

## SHORT NOTES

### SEXUAL DIFFERENCES IN PUKEKO CALLS

Pukekos (*Porphyrio porphyrio melanotus*) do not have distinct physical characteristics that can allow the sex of a bird to be determined by eye. Earlier workers have described ways of sexing Pukekos by taking measurements of various physical features — culmen + shield length and body weight (Williams & Miers 1958) and shield width,

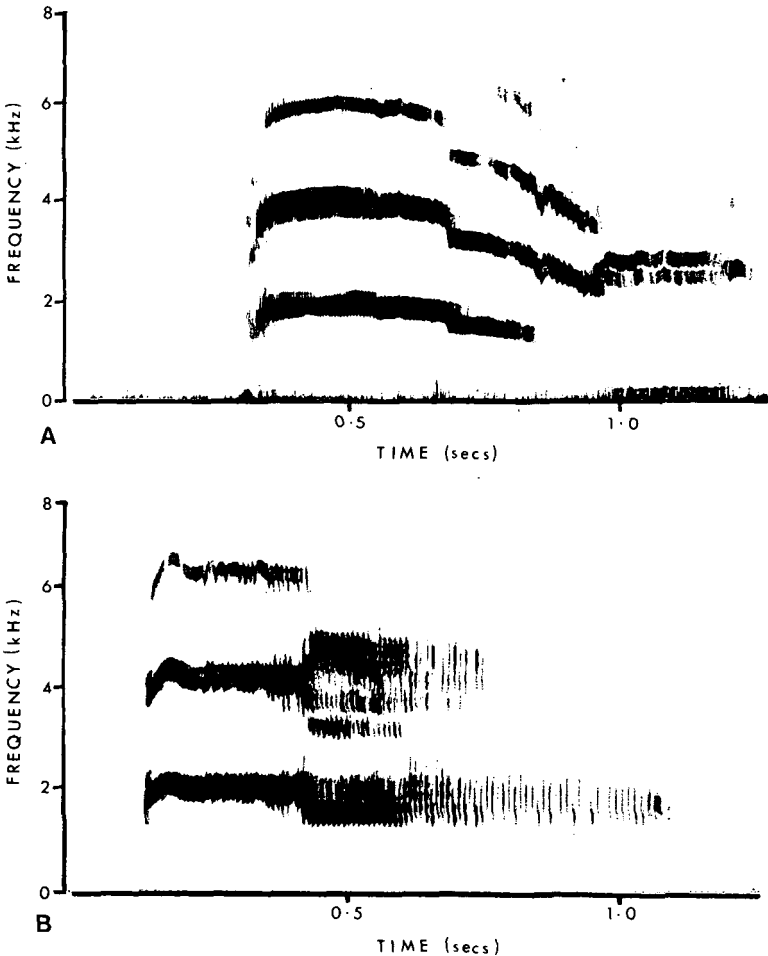


FIGURE 1 — Sonograms of the crowing calls of (a) male and (b) female Pukeko

bill depth, and nares-to-tip length (Craig 1974, Craig *et al.* 1980). Male Pukekos are larger than females, but these methods require the capture of the birds for measuring.

I have recently finished a study of the vocal behaviour of the Pukeko (Clapperton 1982), using a population from which measurements of these features were taken and analysed to determine the sex of the birds. During this study it became evident that the loud crowing call of the Pukeko shows distinct sexual dimorphism.

The crowing call, given as a territorial advertisement call, is a loud drawn-out call heard frequently during the day and night. The call of the male is a clear sound, whereas that of the female has a harsh, guttural quality. This difference in quality is due to differences in the structure of the second part of the calls — in the male the second part is at a low fundamental frequency with little or no frequency modulation (Fig. 1a), whereas the female's call does not drop in frequency and the frequency is modulated widely (Fig. 1b).

This difference can, with practice, be easily distinguished by ear and can be used as a quick guide to the sex of birds in the field.

#### LITERATURE CITED

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### WINTER FLOCKING OF CHAFFINCHES IN NORTHERN NEW ZEALAND

When the nesting season is over, flocking and migration are part of the normal way of life of many species of finches and buntings. In Europe, Chaffinches (*Fringilla coelebs*) have attracted attention for more than two centuries because quite often large flocks seem to be composed almost entirely of birds of one sex. Hence their scientific name given by Linnaeus, which means literally, Bachelor Finch.

In Gilbert White's *Natural History of Selborne* there is a well-known passage in Letter XIII dated 22 January 1768 and written to Thomas Pennant: "For many years I have observed that towards Christmas vast flocks of chaffinches have appeared in the fields; many more, I used to think, than could be hatched in any one neighbourhood. But when I came to observe them more narrowly, I was amazed to find that they seemed to me to be almost all hens. I communicated my suspicions to some intelligent neighbours, who after taking pains about the matter, declared that they also thought them mostly females —