

NOTES ON THE GIANT GIRDLED LIZARD *CORDYLUS GIGANTEUS* A. SMITH

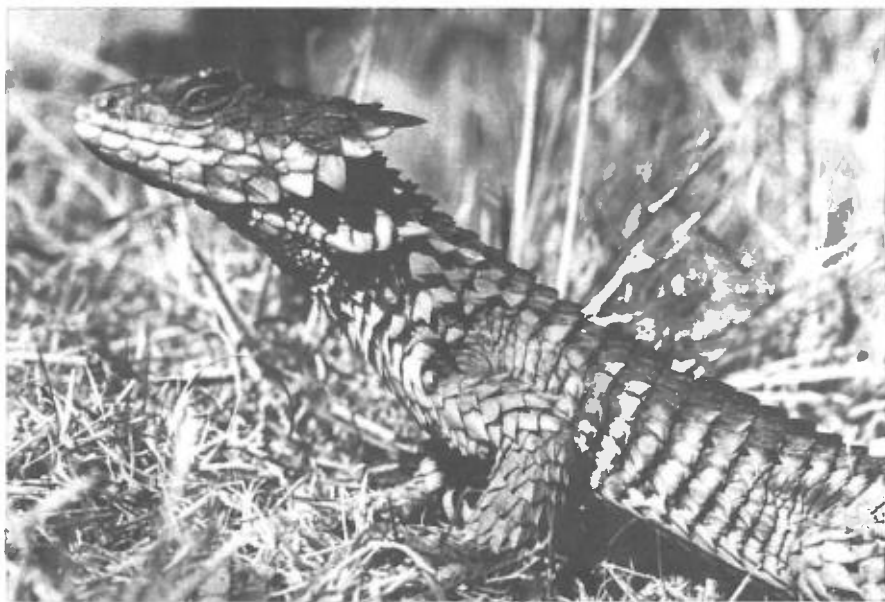
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The giant girdled lizard, *Cordylus giganteus*, is one of South Africa's largest and most impressive Cordylids. Though abundant and well known where it occurs, very little has been written about this lizard. Very popular in zoo and private collections and, until recently, easily obtainable from dealers in Europe and U.S.A., the species is now protected throughout most of its range, and it is therefore unlikely that many more specimens will reach the "pet trade" in future.

COMMON NAME

Giant girdled lizard; sungazer; Lord Derby's girdled lizard; and, in Afrikaans, sonkyker ("sun-watcher") ouvolk ("old people") or skurwejan.



Cordylus giganteus

RANGE

North-eastern Orange Free State and adjacent southern Transvaal. Possibly occurs in bordering areas of Lesotho in the east and the Cape Province in the south. Branch and Patterson (1975) stated that the presence of *Cordylus giganteus* in the southern Transvaal "is now doubtful". This species is, in fact, abundant in that region. *Cordylus giganteus* has recently been found in Natal.

SIZE

Largest specimens measured by De Waal (1978) during his survey were as follows: a male measuring $204 + 172 = 376\text{mm}$ and a female measuring $205 + 181 = 386\text{mm}$.

HABITAT

Flat or sloping, mixed to sour grassveld where it excavates its own burrow. The flattened oblong burrow entrances are well-worn and may face any direction. The burrows average 2-3 metres in length and from 30-45cm in depth. They do not end in an enlarged chamber as reported by FitzSimons (1943) but are often wide enough for the lizard to turn around along the length of the burrow. Several lizards may inhabit one field or slope and as many as 140 active burrows, some less than a metre apart, have been located by the author within an area of 500m².

Heavy rains may flood the burrows without drowning the occupants. It has been suggested that the ends of the burrows are a little nearer to the surface than the deepest vertical part, thus trapping some air and enabling the lizard to breathe until the water drains away.

Each male apparently inhabits his own burrow, while one or two females may inhabit a burrow with one or two juveniles and one or two sub-adults. Captive males have been observed eating juveniles.

Because of the unique shape, depth and length of the burrows, it is unlikely that *Cordylus giganteus* utilizes deserted animal burrows, as stated by FitzSimons (1943).

SEXUAL DIMORPHISM

Males are distinguished by two to three rows of swollen glandular scales anterior to the femoral pores. See Figure 1.

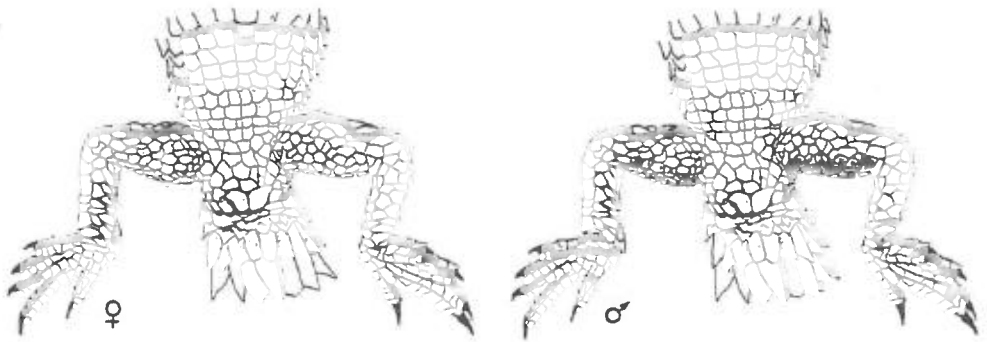


Figure 1

BREEDING

Ovoviviparous, giving birth to one or two young in late summer (February to March). The young measure 114-135mm and average 124mm (40 newly-born specimens examined).

DIET

Insectivorous and carnivorous, feeding on virtually any creature that can be overpowered. It will usually dash towards its prey, stop with head and forepart of the body well-elevated, and then lunge forward to seize the food-animal in its powerful jaws. Rodents are killed by being rapidly shaken and hit against the ground.

FIELD NOTES

Cordylus giganteus occurs at altitudes over 1300m above sea level which have summer rainfall varying between 450-750mm per annum. Temperature extremes (summer maximum to winter minimum) are great, varying from well above 36 degrees Centigrade to well below freezing. Severe frosts occur in winter.

Emerging from their burrows in the mornings, the lizards bask in the sun with head and forepart of the body elevated. Initially lying at right angles, once they have warmed up they will face the sun and have the rays falling more obliquely on their bodies. The light yellowish chest, which is highly reflective, then receives most of the rays whereas the absorptive back receives very little. From about 11H30 to 14H00, on hot summer days, they go back into their burrows to escape from the heat of the day. They may then lie up near the burrow entrances or otherwise move deeper into the burrows.

This shy lizard disappears down its burrow the moment it is disturbed and may remain there for as long as one or two hours, sometimes even longer. In areas where cattle graze among the burrows, however, the lizards are accustomed to being disturbed and may re-emerge a few minutes later. To bask, they seldom venture far from their burrow entrances.

Once they disappear into their burrows they obviously face away from the burrow entrances. Any attempt to seize a specimen by its tail would result in the lizard thrashing its spiky tail about, often drawing blood. If successful in seizing a tail and attempting to pull the lizard from its burrow, it will merely hook the four occipital spines into the roof of the burrow. Further tugging usually results in some of the occipital spines snapping or a section of the tail breaking off. *Cordylus giganteus* seldom, if ever, attempts to bite when first captured.

In winter, night temperatures soon drop below freezing and the lizards go into hibernation. They will then hibernate throughout most of winter, even if day temperatures exceed 20 degrees Centigrade. At least three frog species, *Kassina senegalensis*, *K. weallii* and *Cacosternum boetgerii*, are known to hibernate in the burrows with *Cordylus giganteus*.

THE STATUS OF *CORDYLUS GIGANTEUS* IN 1984

In the past hundreds (or perhaps thousands?) of *Cordylus giganteus* were exported from Johannesburg and Durban in South Africa to various dealers in Europe and U.S.A. Most of them were thus fairly inexpensive and easily obtainable. This led to poor captive conditions and high mortalities. The commercial exportation of all reptiles, from Natal, Orange Free State, Cape Province and the Transvaal, is now strictly controlled. Masses of lizards will no longer leave South Africa. Most of the independent homelands, i.e. Swaziland, Transkei and Boputhatswana do not permit the commercial exportation of reptiles. None of the homelands have international ports.

Commercial exploitation for the "pet trade" no longer seems to threaten the survival of this species. Habitat destruction still remains as a major threat. The areas in which *Cordylus giganteus* is found are ideal for agriculture but in many areas the ploughed up soil is beginning to break down into sand. Branch and Patterson (1975) reported that the practise of rotation farming, in which periods of crop-farming and cattle-grazing are interspersed with periods in which the land is allowed to remain fallow, does not seem to endanger populations. There is, however, no doubt that ploughing and the accompanied destruction of natural grassveld adversely affects populations.

Other forms of development, i.e. the construction of new power stations, factories, mines and roads, add to the loss of habitat. As far back as 1978 *Cordylus giganteus* was listed as "vulnerable" in the C.S.I.R. Red Data Book (McLachlan, 1978).

Cordylus giganteus is still common and abundant over most of its range in the Orange Free State. At present a conservative estimate of the southern Transvaal population alone would be well in excess of 70,000 specimens.

CORDYLUS GIGANTEUS IN CAPTIVITY

This rather attractive, pre-historic-looking lizard is very hardy and does well in captivity. Though shy and retiring it settles down well, even taking food from one's hand.

Outdoor enclosures are ideal (climate permitting) and the lizards soon dig their own burrows if conditions allow. They may dig beneath the walls of the enclosure but do not usually surface on the outside to escape, unless the burrow collapses. If they cannot burrow they will seek refuge beneath any suitable shelter, even amongst rocks.

Though they come from a dry environment they can tolerate a fair percentage of humidity and do well in an open enclosure in Durban, South Africa, at sea level. They cannot cope with excessive humidity, e.g. Florida, U.S.A. In cold, wet regions it is advisable to accommodate this species in glass enclosures.

They feed readily on a variety of insects and the adults soon accept pets mince from a dish. The juveniles are more visually attracted to their food and should be fed on live insects (crickets and locusts) dusted with mineral/vitamin supplements. Water can be provided in shallow dishes and the enclosure should be sprayed down twice a week. These lizards, especially juveniles, readily lick up water drops. Add Calcium lactate and Vitamin D3 to the water.

Several specimens can be housed in one enclosure. Juveniles, however, should be accommodated separately as the males are known to be cannibalistic.

ACKNOWLEDGEMENTS

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