5 For a biographical note on McDonnell refer to An Encyclopaedia of New Zealand, 3 vols (Wellington, 1966) II, p. 357.

6 McDonnell read his paper '... Observations on New Zealand' to the Royal

Geographical Society on 10 March 1834.

7 Subsequently numbered 1212, this chart became the first of many editions of the Admiralty general chart of New Zealand to bear this number.

8 Robert McNab, Murihiku (Wellington, 1909), p. 306.

9 New Zealand Geographer, 20 (1964), 189-93.

10 Cook's longitude was 40' too far east.

11 McDonnell makes no claim that he journeyed south, nor is there any evidence that he surveyed in New Zealand coastal waters except in Hokianga, Kaipara and Manukau harbours. Manuscript charts drawn by McDonnell of Kaipara Harbour are held in the library of the Royal Geographical Society, London and the Mitchell Library, Sydney. James Wyld published McDonnell's chart of Kaipara Harbour in 1838.

12 See the illustration showing part of Australia in J. Blaeu's 1648 world map reproduced in G. Schilder's *Australian Unveiled* (Amsterdam, 1976), p. 371.

13 Basil Howard in *Rakiura* (p. 366) mentions that McDonnell paid a visit to Port Pegasus and perhaps to other parts of Stewart Island before 1833. But as there is no evidence to support this belief, it is unlikely that McDonnell journeyed anywhere near Stewart Island or the South Island. In his *Extracts*... *Containing Observations on New Zealand*, (London, 1834) McDonnell does not say he visited Stewart Island (or other places) he describes so vividly.

14 Extracts . . . Containing Observations on New Zealand (London, 1834).

- 15 As the second edition of McDonnell's chart was published on 9 February 1837, d'Urville most likely obtained the updated issue of McDonnell's chart.
- 16 Included in the atlas published to accompany the account of d'Urville's 1837-1840 voyage, Voyage au Pôle Sud et dans l'Océanie . . . (Paris, 1843-47).

17 Olive Wright, The Voyage of the Astrolabe (Wellington, 1950), p. 16.

18 The Admiralty general chart of New Zealand (see reference 7) showing Akaroa Harbour on the eastern side of 'Banks Island' was most likely also carried on the Astrolabe.

19 'Carto-bibliographical Description . . . ', p. 82-83.

20 James Wyld died in 1836 and his son James Wyld the Younger succeeded him as head of the publishing firm.

21 11 (June 1980), 28-35.

22 A burnisher was used to polish out shallow lines on an engraved copper plate. Major revision in one area on a plate was made by resting the plate on an anvil and pounding the copper from the back of the plate with a hammer. Fresh engraving was then carried out. For a detailed description of the technique of copper plate engraving and printing see Coolie Verner, 'Copperplate printing', in *Five Centuries of Map Printing*, edited by David Woodward, (Chicago and London, 1975), p. 51-75.

23 R. A. Skelton in *Maps; a Historical Survey of their Study and Meaning* (Chicago and London, 1972) notes on p. 31 that engraved copper plates of maps were discarded or beaten down for re-use in great numbers when lithography and zincography were applied to map reproduction in the nineteenth century.

24 The author is grateful to Mr P. L. Barton, Wellington, for supplying information regarding the firms of Bacon and Johnston.

* *