

The Natal Midlands Dwarf Chameleon

-Justin Herd-

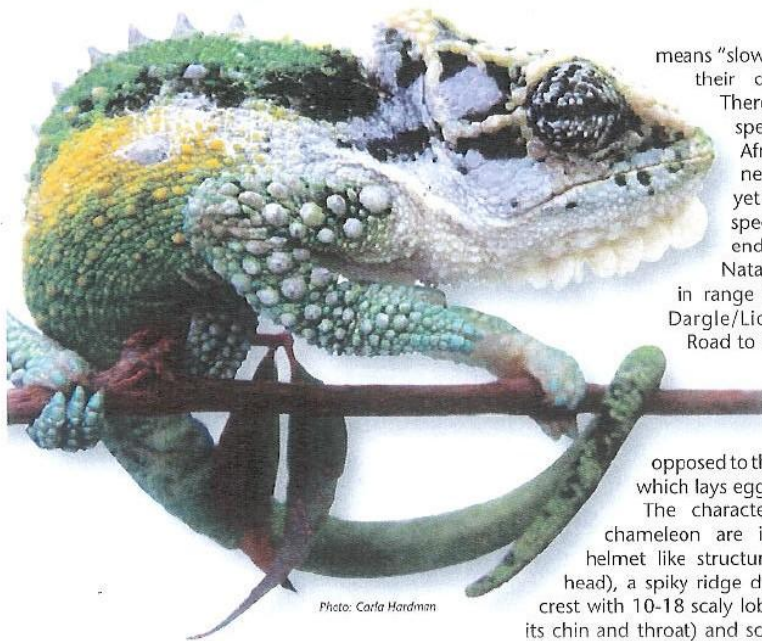


Photo: Carla Hardman

How many of you have seen 'dwarf lions' whilst felling trees in the Midlands? The Greeks called them 'chamai leons' (dwarf lions) because of their aggressiveness when attacked. Most of the indigenous peoples of Africa have a superstitious dread of chameleons and are wary of handling them.

This little chameleon is known scientifically as the *Bradypodion thamnobates*. The genus *Bradypodion*

means "slow foot" which describes their deliberate jerky gait. There are 14 documented species of dwarfs in South Africa with a number of newly discovered ones, yet to be recognised. The species *thamnobates* is endemic to the KwaZulu-Natal Midlands and occurs in range from Boston through Dargle/Lidgetton/Nottingham Road to Mooi River. The dwarf chameleons are viviparous which means giving birth to live young as opposed to the common chameleon which lays eggs.

The characteristics of this dwarf chameleon are its large casque (the helmet like structure at the back of the head), a spiky ridge down the back, a gular crest with 10-18 scaly lobes (like a beard under its chin and throat) and scattered large tubercles (knobby warts) particularly on its flanks and limbs. This particular specie can be recognised by its triangular bone structure from the casque to behind the eye.

The adult males develop intense breeding colours down their bodies usually alternating green/turquoise/black with a central yellow stripe. Females and juveniles are more mottled green, grey/green or brown. The *thamnobates* is one of the larger dwarfs with an adult size of between 100-180 mm.



Two young live birth thamnobates – the one on the left is a few days old and the other approximately two weeks old

Biology and breeding

Their habitat is lowland forest and they are usually found on the lower branches of shrubs and trees. The chameleon changes colour to camouflage its position and is therefore very often extremely difficult to find. During winter they turn a brown colour and hibernate amongst the dark lower stems of plants or hide in the grass. If there is thick grassland adjoining the forest, the female gives birth in the grass and the youngsters start life catching insects at ground level.

The adults are extremely territorial and should another chameleon approach a breeding male, there is much head to head confrontation with bobbing and shaking from side to side. A male will co-exist quite happily with a number of females.

The young are born during late spring to summer. In the Dargle, 6-12 tiny babies are born approximately 20-25mm in size. The rate of growth depends on the food supply and they could double in size within a few weeks. The skin is shed periodically as the chameleon grows in size. It is indicated that chameleons may become

sexually mature within a year.

Out of all the youngsters born, very few seem to survive, being eaten mainly by snakes and birds. I have observed a red lipped herald snake engulfing an adult female.

It has been said that the "chameleons are the first to go and last to come back" when their habitat is threatened. Burning of grasslands and indigenous fringes are the greatest threat to their survival, especially when this is done during their breeding/birthing months (October to January).

Are there chameleons on your property?

In order to make themselves safe from night predators, the chameleons move onto the lower edges of trees or shrubs. Youngsters born in grasslands cling to the tips of individual stems. At night a chameleon turns yellow and can easily be located with a strong torch. It is difficult to spot chameleons whilst actually felling trees. They have normally been recovered trying to escape once the tree is on the ground or very often when cutting and moving side branches to brush lines.



A pair of breeding Natal Midlands Dwarf Chameleons in the Dargle, 25/2/2005.

On coming across one of these little creatures, please be gentle, moving it out of the area to a safe location well away from the harvesting operation and potential brush line burn.

Keeping chameleons in captivity for any length of time is stressful to them. However they can become used to human activity if released in the garden. I have rediscovered a number of the specimens that have returned to their old habitats in the garden. They, if treated gently, will readily take flies and small insects off the hand.

Record of Dwarf Chameleons on Beetree Farm in the Dargle

A record of all the sightings/recoveries of Chameleons found on the property during harvesting gum, scrub wattle and pine starting from 19/10/2004 (Figure 1). A record was kept for one year and most of the specimens measured and photographed. A few sightings were done by overseas visitors outside the felling operation but 90% of the data was directly associated with

tree harvesting. This record is therefore not a true indication of the actual 'dwarf chameleon' population on the property.

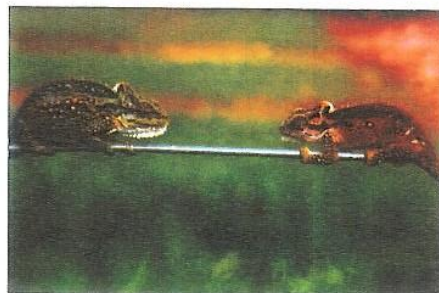
Size/body/tail/overall: Measured in cm to the nearest 2-3mm. It was difficult to measure each specimen accurately because of the wriggling. In a number of instances the Chameleon recovered or sighted was not measured but an estimate of its size range was made. This is as follows: b=baby up to 6 cm; t=teenager 6-10cm; a=adult 10-18cm.

Sex: When the sex of the specimen could be positively ascertained, this is given as either 'm' or 'f'. It is difficult to ascertain the gender of young Chameleons. However one indication of a male is that the tail is slightly longer than the body and also has a slimmer build. Females with very swollen bodies were identified as being pregnant (f/p).

Host tree: This is the tree or plant on which the specimen was first located.

The following is a summary of some of the information contained within the database (Figure 2).

Tree felling stopped at the end of June 2005 and resumed in September when the Pine forest was 'dropped' hence the 11.1% in September 2005.



DISTRIBUTION OF CHAMELEONS BY DATE					
DATE (year/month)	BABY	TEENAGER	ADULT	TOTAL	% AGE
2004/10		1	4	5	9.3
2004/11	3		13	16	29.6
2004/12	1	1	1	3	5.6
2005/01	4	2	4	10	18.5
2005/02	1		4	5	9.3
2005/03		2	1	3	5.6
2005/04			1	1	1.9
2005/05				0	0
2005/06			2	2	3.7
2005/07				0	0
2005/08				0	0
2005/09			6	6	11.1
2005/10			3	3	5.6
TOTALS	9	6	39	54	

Figure 1

DISTRIBUTION BY HOST TREE					
HOST TREE	BABY	TEENAGER	ADULT	TOTAL	% AGE
Wattle	3	5	17	25	46.3
Gum			7	7	13.0
Pine			5	5	9.2
Senecio	1		1	2	3.7
Blackjack			2	2	3.7
Bullrush			1	1	1.9
Grass	4			4	7.4
Halleria lucida			1	1	1.9
Vepris lanceolata			1	1	1.9
Not defined	1	1	4	6	11.1

Figure 2

Conclusion

Wattle is definitely host tree by choice - possibly because black/dark bark allows more sunlight absorption and the insect life under the bark of the older trees provides a superior food source

References: Dr. Vincent A Wager - "The life of the Chameleon" - published by the Natal Branch of the Wildlife Society 1987
 Bill Branch's "field guide to the snakes and other reptiles of Southern Africa" published by Struik Publishers 1990
 Lynn Raw's article in The Quill (November 2004)