A PITFALL IN THE USE OF THE OTOSCOPE TECHNIQUE FOR SEXING BIRDS

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INTRODUCTION

Many species of birds have no external characteristics that can be used to determine their sex. An otoscope may be used to determine the sex of birds which show no external sexual dimorphism (Riser 1971; Ingram 1978). This technique has been used on many species including psittacines, cranes, finches and raptors (Ingram 1980).

MATERIALS AND METHODS

Most female birds have only one ovary, on the left side, so the bird must be positioned on its right side. The bird can be kept in position by tying its feet together and attaching them to one side of a dissecting board. The wings can be secured by tying a loop around the base of the wings and securing this string to the opposite side of the dissecting board to that to which the feet are secured. The feathers are then plucked from a small area (about 2 x 2 cm) between the top of the left thigh and the last rib. An incision is then made (about 1 cm long) parallel to the last rib. The area of incision should be sterilized with alcohol prior to incision. This incision will allow an otoscope to be placed directly into the posterior thoracic air sac. The gonads can then be viewed directly. Ingram (1980) suggests that a dose of 0,03 to 0,04 mg/g body weight of ketamine hydrochloride be administered prior to the operation. This operation has been performed on 14 adult Crowned Plovers *Vanellus coronatus* and six adult Crested Barbets *Trachyphonus vaillantii*. The incision was not sewn up after the operation. All these birds were kept in captivity for 3 weeks after the operation to determine whether there were any ill-effects. The incision closed up in all the birds operated on.

DISCUSSION

None of the birds suffered any ill-effects as a result of the operation. The gonads of all the Crested Barbets (non-breeding) examined were successfully detected. However, the gonads of non-breeding Crowned Plovers could not be detected. Because it is possible that some species of birds may suffer ill-effects as a result of this operation, it is suggested that one only use this technique if there really is no other way of determining the sex of the birds being studied, particularly because this method is not always successful and may depend on the breeding condition of the birds involved.

REFERENCES

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Editor's comments:

A recent publication (American Ornithologist' Union. 1988. Report of Committee on use of wild birds in research. *Auk* 105 [1 Suppl.]: 1A-41A) states: "Exploratory laparotomy has a number of uses. It can provide information on sex in monomorphic species and stage of gonadal development, as well as indicate presence of parasites, gross condition, and activity of other organs. Topical application of xylocaine creme may reduce discomfort of laparotomized birds. Speed of operation is important so that the bird can be released within minutes. ..... In many cases, such as small land birds, sealing the laparotomy wound is not necessary and healing occurs within 3 - 7 days.".

Ward quotes Ingram (1980) regarding the use of ketamine hydrochloride as an anaesthetic. On the subject of anaesthesia, the AOU report states: "....there are no easy answers and no single agent ideal for all situations. The agent of choice for one species may be ineffective, or lethal, for other, sometimes closely related, species.". According to the AOU report, ketamine hydrochloride has a wide safety margin and is inexpensive, but it has highly variable effects, is a poor muscle relaxant, and recovery is violent.

The majority of ringers have neither the training nor the equipment nor, that that matter, the desire to undertake invasive surgery on the birds that they catch and ring. This sort of procedure is more properly the field of qualified veterinarians who, in addition to their expertise, usually also have compassion for the animals they are treating. Ward's article is published here because it provides evidence that laparotomy is not an infallible technique for sexing birds.