, *Micrurus* with about 70 species is the most prominent genus. *Calliophis* is the only genus present in India.

Calliophis is distributed in the Indo-Malayan regions with eight species, out of which five are found in India distributed in Western Ghats and Eastern Himalaya (Daniel, 1983, 2002). They are Beddome's Coral snake, *Calliophis beddomei* Smith, 1943, Bibron's coral snake *Calliophis bibroni* (Jan, 1858), Mac Clelland's coral snake, *Calliophis macclellandi* (Reinhardt, 1844), Slender coral snake, *Calliophis melanurus* (Shaw, 1802) and Black coral snake, *Calliophis nigrescens* Gunther, 1862. The Slender coral snake, *Calliophis melanurus* is a widely distributed snake found in India. Sri Lanka and Bangladesh but in no means common. There are three subspecies namely *C.m. sinhaleyus* Deraniyagala 1951. *C.m. nigrescens* Gunther 1862, *C.m. melanurus* (Shaw, 1802).

The species is locally known as 'Eshuthâni Moorkhan' (*Ezhuthani* = stylus, *moorkhan* = cobra) in vernacular Malayalam, owing to its shape resembling a stylus used for writing on palm leaves. Recently it was reported from Kadalundi, Kozhikode dist. For the first time. Fr. Augustine Illikkal at the St. Paul's Church, Kalvari hills, Kadalundi noticed a strange small snake at the church premises (a hilly laterite terrain, 20 m msl) on 01 April 2008, which was later identified as Slender coral snake, *Calliophis melanurus*. The specimen was 32 cm long with a uniform pale brown body colouration. The head and neck were black and there were two irregular black rings, one at the tail-base and other at the tail-tip. The head was blunt with two conspicuous yellow spots on the top. The underside was coral red, bright scarlet near anus, and bluish white speckled with black at the tail. It was inoffensive and allowed itself to be handled without making any attempt to bite. The specimen is deposited at Zoological Survey of India, Western Ghat Regional Centre, Kozhikode, Kerala (Reg. No.18711).

Easa and Ramachandran (2004) state that the species is reported only from Nilambur in Malappuram district. There were records of this species from Parassinikadavu Snake Park during 1993, locally collected from Ezhome and Kolmotta region in Kannur district. After the news appeared in the dailies, several other sightings of this snake were reported from Feroke, Paruthippara and Ramanattukara in Kozhikode district, during the 2nd week of April. However, a few of such sightings were found to be misidentifications of the non-venomous mimic, the black-headed snake (*Sibynophis subpunctatus*).

Interestingly, all the recent records were from the midland laterite hill ecosystem in north Malabar districts of Kannur and Kozhikode between an elevation of 5-100 m from msl.

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**REPTILIAN FAUNA OF BAGHDARRAH NATURE PARK,
UDAIPUR WILDLIFE DIVISION, UDAIPUR,
RAJASTHAN, INDIA**

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Rajasthan, the largest state of India, is rich in faunal and floral diversity. In Rajasthan, 33 areas have been declared as “protected” or “closed areas” for conservation and better management of biodiversity. Baghdarraah is one of them and was declared as closed area in 1982. Status of closed area is much below that of Sanctuaries and National Parks. The provision of closed areas has been dropped in the Wildlife (Protection) Act, 2002. All the closed areas are now waiting to be declared as “Biodiversity Reserve” as per the amended Act.

Baghdarraah is situated 20 Km South-East of Udaipur city and covers 342.19 hectares of area. As the name “Baghdarraah” indicates, this area was a home of tigers in olden times. But, now they have disappeared due to continuous biotic interference. This area was used as shooting ground by the Maharanas of Mewar State in olden times. To make hunting easier, 3 shooting boxes (Audhi) were constructed by the erstwhile rulers. The closed area also has a perennial pond called Baghdarraah Talab, which is a natural home of Crocodiles. Therefore, it is a major point of attraction for people visiting this area along with the rich biodiversity of flora and fauna of Aravalli ecosystem.

The present investigation was carried out in order to estimate the species richness of this closed area. No study in this regard had been carried out at Baghdarraah so far. The earlier studies pertaining to reptiles were those of McCann (1946), Frazier (1989), Sharma (1993a-), Sharma (1995), Gaur and Pandey (2007) etc. but none of them includes Baghdarraah. The study was conducted from March 2007 to March 2008. The observations of the study are recorded in the following table in regard to reptiles.

Table 1. Reptilian fauna of Baghdarrah

S. no.	Family	Species	Common Name	Status
1.	Crocodylidae	<i>Crocodylus palustris</i>	Marsh crocodile	C
2.	Testudinidae	<i>Kachuga tecta</i>	Indian sawback terrapin	R
3.		<i>Lissemys punctata</i>	Indian mud or flap-shell turtle	R
4.		<i>Geochelone elegans</i>	Star tortoise	R
5.	Geckkonidae	<i>Hemidactylus flaviviridis</i>	Northern house gecko	C
6.		<i>Hemidactylus brookii</i>	Brook's gecko	L
7.		<i>Hemidactylus triedrus</i>	Termite hill gecko	R
8.		<i>Eublepharis macularius</i>	Leopard or fat-tailed gecko	R
9.	Agamidae	<i>Calotes versicolor</i>	Common garden lizard	VC
10.		<i>Sitana ponticeriana</i>	Fan throated lizard	LC
11.		<i>Chamaleo zeylanicus</i>	Indian chameleon	R
12.	Scincidae	<i>Eutropis carinatus</i>	Brahminy skink	VC
13.		<i>Eutropis macularius</i>	Little skink	LC
14.		<i>Lygosoma punctatus</i>	Snake skink	R
15.	Lacertidae	<i>Ophisops minor nictans</i>	Jerdon's snake eye	LC
16.	Varanidae	<i>Varanus bengalensis</i>	Common Indian monitor	C
17.	Typhlopidae	<i>Ramphotyphlops braminus</i>	Brahminy worm snake.	C
18.	Typhlopidae	<i>Grypotyphlops acutus</i>	Beaked worm snake.	R
19.	Pythonidae	<i>Python molurus molurus</i>	Indian rock python	R
20.	Boidae	<i>Gongylophis conicus</i>	Common sand boa.	LC
21.	Boidae	<i>Eryx johnii</i>	Red sand boa	LC
22.	Colubridae	<i>Coelognathus helena helena</i>	Common trinket snake	LC
23.	Colubridae	<i>Ptyas mucosa</i>	Indian rat snake	LC
24.	Colubridae	<i>Oligodon taeniolatus</i>	Russell's kukri snake	LC
25.	Colubridae	<i>Oligodon arnensis</i>	Common kukri snake	LC
26.	Colubridae	<i>Dendrelaphis tristis</i>	Common bronzeback tree snake	R
27.	Colubridae	<i>Lycodon striatus</i>	Barred wolf snake	C
28.	Colubridae	<i>Lycodon aulicus</i>	Common wolf snake.	C
29.	Colubridae	<i>Xenochrophis piscator</i>	Checkered keelback snake	C
30.	Colubridae	<i>Boiga trigonata</i>	Common cat snake	LC
31.	Elapidae	<i>Bungarus caeruleus</i>	Common krait	C
32.	Elapidae	<i>Naja naja</i>	Spectacled cobra	C.
33.	Viperidae	<i>Daboia russellii</i>	Russell's viper	LC
34.	Viperidae	<i>Echis carinatus</i>	Saw-scaled viper	LC

R = Rare, LC = Less Common, C = Common, VC = Very Common

Conclusion

Thus Baghdarrah is rich in reptilian fauna. This closed area provides a very congenial environment and habitat for the reptiles. The small lake possesses many crocodiles and their viewing is much easier as compared to bigger lakes like Jaisamand. Therefore, there is a vast scope for developing Baghdarrah as a place to be visited by reptile and nature lovers.

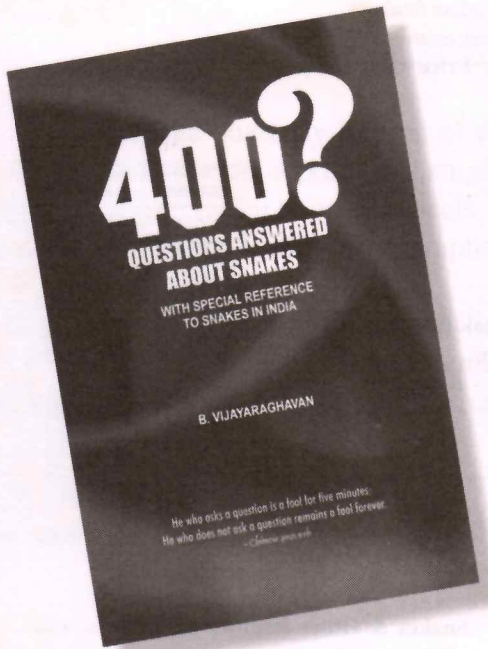
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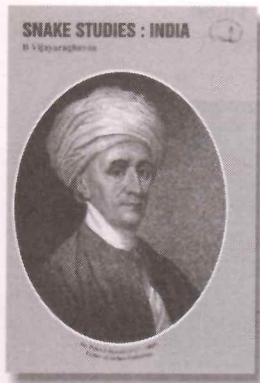
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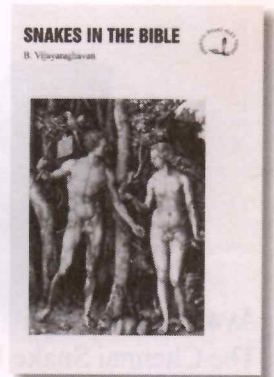
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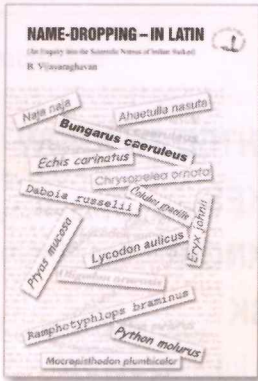
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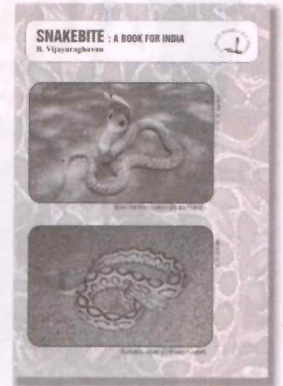


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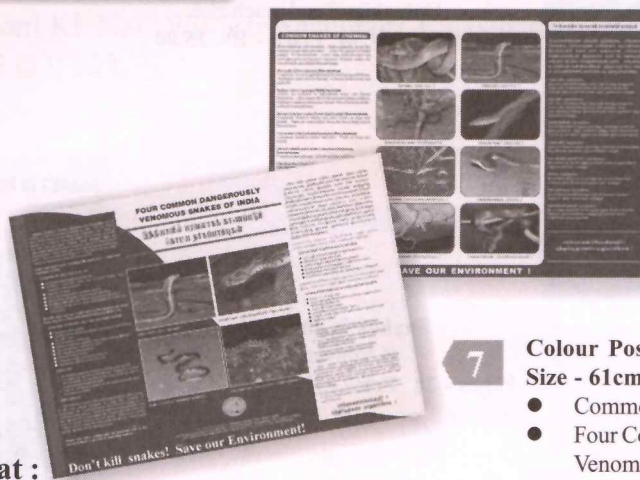
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