

Pemberton to cope with the usual last-minute demands. The distributions will again be made at the rear of the State Housing Commission's buildings. Technical Officer J.S. Simpson will be in charge, assisted by Mr. Ian Bartholomew, of Head Office.

WHALE MARKING

Working in conjunction with Mr. R.G. Chittleborough, research officer of the C.S.I.R.O., the research vessel "Lancelin" spent the last two weeks of July and the first week of August in Shark Bay carrying out an interesting whale marking programme. During this period a total of 86 marks were fired. These marks (see figure overleaf) are metal tubes $10\frac{1}{2}$ inches long, each bearing a serial number and inscription. Some of the marks used were of an earlier type which referred to the Colonial Office, London. The marks are manufactured in England and distributed by the British Institute of Oceanography. Any marks recovered on the Australian coast should, however, be returned to the Fisheries Division of C.S.I.R.O., as they will in all probability be those used in the research programme of that Division. A reward of £1 is paid to the finder of a mark.

Whale marks are fired from the shoulder, using a specially built 12-gauge gun. An extreme range of 70 yards is claimed, but for efficient marking a range of up to 30 yards is preferred. The mark usually lodges in the whale's blubber and is recovered during flensing operations at whaling stations. Some marks do not enter the blubber completely: such protruding marks are less effective as they are likely to work out within a few weeks of marking.

The aims of marking whales are twofold: the discovery of migrations and determination of growth-rate. Marking previously carried out by the Discovery Committee (London) greatly assisted British scientists to outline the main groupings and migration routes of the humpback whale. For example, marks fired into humpback whales in Antarctic waters south (and south-west) of Cape Leeuwin have been recovered along the Western Australian coast (up to 17 years later), but not from the eastern coast of Australia. Humpbacks wintering off the

eastern coast of Australia are a separate group which is concentrated in Antarctic waters south of Tasmania and New Zealand during the summer. It is hoped that the present marking will enable further details of the migration pattern to be elucidated.

If calves (14 to 20 feet long) and yearling humpback whales (about 30 feet long) are marked, the recovery of such marks in later years can yield valuable information upon the growth-rate and age at maturity, for the age of such whales would be accurately known.

One mark from the recent marking in Shark Bay has already been recovered from a humpback killed 20 miles south of the point of marking, 2 days later. However, it is hoped that more marks will be recovered in later years.

Captain Piesse, skipper of the "Lancelin", reports that the area of operations was between lat. 24° 31' S. and lat. 24° 45' S. The first whale was marked on July 16 in Geographe Channel. Humpbacks were plentiful in the whole area, as many as 50 being seen on some days, mainly in pairs and in groups of from 3 to 6. The greatest concentration appeared to be in close proximity to Geographe and Naturaliste Channels.

"Lancelin's" maximum speed is 8 knots, and it was feared she would not be suitable for whale marking. However, very little difficulty was experienced in approaching close enough to the whales to record a most satisfactory percentage of hits. Pairs were easier to mark as they moved more slowly than single whales.

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WHALE MARK - $\frac{2}{3}$ ACTUAL SIZE

(147)

To facilitate shooting, it was found necessary after the first few shots to rig a makeshift crow's nest from the stem head forward of the rigging. This gave greater elevation and also a greater range.