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THE REACTION OF THE CAPE MOUNTAIN ZEBRA (*EQUUS ZEBRA ZEBRA*) TO CERTAIN CHEMICAL IMMOBILISATION DRUGS

by

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Abstract – The physiological reactions evoked by M–99 and Azaperone in the Cape Mountain Zebra (*Equus zebra zebra*) are discussed. Notes on clinical as well as physiological parameters are presented and it is concluded that these drugs can be used effectively in the capture of individuals of this rare mammal.

Drugs advocated for use in the capture of Burchell's zebra *Equus burchelli* (Pienaar, 1969) have now also been used with equal success in the field immobilisation and restraint of the rare Cape mountain zebra *Equus zebra zebra*.

Five of the captured individuals, ranging from a young foal, 7 months old, to an adult full-grown stallion, were each darted while running, from a fast moving Landrover, with a narcotic mixture consisting of 2 mg of the thebaine-derived analgesic, Etorphine hydrochloride or M–99 (Reckitt and Sons Ltd.), 200 mg of the butyrophenone neuroleptic, Azaperone (Janssen Pharmaceutica) and alternatively 5 or 10 mg of the parasympatholytic alkaloid, Hyoscine hydrobromide.

It was attempted with success not to drive the animals for more than about 400 to 800 m before darting, in order to prevent overstraining and the frequent detrimental effects thereof.

They were all immobile within 3 to 5 minutes and recumbent within 5 to 9 minutes after administration of the drugs.

Clinical observations also revealed the initial drooping of the head and ears, partial raising of the tail and occasional staggering, followed by recumbency, more generalised locomotor arrest and eventually more or less complete general anaesthesia. Sweating was, at times, very pronounced.

Muscular tremors and twitching of especially the brachiocephalus muscles, as well as the marked dilatation of the pupils, were without doubt attributable to the hyoscine in the drug mixture, the former effects being especially obvious in animals which had received the relatively high dose of hyoscine. The midriatic effect, responsible for ex-

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treme nearsightedness and which may facilitate the capture of the thereby half blinded animals under veld conditions, could be adequately accomplished with as little as 5 mg of hyoscine in even the full-grown stallion. Higher dosage rates may occasionally cause fatal intoxication and should therefore preferably be avoided.

Physiological parameters varied from one individual to another; the pulse rate ranging from 92 to well over 200 per minute, respiration rate from 12 to 80 per minute and the rectal temperature from 35,3 to 39,7°C. These values were, of course, not only affected by the drugs used but also by the animals' attempts to escape from the capturing team.

After being recumbent for about 30 to 70 minutes and 4 of the 5 zebras having been transported to stables 3 to 5 km away, each animal received from 140 to 200 mg of the morphine antagonist, Nalorphine hydrobromide or Lethidrone (Burroughs-Wellcome). They all recovered completely from the effects of the capture drugs.

In addition to the above, a full-grown stallion kept in isolation stables for observation and treatment, was immobilised successfully on 3 successive days, each time receiving 3 mg of M-99 without additional Azaperone or Hyoscine. The latter adjunctives should, however, preferably be included for the capture of free roaming animals.

It may be concluded that the above dosage rates of the mentioned drugs can be used very effectively and with the required safety in the capture of adult individuals of this very rare species. It is, however, recommended that appropriately lower doses be used for immature or diseased animals and that hyoscine not be used at higher levels than that required to produce midriasis.

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