

The Editor  
SAFRING NEWS

Dear Sir,

**PROBLEM BIRD CONTROL USING MISTNETS: A CONSERVATION  
PERSPECTIVE**

Fraser, Underhill and McMahon (1990) in the previous issue of Safring News questioned the success of mistnet control measures for small problem birds in the southwestern Cape, and also the involvement of the Chief Directorate Nature and Environmental Conservation (CDNEC), Cape Provincial Administration, in these activities.

The South African provincial nature conservation bodies have a statutory responsibility (according to the Financial Relations Act, 65 of 1976) to render a supportive service towards the elimination of agricultural losses and other damage caused by indigenous vertebrates. Practical considerations dictate that more attention be given to certain species as a result of their ecological importance or their importance to man. Various categories of problem animals were therefore compiled, and the highest priority is given to species such as the Blackbacked Jackal, Caracal and Leopard (Lensing & Vorster 1983). This is done on the grounds that they cause more significant losses, but at the same time fulfil important ecological functions in relatively natural areas.

The lowest priority is given to problem species which occur abundantly in man-transformed habitats; this group includes rodents, e.g. the Cape Gerbil and Cape Dune Molerat, and various small granivorous or frugivorous birds, e.g. the Cape Sparrow, Cape Weaver, Red Bishop and certain starlings. Problems caused by these species are considered to be largely an artefact of intensive land-use practices. Such environments generally have little conservation value, and the CDNEC's involvement is therefore limited to advice and assistance to other bodies on request. However, the primary objective with problem animal control entails that no actions harmful to the natural environment be taken. In this regard therefore the CDNEC has the responsibility to ensure that ecologically acceptable control methods be applied, which will not unduly affect the populations of protected species.

The legal position regarding the accepted small problem birds is that they are unprotected, and may be controlled by certain approved methods such as shooting, egg-removal, etc. However, these methods are usually ineffective in cases of severe crop losses. A problem bird committee consisting of representatives from various farmers associations and

governmental bodies was established to address the problems of bird damage in the southwestern Cape, which reaches serious proportions locally (Anon. 1984). It became evident that numerous farmers resort to ecologically harmful methods such as poisoning and habitat destruction. Under the auspices of this committee various repellents and bird control methods were investigated, but they were mostly found to be ineffective or unacceptable (Swart & Flight 1982; Heyl 1986). Based on extensive field-trials Jarvis (1986) concluded that mistnetting could potentially be an effective control method.

Permission was therefore granted to certain farming communities to use mistnets. The procedure to obtain mistnets entails an inspection of the severity of crop losses, and the training of prospective mistnet users, by the Department of Agriculture. Following this, permits are issued to successful applicants by the CDNEC, which is also responsible for regular inspections of mistnet operations. In answer to the fears of Fraser et (1990), the CDNEC's involvement is primarily related to a conservation function, i.e. to ensure that the stipulated permit conditions are being complied with, and that control operations have a minimal effect on protected species. Since 1987 permits have been issued to grainproducers who have experienced severe crop losses. Over a three-year period a total of 75 988 birds were controlled by the 10 to 12 farmers who actively participated in mistnet control. Captures of target species consisted almost exclusively of Red Bishops (82%), Cape Weavers (13%) and Masked Weavers (5%). Non-target species are to be released unharmed, and according to the returns supplied by farmers only small numbers (<0,1% of the total) were being captured. As from the 1989/90 season, permission was also granted to grape-producers; during the first season 11 564 birds of various target species were controlled, consisting mainly of Cape Weavers (43%) and Cape Sparrows (38%), captured by 15 farmers. Compared to national pest species such as the quelea, of which an estimated 119 million were poisoned in 1987 (Anon. 1988), the magnitude of control operations in the southwestern Cape is small.

Fraser et al. (1990) argued that a high **short-term turnover** of individuals at problem areas could nullify the effect of control measures. However, the scientific evidence they have provided tends to contradict their viewpoint: the large majority of Cape weaver recoveries were for birds which moved less than 15 km, indicating a low turnover. Furthermore, recovery data cannot be expected to throw much light on short-term turnover rates, because of the usually extended time lapses between ringing and recovery. Especially in the grain-producing areas control operations take place during the breeding season, when most birds are sedentary and movements are restricted to feeding flights within a radius of a couple of kilometres from the breeding site. Birds are also being caught close to their breeding colonies, to which they have a high fidelity, perhaps even in subsequent breeding seasons. These conditions should promote the ability to reduce bird

numbers locally. The returns also showed that individual farmers can catch fairly large numbers of birds (up to 6 400 per season), and reports indicate that satisfactory reductions in crop damage have resulted in some cases.

Because of the labour intensiveness of mistnetting, it is evident that those farmers who do not materially benefit from it, will discontinue their actions. Farmers are not enforced to control problem birds, and it is in their own interest to ensure the cost-effectiveness of their efforts.

Nevertheless, it is acknowledged that mistnets could potentially be harmful if used injudiciously. There is especially a concern about control operations involving Red Bishops, which breed in aquatic habitats where rare species such as bitterns, crakes and flufftails may occur. The CDNEC's officials have up to now experienced a responsible attitude from the farmers. However, should evidence come to light that mistnetting has a deleterious effect on the populations of non-target species, this concession could be suspended.

**C.W. Heyl, Jonkershoek Nature Conservation Station, Private Bag X5014, STELLENBOSCH 7600**

- o O o -

**CSIRO BIRD BANDING PROGRAMME**

**KELLERIN, WESTERN AUSTRALIA**

**Perry de Rebeira**

This is an outline of the work carried out by the Division of Wildlife and Ecology of the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and provides some details of the bird banding programme at Kellerberrin.

The aim of the Division is to understand the nature of Australia's ecological systems and their component species and to provide a sound scientific basis for the management and conservation of wildlife, plants and land resources.

The Division's laboratory in Western Australia is studying the effects of habitat reduction and fragmentation on the distribution and abundance of native animals in the grain-producing area of Western Australia. This work is based at Kellerberrin in the central wheatbelt.