## RINGING - AN UNMEASURED MORTALITY FACTOR

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The ultimate ringers' nightmare is a recovery of a bird which shows injuries as a result of having being ringed. Occasionally letters reach NUBRA which document and even illustrate injuries suffered by birds. The birds may have been badly ringed or a ring may have aggravated a subsequent injury.

Ringers are in a privileged position of being able to handle birds. Obviously they should cause as little interference as possible. It is for this reason that there is a strict code of conduct which ringers abide by. This serves to prevent birds being injured through capture or incapacitated by an incorrectly applied ring. Hopefully cases of misconduct are rare, as one instance is often enough to have the reputation of all ringers, and the value of ringing, brought to question. Ringers accidentally misfiting a ring and releasing a bird should clearly mark the fact on their ringing schedules.

It is most important that there is no difference in survival chances of ringed and unringed birds. Otherwise the population dynamics factor calculated will be falacious. While we assume that ringing does not decrease the chances of survival of a bird it is very difficult to obtain data to substantiate this assumption.

It was quite by chance that I obtained some figures which give some indication of the problem of ringing as a mortality factor. In 1973 I ringed two populations of White-browed Sparrow- Weavers Plocepasser mahali, in the Wankie National Park, Rhodesia, one at Main Camp and the other at Robins Camp. In 1975 the survival rate of the Main Camp population was calculated at 0,55 per bird per year while that of the Robins Camp population was 0,70, (Vernon in prep.). Was the difference in survival rates real or artifical?

Examination of some of the birds at Main Camp showed that their aluminium rings had become "cemented" to the leg of the bird. This was probably because of the alkaline soil there formed a bond with the ring. This "cementing" may have caused some birds to die. At Robins Camp the soil was basaltic and the cementing did not appear to have occurred. While other factors such as a differential tendency to disperse, or variations in food supply, may have caused the different survival rates, the potential ringing bias makes it impossible to do more than speculate.