

NEPHRITIS ASSOCIATED WITH *ACTINOBACILLUS EQUULI* IN THE CAPE MOUNTAIN ZEBRA

G. F. BATH

Regional Veterinary Laboratory

Middelburg, Cape

5900

In post mortem examinations conducted on four Cape mountain zebra *Equus zebra zebra*, nephritis was suspected of being a major contributory factor or the direct cause of death. In two cases *Actinobacillus equuli* was isolated from several organs.

The organism *Actinobacillus equuli*, which has also been described as various species of the genera *Bacillus*, *Bacterium* and *Shigella*, is responsible for arthritis and nephritis in solipeds, particularly horses (Buchanan & Gibbons 1974, *Bergeys Manual of Determinative Bacteriology*, Wilson & Miles 1964 *Topley and Wilson's Principles of Bacteriology and Immunity*). The resulting syndromes have been given the names Joint Ill of foals and Sleepy Foal Disease.

Cape mountain zebra from the Mountain Zebra National Park, Republic of South Africa, are sometimes presented to the Middelburg Regional Veterinary Laboratory for a post mortem examination to determine the cause of death. Four of these had lesions consistent with nephritis with or without other pathology when examined (Table 1). In the first case (73/171) no bacteriological specimens were taken because of the long interval between presumed time of death and autopsy.

The kidney lesions were clear and unmistakable in the last two cases (76/58) and 76/725).

Table 1

Autopsy data and bacteriology

| Case No. | Date | Age | Sex | Interim | Condition | Known Pathogens | | | |
|----------|----------|----------|--------|---------|-----------|------------------|------------------|------------------|------------------|
| | | | | | | Kidneys | Liver | Spleen | Lung |
| 73/171 | 72.07.16 | 14 years | Female | 48h | Poor | — | — | — | — |
| 73/434 | 72.09.26 | Newborn | Female | 12h | Good | Neg. | Neg. | Neg. | Neg. |
| 76/58 | 75.06.11 | 3 months | Female | 4h | Poor | <i>A. equuli</i> | <i>A. equuli</i> | — | — |
| 76/725 | 76.01.10 | 20 years | Female | 6h | Poor | <i>A. equuli</i> | <i>A. equuli</i> | <i>A. equuli</i> | <i>A. equuli</i> |

Although from these findings it is not established beyond doubt that nephritis caused by *Actinobacillus equuli* was the sole or major cause of death, it seems that infection by this organism was at least partly responsible for death.

It is also worth noting that in three cases the body fat reserves were absent. In these cases considerable gastro-intestinal parasitism by bots, strongyles and tapeworms occurred. This is a common finding in autopsies of zebra from the Park.

Acknowledgement

The Director of Veterinary Services is thanked for the facilities in carrying out these examinations.