was maintained. This fact probably explains the constancy of the RBC and Hc values compared with freshwater-transported animals where the decrease in blood Na^+ concentration is known to be associated with a decrease in blood osmotic pressure (Hattingh & Van Pletzen 1974). This eventually leads to haemolysis. Maintenance of a constant blood Na^+ concentration during transportation therefore seems to be crucial for these animals and they most probably do this by absorbing NaCl from their medium.

Finally, although it is apparent that addition of salt to the transportation water aids the fish, the decrease in blood pH on the second day is indicative that some stress is still experienced. The cause of this remains to be investigated.

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SAND SOLIDIFIED BY GEMSBOK URINE AS SELECTED BURROW SITES BY GERBILS

M. K. SEELY
Desert Ecological Research Unit, Walvis Bay

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Gerbillurus paeba is widely distributed throughout the arid parts of southern Africa (Roberts 1951). Its range extends into the central Namib Desert where it is most often found on sandy areas of the central Namib plains or in the interdune valleys (Coetzee 1969). Its semi-permanent burrows are excavated in the sand either in the open (Laycock 1975) or, more often, close to dune-grass clumps (Coetzee 1969) and other vegetation. The sand at the base of perennial vegetation clumps (*e.g. Acanthosicyos horrida, Stipagrostis sabulicola, Trianthema hereroensis*) is solidified by fog precipitation falling from the plants and by the presence of the roots which facilitate burrow construction. Distribution of gerbil burrows in dunes is thus limited by the occurrence of perennial vegetation or other suitable burrow sites in the more compact pebbly soils of the interdune valleys.

Unconsolidated sandy interdune valleys can be successfully colonized only under special conditions. One such opportunity is presented by the occurrence of sand patches which have been solidified by gemsbok (*Oryx gazella*) urine. The concentrated gemsbok urine lightly cements a block of sand averaging 0,025 m^3 (n = 20) in diameter which is more resistant to wind erosion and other disturbance than the surrounding loose

FIGURE 1

Gerbil burrow at sand solidified by gemsbok urine which is situated in a sandy interdune valley.

sand. This provides a suitable location for the entrance to gerbil burrows which can then be extended into the more cohesive subsurface sands (Figure 1). Gemsbok occur widely and regularly throughout the dunes thus providing numerous suitable burrow sites.

In one sandy interdune valley 16 km south of Natab on the Kuiseb River in the Namib Desert Park a one-hectare plot was surveyed for gerbil holes and patches of sand solidified by gemsbok urine. Multiple entrances at one gemsbok urine patch were counted as one burrow. Of 134 gemsbok urine patches, 106 (79 per cent) were used for gerbil burrow entrances with from one to three entrances each. In this area there were 17 other gerbil burrow entrances. Thus of all burrow entrances in this area 86 per cent were situated at gemsbok urine patches. The surface area solidified by gemsbok urine totalled 13,4 m^2 or $1{,}34 \times 10^{-5}$ per cent of the total area surveyed. Using the chi-square test a non-random distribution of burrow sites was demonstrated ($p < 0{,}001$).

This valley supports a sparse cover of dried annual *Stipagrostis gonatostachys*, *Monsonia ignorata* and *Asthenatherum glaucum*, none of which is suitable for gerbil burrow entrances. Gerbils are highly mobile, crossing high dunes (Coetzee 1969) and are sometimes found far from their burrows (Laycock 1975). At such times they are subject to predation, primarily by jackals (*Canis mesomelas*). Access to escape provided by foraging in the vicinity of burrow systems probably reduces the possibility of being preyed upon. Thus the advantage gained by a more even distribution of burrows relative to food sources is facilitated by the use of solidified gemsbok urine sand patches as burrow sites.

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BABOONS AS DISPERSAL AGENTS FOR ACACIA CYCLOPS

CHRISTINE DAVIDGE
Zoology Department, University of Cape Town

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Baboons, many birds and a few rodents in the south-west Cape include significant proportions of seeds of the Australian wattle (*Acacia cyclops* – 'rooikranz') in their diets (Middlemiss 1963, 1974). These animals may, therefore, act as dispersal agents for *A. cyclops* by distributing undigested seeds in their droppings. A one-year study (March 1975–February 1976) of a troop of chacma baboons, *Papio ursinus*, in the Cape of Good Hope Nature Reserve provided oppor-