

be causing malnutrition (especially in the dry season) which makes the population more susceptible to disease; (viii) protozoal blood parasites (e.g. babesiosis) are problematic when rhino are stressed during drought; and (ix) the high level of inbreeding is likely to manifest in abnormalities, reduced conception and greater calf mortality due to lowered immunity to disease, unless new rhinos are brought into the Crater.

3.7 Disease concerns for black rhino in East Africa

Elizabeth Wambwa, Chief Veterinary Officer, Kenya Wildlife Service.

Health risks for black rhinos include: (i) numerous tick species that cause diseases such as *Babesia bicornis* and *Theileria bicornis* which can result in rhino death under extreme conditions such as drought; (ii) biting flies, in particular *Glossina* species which are vectors for trypanosomiasis - a condition only likely to manifest clinically when rhinos are stressed; (iii) nematodes which cause skin ulcers; (iv) viral diseases such as rabies; (v) bacterial diseases such as Anthrax, Salmonella, *Pseudomonas pyocyanea*, coliform bacteria, *Clostridium* spp., and tuberculosis; (vi) Haemolytic anemia, which is usually linked to infection with *Leptospira interrogans* and can cause rapid death (within 48 hours of first symptoms); and (vii) trauma, disease and injuries sustained during and after translocation. Rhinos are routinely translocated in Kenya to increase metapopulation growth rates. Stresses exerted during translocation can, however, reduce immunity and increase the risk of infection. Resident rhinos also often fight with introduced rhinos which can cause injury or deaths. Nine rhinos have been killed by such incidents during 77 rhino translocations in Kenya. It is recommended that health and disease management play an integral role in the conservation of black rhino in the Crater. Before rhinos are brought into the Crater, for example, they should be rigorously screened for diseases and parasites. Serological investigations should be conducted in the Crater to determine the susceptibility of rhino to various infections and to develop a proactive disease management plan.

4. CRATER ECOLOGY WORKING GROUPS (3 SEPTEMBER 2003)

Small working groups were formed in the afternoons of both days. These groups were asked to identify management problems and solutions within their subject areas.

4.1 Working Group 1: Pasture, fire and ticks

Chair: Winston Trollope

Rapporteur: Amiyo Amiyo

4.1.1 Priorities that emerged:

- Development of a fire management plan;
- Development of a vegetation monitoring programme to assist fire management decision-making;
- Production of a map of the major vegetation units related to the major types of soils in the Crater;
- Identification of browse species favoured by rhino;