

NOTES ON SOME SEYCHELLES REPTILES

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INTRODUCTION

The Seychelles islands comprise some 140 islands (including rocks and sand cays). Reptiles are found throughout the group but are most diverse in the northern, granitic islands. In these 23 reptile species have been recorded, of which 15 are endemic species and 2 endemic sub-species.

The reptile fauna of the Seychelles islands is relatively well known in terms of basic taxonomy. The majority of species were described or identified by the 1950s with only two full species being described since then (the tortoise *Dipsochelys arnoldi* (Bour 1982) and the gecko *Ailuronyx tachyscopaeus* (Gerlach & Canning 1996)). Very few species have been studied in any detail and there is very little published information on the ecology of most taxa. This account summarises some recent observations on the distribution, behaviour and diet of some species of Seychelles reptiles and reports on the first confirmed sighting of a Yellow-Bellied Sea Snake in Seychelles waters.

Gekkonidae

Urocotyledon inexpectata Seychelles Sucker-Tailed Gecko (Plate 1).

Two Seychelles Sucker Tailed Geckos (male and female) were found in a house at Le Niol, Mahé in January 1995. These were kept in a vivarium for 12 days (9/1/95-21/1/95). Prior to capture they were observed for a week. The female was in constant residence in a crack between a piece of wood and a wall. The male was seen only on 3 days and appeared to move between at least two sites. The female measured 39mm snout-vent length, with a tail of 45mm; the male 37mm snout-vent, tail 47mm. Hemipenial bulges were visible on the male but no enlarged femoro-anal pores.

The sucker on the tail of *Urocotyledon* is known to be important to the genus as indicated by the regeneration of the sucker recorded in other species (Klugee 1983). A male *U. inexpectatus* was found in a nearby wood-shed with a fully regenerated tail, including a functional sucker. During locomotion the tail sucker is used constantly, being moved and pressed against the substrate after each leg movement cycle. This produces a characteristic tail mark on glass surfaces – a sucker trail of contiguous circles (diameter 0.75mm).

Throughout the period of observation both prior to and including the 12 days in captivity activity was not observed before dusk (18:15-18:55). The captive geckos consumed an average of 1.86 ± 1.06 food items per day. During a single feeding observation the female spotted a 5.5mm long cricket (*Zarceus fallaciosus*) on the ground 20cm away. She jumped onto the ground and approached to 15cm, stopped, coiled to spring and watched the cricket for 95 seconds. She then approached another 1cm, coiled again and then jumped the intervening 14cm, knocking the cricket 1cm away. The cricket was stunned and remained immobile. The gecko licked her mouth, turned her head towards the cricket



Plate 1. Seychelles Sucker-Tailed Gecko (*Urocotyledon inexpectata*)

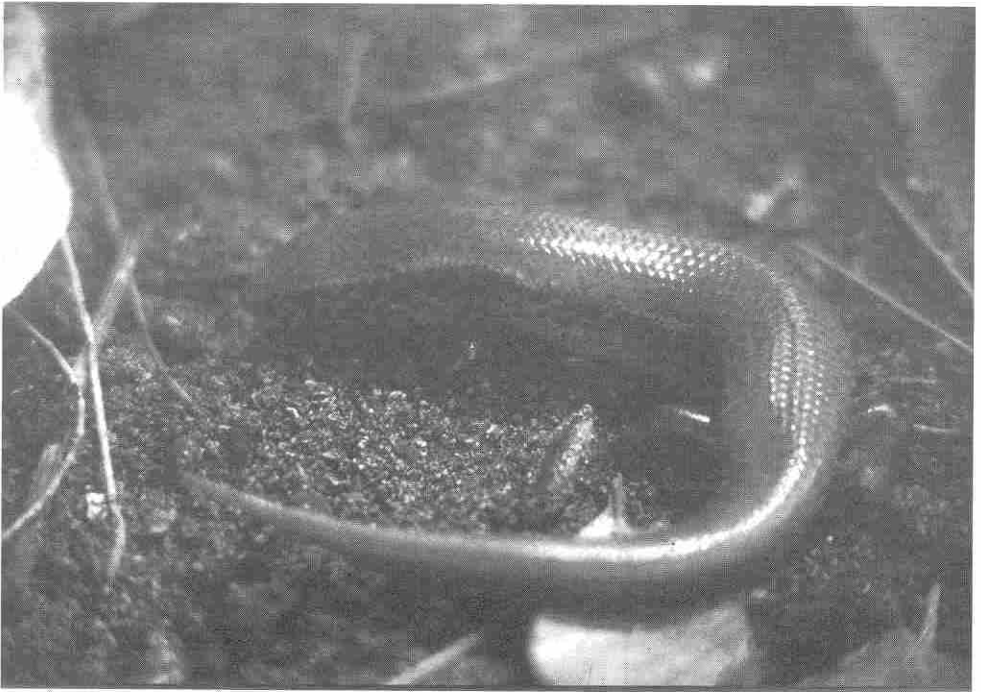


Plate 2. Burrowing Skink (*Pamelascincus gardineri*)



Plate 3. Aldabran Giant Tortoise (*Dipsochelys dussumieri*)

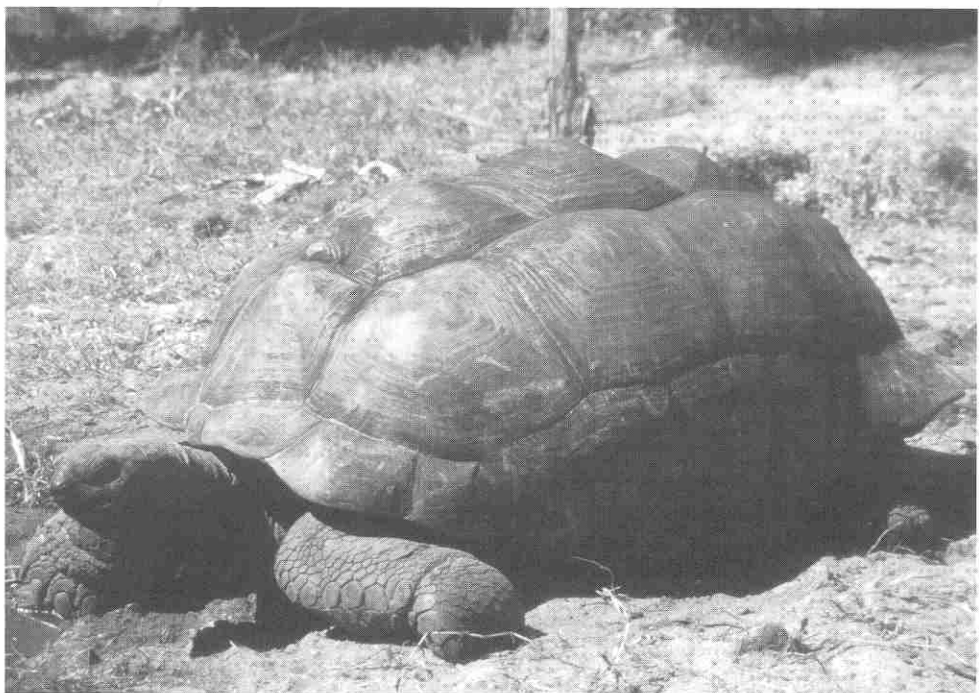


Plate 4. Seychelles Giant Tortoise (*Dipsochelys hololissa*)

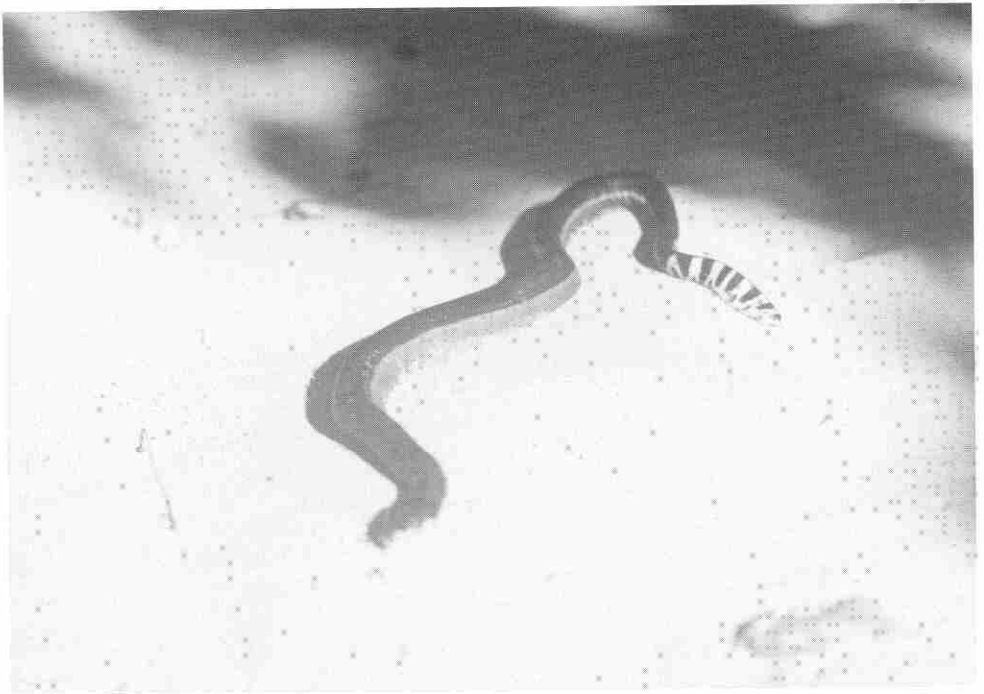


Plate 5. Yellow-Bellied Sea Snake (*Pelamis platurus*). Photo by A. Skerrett

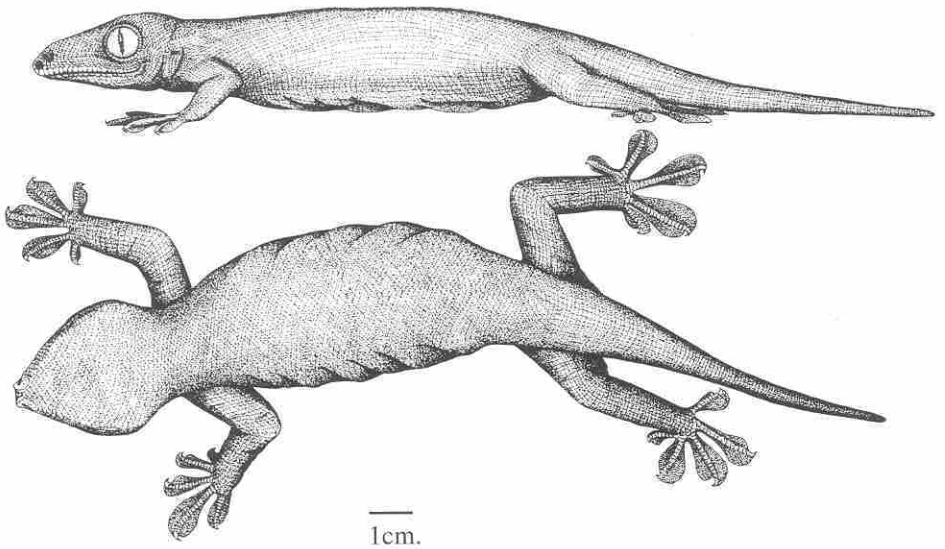


Fig. 1. Drawing of the giant bronze gecko (*Ailuronyx* cf. *trachygaster*);

and ate it. She was very nervous on the ground and returned to a piece of bark straight away.

During the 12 days of captive observations a single courtship attempt was observed. At 18:35 the male and female were both active, 15cm apart. The male was on the ground and the female on a vertical piece of bark. The female was facing the male who was turned sideways, both were stationary. The male lifted his tail until its full length was held at an angle of 45° to the ground, exposing the bright yellow underside. He then slowly waved the last 2/3 of the tail from side to side. The female jumped at the male aggressively, ending the display. From this observation it would appear that the bright yellow colour on the underside of the male (the female's underside was grey) is associated with sexual selection and ritualistic display.

Ailuroonyx spp. Bronze Gecko

Two species of *Ailuroonyx* have been identified in the Seychelles; the large (81-116cm SV) *A. seychellensis* and the dwarf (56-84cm SV) species *A. tachyscopaeus* (Gerlach & Canning 1994). There have been reports of a giant form (Henkel & Zobel 1987) in the Vallee de Mai on Praslin. This form is regularly seen in the Vallee de Mai and Fond Ferdinand areas (J. Gemma pers. comm, to R. Gerlach). I have also seen it on two occasions. Both times it was on the leaves of the Coco-de-mer Palm (*Lodoicea maldivica*) some 7m above the ground and impossible to capture. It is an exceptionally large gecko and estimates derived from photographs suggest a snout-vent length of 26cm. A drawing of this animal is provided in Fig. 1. based on the available poor quality photographs and video footage and my field sketches. The large size, broad, wedge-shaped head, depression between the nostrils, disproportionately large feet and short tail all resemble the supposedly Madagascan *A. trachygaster*. *A. trachygaster* is known from a single 19th century specimen and it has been suggested previously that this may be a mis-labelled Seychelles species (Volobouev & Ineich 1994). Until a specimen can be caught this cannot be confirmed and all that can be said at present is that there is a 'giant' *Ailuroonyx* on Praslin which closely resembles *A. trachygaster*.

During searches for the 'giant' *Ailuroonyx* brief surveys of *Ailuroonyx* abundance have been made in the Vallee de Mai. These are summarised in Table 2. These provide only minimum estimates of density but are reasonably consistent. More *A. tachyscopaeus* are recorded than *A. seychellensis* (at least 33% more). This is probably a result of geckos in lower vegetation being easier to find than those in the canopy and larger geckos excluding small ones from the favoured canopy sites. Consequently the *A. seychellensis* and the giant *Ailuroonyx* are probably significantly under-represented in these transects.

Observations of activity on Aride island in January 1997 found *A. seychellensis* to be active only after dusk (18:15). The diet of this population was studied by dissection of faecal pellets (Table 3); cockroaches (Dictyoptera) and moths (Lepidoptera) make up most of the items consumed with large geckos eating more of the large cockroaches and smaller geckos eating more of the smaller prey items. The single ant consumed was of the large (10mm), aggressive species *Odontomachus troglodytes*.

Scincidae

Mabuya skinks

Activity patterns in the large skink of sea-bird colonies, *M. wrightii* (Wrights Skink), on Aride island were recorded in January 1997. This diurnal species was active until 18:25, 10 minutes after dusk. Similar patterns were observed for the smaller *M. seychellensis*. Single pairs of both species were found exhibiting mate guarding. For both species this occurred on the trunk of fallen coconut trees. In both cases the male was resting on the

back half of the female although mating was not occurring at the time. This behaviour started at some undetermined time in the late afternoon and continued until after dusk. The *M. seychellensis* pair separated at 18:30 when both individuals hid in leaf litter. The *M. wrightii* pair were found in this position at dusk (18:15) and remained motionless, in a very exposed position until 19:15 when they were disturbed. The skink population density on Aride is exceptionally high and the consequent likelihood of disturbance during mating may make mate guarding advantageous in this situation, despite the potential dangers of remaining exposed after dark.

The diets of *Mabuya* were investigated on Aride very briefly in January 1997. Of two faecal pellets of *M. seychellensis*, beetle remains were found in two and an ant (*Pheidole* sp.) in one. A single *M. wrightii* pellet contained two small beetles (5mm long) and scales identifiable as those of *M. seychellensis*. Large *M. wrightii* are often seen chasing smaller skinks (usually *M. seychellensis*) and this indication of predation on the smaller species is interesting. It is impossible to say whether this is evidence of predation or of carrion feeding although cannibalism in *M. seychellensis* has been seen elsewhere (pers. obs.). It is notable to note that both species consume large quantities of carrion in the sea-bird breeding season when skinks are often seen fighting over bird carcasses. This behaviour may mean that carrion eating skinks may be carriers of the bacterium *Erysipelothrix rhusiopathiae* which has been implicated in the deaths of skink predating birds on Aride in recent years. Paralysed and dead *M. wrightii* are frequently found on Aride (Betts pers. comm. and pers. obs.) although bodies of the smaller *M. seychellensis* are never encountered. This could be due to small immobilised skinks being easy prey to the larger species.

Pamelaescincus gardineri

This burrowing skink occurs on several islands, from sea-level to high forest. Although there are no published records of the species from Cerf island an adult was found at the edge of the marsh on the island in January 1996. Unquantified observations indicate that the largest population is found on Silhouette island. A single individual (snout vent length 72mm, tail 54mm, weight 14g) was captured on Silhouette in January 1998 and observed for 4 days. During that time only diurnal activity was noted, the skink was seen to spend equal lengths of time foraging on the surface (Plate 2) and under leaf litter. It was fed crickets, house flies (*Musca* sp.), moths and a burrowing cockroach (*Pycnoscelus surinamensis*) but only the latter was eaten. Fresh faecal pellets contained beetle elytra. As beetles are abundant in the leaf litter on Silhouette and the single item eaten in captivity was a burrowing cockroach it is probable that this species feeds exclusively on arthropods inhabiting leaf litter.

Testudinidae

Dipsochelys Giant tortoises

Recent taxonomic work on the giant tortoises of the western Indian Ocean has established that three distinct living species can be recognised (Gerlach & Canning 1998). The majority of tortoises in Seychelles are the Aldabran *Dipsochelys dussumieri* (often called *Geochelone gigantea* or *D. elephantina*). Some 120,000 of these survive in the wild on Aldabra and there are also introduced populations on other islands, such as Fregate and Curieuse. This is a grazing species and, as with most tortoises of open grasslands, has a regularly domed shell (Plate 3). The recently rediscovered species include *D. hololissa* which originates from the high, forested islands. Although a grazing species it has a slightly flattened, broad shell which characterises tortoises from forests or scrubby habitats where some degree of streamlining is advantageous (Plate 4). This species is restricted to 8 known individuals in Seychelles and 2 elsewhere. The other rediscovered species is *D. arnoldi*, a saddle-backed species (see front cover).

The unmistakable shape of this species, with its long, flat shell and high shell opening, is characteristic of a browsing species. As with *D. hololissa* it barely clings to survival with 18 individuals identified to date (only 3 of these female).

Elapidae

Pelamis platurus Yellow-Bellied Sea Snake

Yellow-Bellied Sea Snakes have not been recorded in Seychelles waters although they are occasionally recorded in southern Africa. In January 1998 a snake was washed onto a beach on Mahé (Plate 5); this excited the interest of naturalists, divers and the Seychelles media and was extensively photographed and filmed. It was defined as a Yellow-Bellied Sea Snake and is the first unequivocal record for that species in Seychelles waters. Earlier the same month passengers on a cruise ship had observed a snake near Poivre island; this was not photographed but was described as having a yellow underside and may refer to the same species (G. Gerlach pers. comm.).

Table 1: Diet of captive *Urocytyledon inexpectata*

	Lepidoptera				Diptera*	Orthoptera	Homoptera			Trichoptera	Opiliones
	<2	2-5	>5	all			<5	>5	all		
Size (mm)	<2	2-5	>5	all	<6	8	<5	>5	5-8	5	6
Eaten	6	4	10	20	4	3	2	0	2	0	0
Rejected	0	0	1	1	0	0	0	1	1	2	1
% eaten	100	100	91	95	100	100	100	0	67	0	0

* Diptera included the families Drosophilidae, Tipulidae, Chironomidae, Micropexidae

Table 2: Number of *Ailuroonyx* seen on 6m wide transects with numbers per hectare in parentheses

Date	Transect length (km)	<i>seychellensis</i>	<i>tachyscopaeus</i>	'giant'	<i>A. sp.?</i>	Total
26/6/1996	1.5	3 (3.3)	4 (4.2)	1 (1.6)	2 (2.2)	10 (11.2)
10/1/1997	3	6 (3.3)	9 (5)	1 (0.5)	—	16 (8.8)
11/1/1997	3	5 (2.8)	14 (7.8)	—	—	19 (10.5)

Table 3: Diet of *Ailuronyx seychellensis* on Aride (January 1997) – numbers of pellets containing each prey item

Prey	Large <i>Ailuronyx</i> (n=6)	Small <i>Ailuronyx</i> (n=15)	Total (n=21)
Dictyoptera	4	2	6
Coleoptera	1	3	4
Orthoptera	1	3	4
Formicidae	1	0	1
Arachnida	1	0	1
Lepidoptera	0	8	8
Hymenoptera	0	1	1

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