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REPTILE SURVEY OF VENETIA LIMPOPO NATURE RESERVE, LIMPOPO PROVINCE - SOUTH AFRICA

WERNER CONRADIE [1], HANLIE ENGELBRECHT [2], ANTHONY HERREL [3], G. JOHN MEASEY [4], STUART V. NIELSEN [5], BIEKE VANHOOYDONCK [6] AND KRYSTAL A. TOLLEY [2,4]

[1] Port Elizabeth Museum, Port Elizabeth, South Africa

[2]Department of Botany and Zoology, University of Stellenbosch, Matieland 7602, South Africa

[3]UMR 7179 C.N.R.S/M.N.H.N., Département d'Ecologie et de Gestion de la Biodiversité, 57 rue Cuvier, Case postale 55, 75231, Paris Cedex 5, France

[4]Applied Biodiversity Research Division, South African National Biodiversity Institute, Private Bag X7, Claremont, Cape Town, 7735 South Africa

[5]Dept. of Biology, University of Mississippi, University, MS, USA

[6]Department of Biology, University of Antwerp, Universiteitsplein 1, B-2610 Antwerpen, Belgium

INTRODUCTION

In the 1980s a diamond-bearing kimberlite pipe was discovered on the Farm Venetia in the Limpopo Province, South Africa. Following extensive exploratory drilling and feasibility studies, De Beers Ltd established a diamond mine on the property. They ac-

quired a number of properties between the mine and the Limpopo River and the decision was then taken to establish the Venetia Limpopo Nature Reserve (hereafter VLNR). The 35 000 hectare reserve is located 25 km north east of Alldays, Limpopo Province (2229AD, 600 m asl). The topography is predominantly flat, with underlying sandstone that occasionally interrupts the landscape as exposed koppies. Vegetation of VLNR is dominated by Mopane woodland.

We undertook a herpetological survey of the VLNR from 22 – 28 January 2010. The purpose of the survey was to 1) document the species that occur on the reserve and 2) to provide data, samples, and museum specimens in connection with the Reptile Speciation Project (http://sites.google.com/site/ reptilespeciationproject/). The Venetia area was previously identified as a significant gap in the current sampling for the project, and as such the reserve was targeted for data collection.

METHODS

During the 6 day fieldwork period, different habitat types across VLNR were surveyed, covering koppies and savanna habitats. Two Y-shape trap arrays (see Conradie et al., 2011) were set up in different habitat types of the reserve (Trap 1: 22.266395 S; 29.330720 E and Trap 2: 22.275841 S; 29.358191 E) and the traps were visited twice daily (morning and evenings). In addition, the team conducted daily active searches for reptiles in different areas of the reserve, attempting to sample across all habitat types. All reptiles encountered were captured by hand or by noosing and identified to species level. DNA samples were obtained from all captures and representative voucher specimens were deposited in the collection of the Port Elizabeth Museum (PEM).

SYSTEMATIC ACCOUNT

(Known distribution data based on the preliminary SARCA maps. * indicate new records for 2229AD)

Family: PELOMEDUSIDAE

Pelomedusa subrufa* (Lacépède, 1788) Marsh Terrapin

Numerous specimens were observed in the Lizzulea Dam (22.346234S; 29.329953E). No specimens were collected.

Family: TESTUDINIDAE

Stigmochelys pardalis* (Bell, 1828) Leopard Tortoise

One adult was observed crossing the gravel road.

Family: AGAMIDAE

***Agama armata* Peters, 1854 Peter's Ground Agama**

Three specimens were captured along dirt roads, sheltering under low growing Mopane trees on sandy to compact soil. Voucher specimens were collected: PEM R18648: 1 adult female (22.401440S; 29.253222E). PEM R18646: 1 adult male (22.318970S; 29.348028E). PEM R18637: 1 adult male (22.275170S;29.355889E).

Family: CHAMAELEONIDAE

Chamaeleo dilepis* Leach 1819 Flap-neck Chameleon

Two specimens were observed by spotlighting at night just outside the main research camp (22.266889S; 29.330944E & 22.264639S; 29.327250E respectively). No voucher specimens were collected. One additional *C. dilepis* was encountered on the main tar road along the northern border of the reserve.

Family: CORDYLIDAE

***Cordylus jonesii* (Boulenger, 1839) Limpopo Girdled Lizard**

Three specimens collected under tree bark. Voucher specimens were collected: PEM R18644 & 186455: 1 adult, 1 juvenile (22.26719S; 29.35864E). PEM R18658: 1 adult (22.37469S; 29.32783E).

***Platysaurus intermedius rhodesianus* FitzSimons, 1941 Common Flat Lizard**

Numerous specimens were observed on the exposed sandstone koppies to the north of the reserve and adjacent farm. Voucher specimens were collected: PEM R18634, 18638, 18639, & 18615: 2 adult males, 1 adult female & 1 juvenile (22.25256S; 29.31631E).

Family: GEKKONIDAE

***Chondrodactylus tuneri* (Gray, 1864) Turner's Tubercled Gecko**

Collected on the walls around the main research camp. Voucher specimens were collected: PEM R18611-18613: 2 adult males & 1 adult female (22.26664S; 29.33089E).

***Lygodactylus capensis* (Smith, 1849) Cape Dwarf Gecko**

Numerous specimens were collected around the main research camp, as well at the parking area of the Mopane camp. Voucher specimens were collected: PEM R18621-18622: 2 adults (22.26664S; 29.33089E).

***Pachydactylus punctatus* Peters, 1854 Speckled Gecko**

Three specimens were collected on sandy substrate under fallen, decaying Mopane trunks. Voucher specimens were collected: PEM R18617 &18619: 1 adult female, 1 juvenile (22.31897S; 29.34803E). PEM R18627: 1 adult female (22.25256S; 29.31631E).

Hemidactylus mabouia* (Moreau de Jonnes, 1818) Moreau's Tropical Gecko
Common on the walls of building in the main research camp. One specimen was collected under tree bark of a Mopane tree around the exposed sandstone koppies to the north of the reserve.Voucher specimens were collected: PEM R18609 & 18610: 1 adult male & 1 adult female (22.26664S; 29.33089E).

Family: GERRHOSAURIDAE
***Gerrhosaurus flavigularis* Wiegmann, 1828 Yellow-throated Plated Lizard**
One specimen was collected among some loose rocks on the koppie overlooking the Lizzulea dam. The second specimen was collected under debris at a base of a young Baobab tree at the main research accommodation. Numerous juvenile specimens were seen running in the Mopane scrub on the northern side of the reserve. Voucher specimens were collected: PEM R18633: 1 adult (22.34369S; 29.32783E). PEM R18641: 1 adult (22.26664S; 29.330899E).

***Gerrhosaurus validus validus* Smith, 1849 Giant Plated Lizard**
One specimen was collected amongst large boulders on the koppie overlooking the Lizzulea dam, in the same habitat as *G. flavigularis*. A second specimen was collected on the sandstone koppie north of the main research accommodation (22.25256S; 29.31631E). Voucher specimen was collected: PEM-R 183636: 1 adult male (22.34369S; 29.327833E).

Family: LACERTIDAE
***Heliobolus lugubris* (Smith, 1838) Bushveld Lizard**
Only juveniles were observed on gravelly soil. When approached they employed the defensive tactic of mimicking the acid-*squirting ground beetle (Anthiini* sp.) (Huey & Pianka, 1977).Voucher specimens were collected: PEM-R 18642 & 18652: 2 juvenile (22.311879S; 29.34803E).

***Ichnotropis squamulosa* Peters, 1854 Common Rough-scaled Lizard**
Specimens were collected on sandy soil surrounding the granite outcrops north of the main research camp. No juveniles were encountered. Voucher specimens were collected: PEM R18620, 18624, 18625, 18626, 18628, & 18629: 5 adult specimens (22.25256S; 29.31631E & 22.26719S; 29.35864E).

***Nucras holubi* (Steindachner, 1882) Holub's Sandveld Lizard**
One specimen was collected at the same locality as *H. lugubris* juveniles. Habitat included compacted sand with scattered Mopane trees. Voucher specimen was collected: PEM R18647: 1 adult (22.31897S; 29.348029E).

***Pedioplanis lineoocellata* (Duméril and Bibron, 1839) Spotted Sand Lizard**
Collected north of the main research camp on compacted soil. Voucher specimens were collected: PEM R18623, 18653, 18654, 18655 & 18656: 1 adult female, 2 adult males & 2 juveniles (22.25922S; 29.321639E).

Family: SCINCIDAE
Scelotes limpopoensis limpopoensis* FitzSimons, 1930 Limpopo Dwarf Burrowing Skink
All specimens were collected under rocks in sandy soil, except for one specimen which was collected under a rotten tree trunk near a waterhole. These legless skinks lose their tails easily when handled. Voucher specimens were collected: PEM R18631: 1 adult (22.26664S; 29.33089E) and PEM R18651: 1 adult (22.26533S; 29.31711E).

***Trachylepis punctulata* (Bocage, 1872) Speckled Skink**
These skinks were common on the rockier areas of the reserve and were observed on large boulders. Voucher specimens were collected: PEM R18614: 1 adult (22.26533S; 29.35742E).

***Trachylepis striata* (Peters, 1844) Eastern Striped Skink**
Collected around the main research campsite.Voucher specimens were collected: PEM R18640 & 18643: 2 adult (22.25922S; 29.32164E).

***Trachylepis varia* (Peters, 1867) Variable Skink**
Several specimens were observed at the base of trees and big rocks. Voucher specimens were collected: PEM R18630: 1 adult (22.34369S; 29.32783E) and PEM R18635: 1 adult (22.34103S; 29.3347E).

***Trachylepis margaritifer* (Peters, 1854) Rainbow Skink**
One juvenile specimen was collected on the exposed sandstone koppies to the north on the adjacent farm. Voucher specimen was collected: PEM-R 18616: 1 juvenile (22.25439S; 29.31711E).

Panaspis cf. wahlbergii* (Smith, 1849) Wahlberg's Snaked-eyed Skink
One specimen was observed on a rocky koppie overlooking Lizzulea Dam (22.343723S; 29.327936E).

Family: VARANIDAE
Varanus niloticus* (Linnaeus, 1762) Water Monitor
One adult was observed walking on the Lizzulea Dam wall (22.34445; 29.327604E).

Family: LAMPROPHIIDAE

***Boeadon (=Lamprophis) capensis* Duméril and Bibron, 1854 Brown House Snake**

One adult was captured around the main research camp (22.267127S; 29.330639E). No voucher specimen was collected, however a DNA sample was taken.

Dasypeltis scabra* (Linnaeus, 1758) Rhombic Egg-eater

One specimen was collected in trap 1. No voucher specimen was collected, however a DNA sample was taken.

Psammophis subtaeniatus* Peters, 1882 Western Stripe-bellied Sand Snake

One adult specimen was collected in the funnel of trap 2. Voucher specimen was collected: PEM-R 18618: 1 adult male. One additional specimen was observed crossing the road in the reserve.

Family: VIPERIDAE

Bitis caudalis* (Smith 1839) Horned Adder

In total four specimens were observed. Two juveniles provided DNA samples and released. Voucher specimens were collected: PEM-R 18649: 1 adult (22.34369S; 2932783E). PEM R18650: 1 adult (22.26664S; 29.25322E).

Figure 1: Horned Adder (*Bitis caudalis*), Venetia Limpopo Nature Reserve. Photograph by W. Conradie.

Family: CROCODYLIDAE
Crocodylus niloticus* Laurentus, 1768 Nile Crocodile
Nile crocodiles were observed in the Lizzulea Dam (22.34445; 29.327604E).

DISCUSSION

Our survey produced 82 (50 vouchers specimens) individual records of reptiles, covering 28 species (4 snakes, 21 lizards, 2 chelonians and 1 crocodilian). This represents only a third of all reptile species that would be expected to be present in the area (*sensu* Branch 1998, SARCA). No amphibians were seen or collected during the survey, as the conditions were very dry. The survey was not exhaustive, and it is expected that a full species list can only be obtained by repeated surveys during different seasons. Although the total number of species was low, many of the records represent new atlas distribution records for the quarter-degree grid square. In total 11 new atlas records were made for 2229AD, representing 40% of the species we encountered.

In summary, the Venetia Limpopo Nature Reserve has made an important contribution to both conserving and understanding South Africa's biodiversity. The existence of such private reserves are an important part of preserving this nation's rich biological heritage, and for contributing to basic research which will assist us to better conserve our biodiversity.

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