

# Intestinal parasites in camel calves

Kerstin de Verdier<sup>1</sup>, Bengt Erlingsson<sup>2</sup>, Signe Erlingsson<sup>2</sup>, Helena Bosaeus Reineck<sup>1</sup>, Set Bornstein<sup>1</sup>

**Aims:** To obtain knowledge about parasites in Bactrian camel calves in Sweden.

## Introduction

Intestinal parasites were studied in young Bactrian camel calves (*Camelus bactrianus*) on a farm situated on the island of Öland in Sweden.

The herd is the largest camel herd in Scandinavia and comprises Bactrian camels (n=30), beef cattle (n=70) and llamas (n=20).



Photo: Signe Erlingsson

## Materials and Methods

All camel calves (n=7) born 2009 – March to May - were sampled each week from birth to 12 weeks of age, directly from the rectum.

In total, 81 faecal samples were examined by Stoll's technique, by larval cultures (nematodes), by immuno-fluorescens (protozoa) and by ELISA (rotavirus group A).

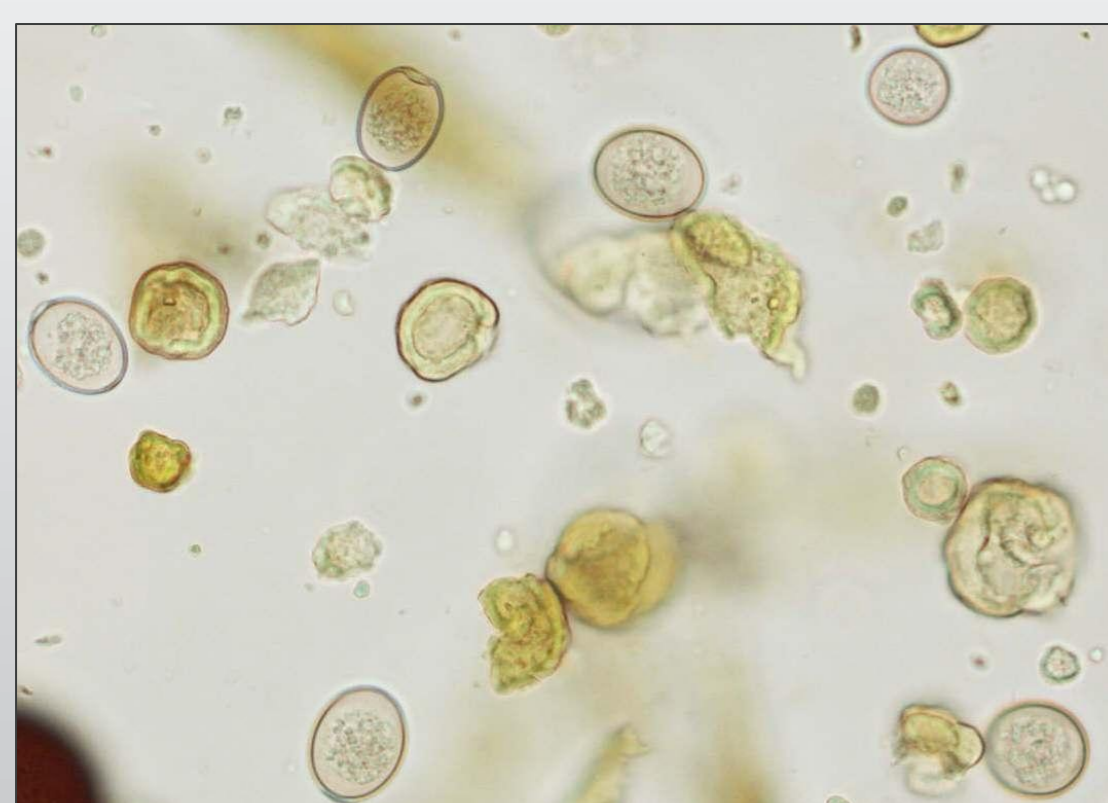


Submitted faecal samples

## Results

- *Eimeria* spp – small types - was the most prevalent finding (45/67) and opg ranged between 50 – 66 000.
- Prevalent findings were *E cameli* – the large *Eimeria* - (41/67, 50-4400 opg), Trichostrongylidae (18/68, 50-600 epg) and *Giardia* sp (28/79).
- Rare findings were *Trichuris* sp (4/68) and *Cryptosporidium* sp (1/80).
- Haemonchus* sp and rotavirus were not found.
- All calves were healthy throughout the study period.

Photos of parasites from the camel calves during the study:



*Eimeria bactriani* (small type) oocysts



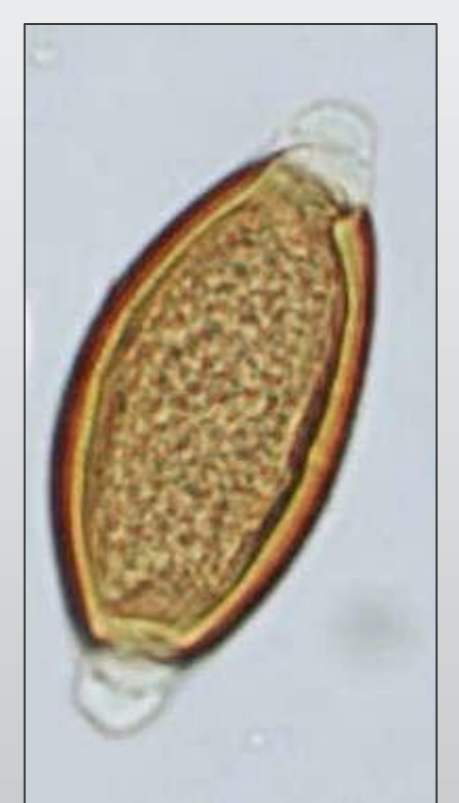
Sporulated *Eimeria bactriani* (small type) oocyst



*Eimeria cameli* (the large *Eimeria*) oocyst



Trichostrongylidae egg

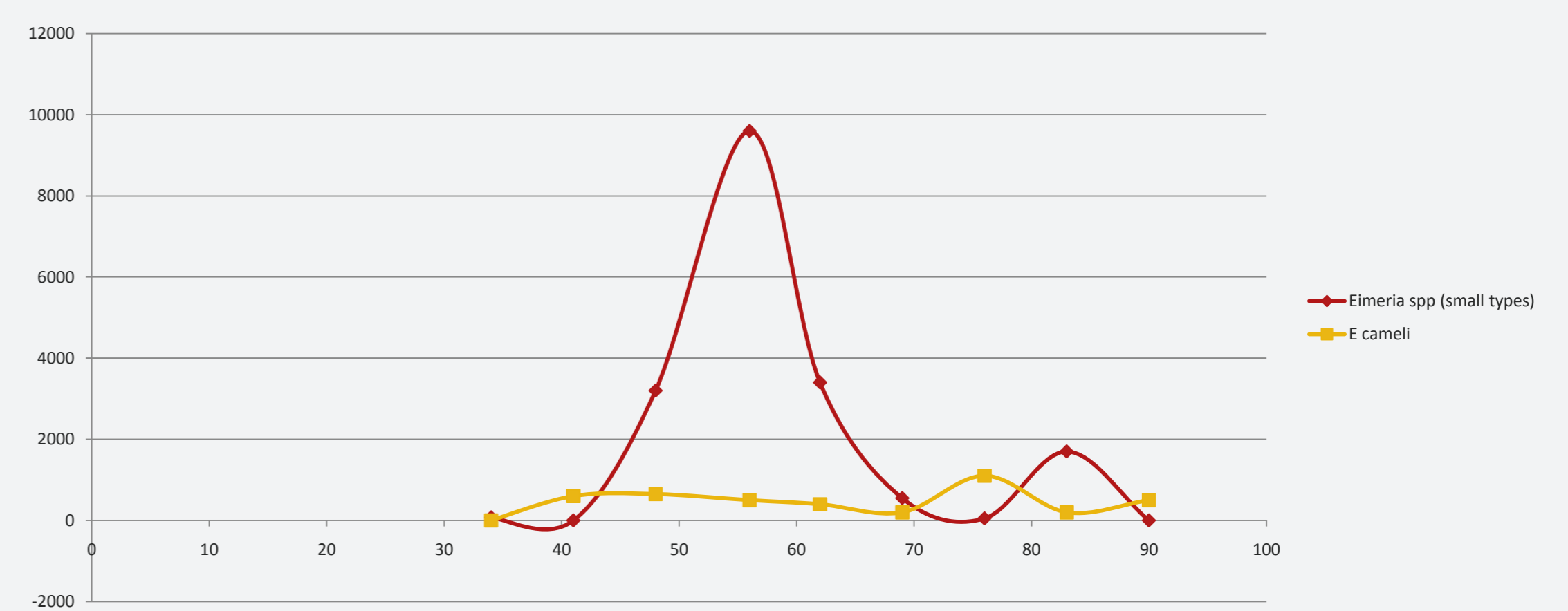


*Trichuris* sp egg

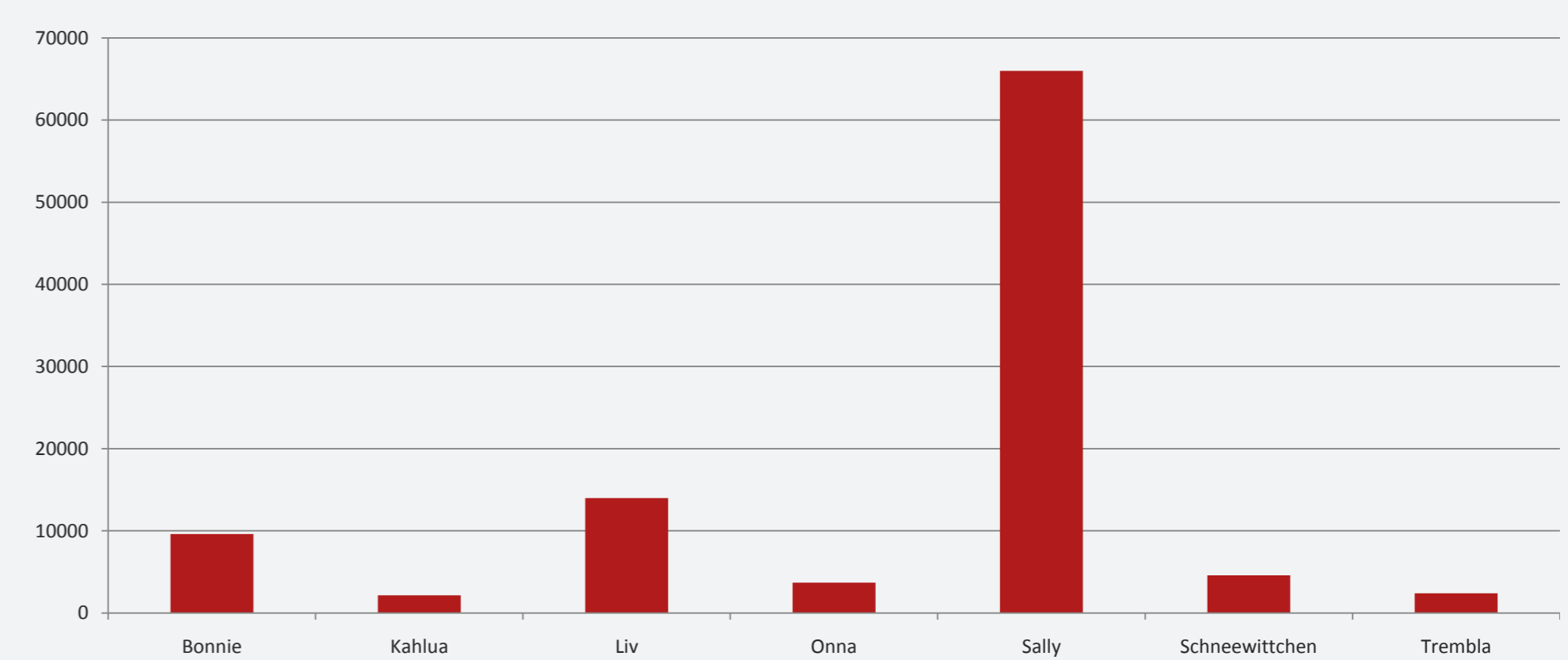
## Conclusion

The calves excreted *Eimeria* oocysts between 40 and 90 days of age, in uni- or bimodal peaks. One single calf excreted a major part of the oocysts.

The parasites did not cause clinical symptoms.



Excretion (opg) of *Eimeria* spp during 0-100 days of age in one of the seven sampled camel calves ("Bonnie").



Maximum excretion (opg) of *Eimeria* spp (small types) in seven camel calves.



<sup>2</sup>Ormöga Kamelranch, Sweden. [www.kamelranch.se](http://www.kamelranch.se)

<sup>1</sup>NATIONAL VETERINARY INSTITUTE  
post. SE-751 89 Uppsala, Sweden  
phone. +46 18 67 40 00 fax. +46 18 30 91 62  
e-mail. [sva@sva.se](mailto:sva@sva.se) web. [www.sva.se](http://www.sva.se)