to develop a SunZone programme that focuses on maths and its applications in biology, physics and chemistry. The Centre for Invasion Biology has also implemented the "*limbovane: Exploring South African Biodiversity and Change*" outreach project which sees Grade 10 students learning about biodiversity in their immediate surroundings. This project was made possible through funding from the Darwin Initiative and a University of Sheffield/Stellenbosch University partnership. To find out more about limbovane visit: www.sun.ac.za/iimbovane

For more on the Department, visit www.sun.ac.za/botzoo

A FOCUS ON...

Prof. Alan Hodgson, PhD, DSc (Manchester): ZSSA PRESIDENT 2002-2003
By Carol Simon

Prof. Alan Hodgson is a master at multi-tasking. He is head of the Department of Zoology and Entomology and Academic-in-Charge of the Electron Microscopy Unit at Rhodes University. In addition, he has a full lecture load while supervising undergraduate and post-graduate students and a post-doctoral researcher. Over the years Alan has built up a reputation in the fields of marine and invertebrate biology, focussing mainly on invertebrate gametogenesis, gamete structure and function, invertebrate reproduction, molluscan biology, systematics and evolution of limpets and other gastropods and the sustainable utilization of marine and estuarine invertebrate resources. He has also been involved in research into reproductive biology of dolphins, cicadas and crustaceans. This research has resulted in the publication of about 100 peer-reviewed journal articles, one book, three book chapters, popular articles and numerous conference presentations. And so that he doesn't ever get bored, Alan also collaborates with researchers in institutions as varied as the Ben Gurion University in Israel, the University of Maine in the USA and the Marine Biology Association, UK.

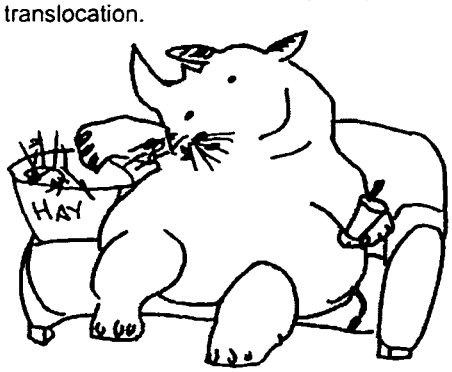
RESEARCH NEWS

What do stressed and obese people have in common with black rhinos in captivity?

By Elizabeth V. Berkeley[1] and Wayne L. Linklater[1-2]
[1]School of Biological Sciences, Victoria University of Wellington,
P.O. Box 600, Wellington 6005, New Zealand, [2] Centre for African Conservation Ecology, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

It appears that the combo of super-sized diets and stress can have just as deleterious consequences for populations of rhinos as for humans. In our efforts to conserve the endangered black rhino, a new problem has emerged that will eventually reduce population growth rates in the medium-term: after translocating rhinos extremely low numbers of female calves are born, particularly for females that were captured pregnant. Abnormally low numbers of female births severely limit the long-term population growth because current breeding females are not replaced.

Recent scientific and technological advances provide the means to investigate this serious problem. High levels of circulating glucose in the mother are known to cause the death of female embryos in mice and cattle. Stress and excessive nutrition both cause high glucose levels. Stress is an inevitable consequence of animal capture, translocation and release into a new reserve or captive institution. Moreover, when a rhino arrives in captivity it tends to be fed a more concentrated diet than it ate in the wild and rhinos released into new reserves initially have preferred foods in abundance. Therefore, we suggest that early female embryo death in rhinoceros may result from stress and/or dietary super-sizing with translocation.



In a new project supported by the International Rhino Foundation we propose using technologies developed for human diabetics to investigate the effects of stress and nutrition on glucose levels and calf sex in free-ranging and captive rhinoceros. This season, in collaboration with Ezemvelo KZN Wildlife, we are measuring blood glucose levels and faecal corticosteroid metabolites (as evidence of stress) in black rhinos

from local reserves through the translocation and release process.
We hope to make recommendations about how to reduce early female embryo death in the rhinoceros and other endangered species that also show male-biased births after translocation perhaps by knowing when it is safe to translocate pregnant rhinos and/or what diets increase female embryo survival.

Stink Bug Sauté

By Cathy Dzerefos, PhD student,

Animal, Plant and Environmental Sciences, Wits University

Entomophagy, the eating of insects, occurs world-wide in Africa, Asia, Australia and the Americas and has nutritional benefits particularly to those that have no other source of protein. The consumption of *Encosternum delego-rguei* the edible stink bug (see picture for clumps of bugs that form in sunny wind-sheltered positions) may seem very strange but is a sought after delicacy by South Africa's northern most ethnic group, the Venda (Limpopo Province) and is even imported from Zimbabwe and Mozambique to supply the Thohoyandou market. Price can vary from R 5 (air-dried product) to R 15 (special order of live insects). The most widely used name is Thongolifha but it is also called Tsonônô meaning "he farts, he is fat" in Bushbuckridge or Podile which is a se Pedi generic term for all stink bugs. Zimbabweans also consider it a delicacy and know it as Harurwa.

The major harvesting areas in South Africa are around the Modjadji Cycad Reserve and Thohoyandou in Limpopo but the bug is also collected in Mariepskop and Salique Forests in Mpumalanga. The adults aggregate during the winter (May to August) on riverine vegetation, woodlands, orchards, gum and pine plantations in sheltered but sunny areas. They are easy pickings for harvesters early in the morning or at night when cooler temperatures prevent them from flying off. The adults do not feed and rely on fatty reserves in the abdomen. No data exists on the resource size, preferred habitat of nymphs and adults, food plants or the life cycle which would be useful for determining sustainable use. My research is funded through the NRF Northern Flagship Institute.

EDUCATION AND OUTREACH

Wits University

Yebo Gogga Yebo AmaBlomo Exhibition To Run from 4th -8th October at the Life Sciences Museum, School of Animal Plant & Environmental Sciences.

By C. M. Crump

For the third year in a row, the five day interactive insect, plant and animal exhibition "Yebo Gogga Yebo AmaBlomo" will be held at the Life Sciences Museum and areas of the Oppenheimer Life Sciences Building from Wednesday 4th October to Sunday 8th October 2006. From small beginnings

it has become a truly integrated community outreach project that satisfies many of the requirements of an ideal engagement scenario.

The project provides a service to the community by addressing shortfalls in teaching biology at schools by means of providing live animals and plants which form an interactive framework round a theme and thus an educational situation for learners that is not encountered in the classroom. Junior and Senior workbooks will be made available at the exhibition and may also be downloaded towards the end of September from our web site at
hhtp://hermes.wits.ac.za/www/Events/YeboGogga/
The project is also integrated within our teaching. Last year the topic "Service Learning in Biology "was offered to second year students in the School of Animal, Plant and Environmental Sciences. Students who participated in the exhibition found the experience broadening and stimulating as well as increasing their awareness of social responsibility.

This year's theme will be medical. There will be a very exciting range of exhibits including a vast array of plants, insects and animals that harm or heal to minerals used in medicine.

The Aardvark
October 2006

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May 2007

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Submit articles to Carol Simon (c.simon@ru.ac.za), or Bettine van Vuuren (bjvv@sun.ac.za).

MESSAGE FROM THE EDITORS

Dear Members,
The ZSSA Council took the decision to streamline the format of our society's newsletter, the Aardvark. This 'new look' newsletter will not only be shorter but also include photographs, and in keeping with modern trends, will be distributed electronically via email and will be available for download from the ZSSA website (http://www.zssa.co.za). Given that the Aardvark did not appear last year, we have included important news from 2005 such as profiles of the medal winners. We have also included profiles of this year's award winners, a 'Focus on...' section where we will take a look at the work and careers of various zoologists in South Africa. Additionally, there will be a section for student matters, conference adverts as well as institutional and outreach news. The response to our call for contributions has been overwhelming, and we hope that this enthusiasm will continue in the future. We hope that you enjoy the feel of this new bumper edition of the Aardvark. Happy reading....

Carol Simon and Bettine van Vuuren

ZSSA COUNCIL, 2006 & 2007

Conrad Matthee (President), Nigel Bennett (Immediate Past President), Michelle Hamer (Vice-president), Sarita Maree (Secretary), Colleen Downs (Treasurer), Charles Griffiths & Gary Bronner (Journal editors), Carol Simon & Bettine van Vuuren (Aardvark editors), Bill Bateman (SAQA), Paul Grobler (Careers), Justin O'Riain & Martin Whiting (Marketing), Berndt Janse van Rensburg & Belinda Reyers (Biodiversity), Peter Taylor (Archives), André Vosloo (Conference convener) and Daniel Parker (Student representative).

MESSAGE FROM THE STUDENT REPRESENTATIVE

By Dan Parker (g98p6036@campus.ru.ac.za)

At the last ZSSA conference in Grahamstown, I was elected as the student representative of the ZSSA Council for 2006/2007. I would like to take this opportunity to tell you a little bit more about me and my role as your student representative.

I am currently registered for a PhD at Rhodes University and my thesis is aimed at assessing how elephant foraging affects the vegetation types of the Eastern Cape Province and how this influences the other animals and physical ecosystem processes that rely on the vegetation. Elephants are recognised as keystone herbivores in African savannas. Elephants are the largest land mammals, and consequently require large amounts of forage per day (~300kg for males). This, coupled with the fact that they are extremely wasteful feeders, means that they can have profound effects on the ecosystems they inhabit. These effects can have a powerful cascading effect through an ecosystem.