McPHERSON, L. B. Sounds of New Zealand Birds, Vol. 4. A 45 r.p.m. extended play record, PR 699. Christchurch: McPherson Natural History Unit, P.O. Box 21-083, Edgeware, 1973. \$1.50 plus postage.

This fourth volume in Mr Les McPherson's series consists of the following well-known New Zealand birds:

Tui Bellbird North Island Robin Whitehead South Island Fantail North Island Fantail Silvereye Brown Creeper Pied Tit Long-tailed Cuckoo

which were taped in 1956-57 by Carl and Lise Wiesmann of Lyngby, Denmark. This record is of the highest quality so far in this series. No extraneous background noise can be heard, and Mr Wiesmann obviously took pains to do his recording on windless days with his microphone close to the bird. There is, however, some overrecording on most of them, and I do not know whether this occurred during original recording or transcribing tapes to disc. EMI L2a and L2bs field recorders were used on Scotch 11A and 12 tapes with a 36 inch parabolic reflector. The call of the Long-tailed Cuckoo on side two is incorrectly attributed to the Indian Myna on the record cover but Mr McPherson has since issued a correction slip.

As John Kendrick said in his March 1973 Notornis article, "Methods and applications of natural sound recording," while it is possible to achieve pleasing bird tapes with inexpensive equipment, the higher-quality recorders operating at the faster speeds do produce the better tapes.

One of the problems we meet in taping birds is that some birds produce terrific volume on their high notes. Designers of tape recorders don't know this and manufacture machines to reproduce music and voice where the greatest volume comes not from the high notes but in the middle tones (or frequencies). Thus, when a bird such as the Hedge Sparrow, Song Thrush, Fantail, or Tomtit, sings, it is important not to set the volume too high, otherwise a distortion known as over-recording will occur. The more expensive tape recorders operating at a speed of 15 inches per second, with VU meters and headphone monitoring, are able to handle this more effectively because the operator can hear the distortion through his phones and set his volume control lower. Also, tape passing the recording head at 15 inches per second is able to separate more of the rapid, high-frequency bursts than is a slower-speed tape.

Aside from this technical factor, the great secret in obtaining high-quality bird tapes anything like the standard of *Sounds* Volume 4 is to get the microphone close to the bird in a situation where there is no wind, no noise from streams or ocean surf, no tractors, cars, planes, dogs, etc. It isn't easy; but those who have the know-how, patience, perseverance and luck, can get some delightful tapes with average equipment.