

## AN ALTERNATIVE FOOD FOR REPTILES: FISH

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### INTRODUCTION

An unfortunate irony of keeping reptiles in captivity is that the natural diet of many species is either partially, or in some cases, entirely other reptiles or amphibians. The young of most species of snakes prefer a diet of small lizards or frogs even if their adult form readily accepts other prey such as mammals and birds.

In order to maintain such species over a long period, or to raise large numbers of baby snakes, the reptile keeper must address the problem of providing an adequate food supply for his captives.

Small skinks and frogs, which are the most tempting food item for such specialized feeders, are not a suitable staple diet for a number of reasons. In many areas these animals are protected and permission must be granted before they may be taken from the wild



Foto 1: *Pseudonaja guttata*, een levende goudvis etend.  
Eating a live goldfish.  
Foto: Brian Barnett.

for this purpose. If this is not the case, or permission has been obtained, sufficient numbers of skinks or frogs may not be available to fulfil the needs of the specimens being held. Numbers of such animals can be seasonally dependant and virtually unobtainable during harsh southern winters or drought stricken summers. Parasites may also be introduced into the collection, particularly where frogs are being used. Also, many keepers simply find the notion of feeding one reptile to another distasteful.

All of these reasons make finding alternative food items more desirable. Skink or frog feeders can often be induced to take mice which have been scented with the preferred food item (Barnett, 1981). But sometimes scent alone is not enough and rapid movement of the food item is also required. This is where live fish, as a substitute, are ideal.

## LIVE FISH

Placed on the dry substrate of the cage or container, the fish will kick and flip about over a large area, often surprising or bumping into the captive reptile in an irresistible manner at which point it is grabbed.

Apparently, the frantic motion of the fish is similar enough to the rapid scuttling of a skink, or the leaping of a frog, to induce the reptile into action. Once seized, the fish is rarely abandoned, its cold scaly body surface probably not being too dissimilar to that of the preferred prey item.

With most individuals, once the first feed has been achieved, further fish will be taken eagerly. At this stage, the keeper may decide whether to maintain a permanent diet of fish or begin scenting other food items with this strong scent.

## FISH PIECES AND BYPRODUCTS

Fish do not necessarily have to be alive or in one piece to be of value to the reptile keeper.

Graeme Gow (pers.comm.) supplements many of his captives diets with fish fillet. The fillet is cut into sections which can be easily swallowed by specimens of any size. The ends of the fillet may also be tapered to assist swallowing.

Using this method, many baby snakes either feed voluntarily or are 'assist fed' on this unusual diet until they reach a size or stage where mice may be taken. At the time of writing, dozens of Western (*Notechis ater occidentalis*) and Mainland (*Notechis scutatus*) Tiger Snakes are being raised by Graeme Gow using this method; probably an impossible task if natural food items were to be used.

Adult snakes maintained by Graeme Gow also have their diets varied with fish fillets. Only prime Whiting fillets are used. A list of species which voluntarily feed on these fillets is provided.

Brian Barnett (pers. comm.) reports that a number of hatchling Childrens Pythons in his collection have taken pinky mice scented with commercially available fish paste (Pecks) as their first feed.

## PROBLEMS ASSOCIATED WITH LIVE FISH FEEDING

While many specimens can be maintained trouble free on a diet of, or varied with fish, some hazards do apparently exist.

A small number of hatchling Childrens Pythons being raised by myself on live goldfish, died within one week of developing a contorted neck and body posture. This 'twisted neck position' was often observed within hours of a live fish being consumed. One specimen did not exhibit any sign of this problem until its 22nd feed, however, another died soon after its 3rd feed.

It was thought that as no amount of constriction would kill the fish and they were being swallowed live, the snakes may have been injured internally by the kicking of the fish as they were being consumed. Baby snakes were often seen to jerk uncontrollably with the movements of the fish inside them. The remaining young were changed to either dead fish or mice and the problem was not seen again. One snake from this group was maintained on dead fish for three years without any problems. Many newborn snakes will accept freshly killed fish from their second feed if the fish is moved about with forceps in a life-like fashion. I did not encounter any problems with these, or any other, snakes first feed of live fish, however any risk could be minimised by using guppies which are more elongate and less vigorous than goldfish.

It may be safer to feed live fish to elapids where the fish die before being swallowed, or colubrids which normally swallow prey alive.

Another major hazard associated with fish feeding is the risk of internal damage from the fins if the fish is swallowed backwards or regurgitated. I have seen countless fish swallowed backwards by Green Tree Snakes *Dendrelaphis punctulatus* and Blue-bellied Black Snakes *Pseudechis guttatus* without incident, however, one otherwise healthy Green Tree Snake died suspiciously the day after it had swallowed a fish backwards. A hatchling Colletts Snake *Pseudechis colletti* and a juvenile Slaty Grey Snake *Stegonotus cucullatus* died in my collection while attempting to regurgitate fish which may have been slightly too large for them.

As a precaution, I now cease feeding an individual if one fish is swallowed backwards as I have observed the regurgitation of all fish if more are eaten. This also prevents pressure on the last fish.

If gravel is used as a cage substrate it may adhere to the fish as it is being swallowed. Often the gravel will fall off as the reptiles mouth progresses over the body of the fish, but however, as a precaution, the animal can be placed on paper in another container before being fed. The fish then offered. I have not observed any problems caused by swallowed gravel but will often pick it off the tail of the fish, with forceps, as it is being swallowed particularly when juvenile snakes are concerned.

I always remove fish from the water they are purchased in and place them in fresh water (of the same temperature) in an attempt to dissipate any chemicals the aquarist may be using on his fish which could be harmful if ingested by reptiles.

## CONCLUSION

As can be seen, there are definite pros and cons in feeding fish to captive reptiles. However, with a little thought and care, live fish and parts of fish can be a very useful standby in most reptile collections.

Following is a list of species which have been maintained on exclusive or partial fish diets by myself, Brian Barnett and Graeme Gow.

	Kortlang	Barnett	Gow
<i>Amphiesma mairii</i>		x	x
<i>Dendrelaphis punctulatus</i>	x	x	x
<i>Stegonotus cucullatus</i>	x		x
<i>Acrochordus arafuræ</i>		x	x
<i>Boiga irregularis</i>		x	x
<i>Cerberus rynchops</i>			x
<i>Myron richardsonii</i>			x
<i>Enhydryis polylepis</i>		x	x
<i>Pelamis platurus</i>		x	
<i>Liasis childreni</i> etc.	x	x	x
<i>Liasis fuscus</i>	x		x
<i>Pseudechis colletti</i>	x		x
<i>Pseudechis guttatus</i>	x		x
<i>Pseudechis porphyriacus</i>			x
<i>Pseudonaja affinis</i>		x	x
<i>Pseudonaja nuchalis</i>		x	x
<i>Pseudonaja guttata</i>		x	
<i>Pseudonaja textilis</i>			x
<i>Austrelaps superbus</i>		x	x
<i>Tropidechis carinatus</i>		x	x
<i>Denisonia punctata</i>			x
<i>Acanthophis antarcticus</i>		x	x
<i>Acanthophis praelongus</i>		x	x
<i>Acanthophis pyrrhus</i>		x	x
<i>Notechis ater</i>		x	x
<i>Notechis scutatus</i>		x	x

REFERENCE:

Barnett, B.F (1981) Observations on Fish Feeding in Reptiles. *Herpetofauna*: 13 (1) pp 11-13.

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