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## Rumen ciliates in the African (Cape) buffalo (*Syncerus caffer caffer*) living in the vicinity of the Orpen Gate entrance into Kruger National Park, South Africa

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### Abstract

Samples of rumen contents were obtained from 10 African (Cape) buffalo living in the vicinity of the Orpen Gate entrance into Kruger National Park in South Africa. Total number of ciliate protozoa per animal ranged from 3.15 to 23.25 x 10<sup>3</sup>. Forty three different species and forms were observed, of which 35 are a new host record. The total number of species and forms per animal varied from 10 to 17. *Eudiplodinium maggii* occurred in all 10 animals, followed by *Dasytricha ruminantium* in nine animals. *Diplodinium posterovesiculatum*, *Eudiplodinium magnodentatum* and *Ostracodinium mammosum* were present in seven animals with all other species and forms occurring in five or less animals.

**Key words:** African buffalo, ciliate protozoa, rumen, South Africa, *Syncerus caffer*

### Introduction

The African buffalo (*Syncerus caffer*) is not closely related to the Asian water buffalo or any of the other larger bovines. There are five subspecies, with *Syncerus caffer caffer* being the typical subspecies which is found primarily in South and East Africa. It is the largest of the subspecies, black in color and commonly called the Cape buffalo. The animals sampled in this study belong to this subspecies. The other four subspecies are smaller in size and are found in Central and West Africa or in the mountains of East Africa. Other than the report by Dogiel in 1932, on rumen protozoa from a single African buffalo in Uganda, no information was found on the fauna of this species. Based on location, it is presumed that Dogiel's (1932) animal belonged to the same subspecies. He reported a total of 21 species of ciliate protozoa.

### Material and methods

The samples were collected in a radius of 50 km from the Hans Hoheisen Wildlife Research Station (24°28'55.60"S, 31°23'09.40"E) next to the Orpen Gate of the Kruger National Park in South Africa during August till October, 2012.

For each animal, handfuls of rumen contents were taken randomly and the fluid squeezed out by making a fist with the thumb down so the fluid can run down into the container. This was repeated until a 200 ml sample was obtained. One hundred ml of formalin was added to each sample for preservation.

In the laboratory, a 10 ml subsample of the total 300 ml protozoa sample was collected by using a pipette to stir the total sample and collecting 1ml at a time until 10 ml was acquired. Two drops of Brilliant Green Stain were added to this 10 ml sample and left overnight. Using a finnpipet, 25 µl of the 10 ml stained sample was dropped on

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