phenomena much more fully in the near future. Airscrew research has been carried out in co-operation with the Royal Aircraft Establishment on full-scale airscrew performance in the 24-ft. wind tunnel there. On the subject of 'flutter derivatives' it is hoped that some light will be thrown by the results of measurements of the instantaneous air forces acting on oscillating aerofoils by an apparatus which is under development.

Among the researches carried out at the William Froude Laboratory was one for the Herring Industry Board and the Coal Utilisation Council concerning the herring drifter, and it was shown that the form of hull in use at present can be so improved as to give a 40 per cent reduction in power for a speed of 9 knots, with a definite improvement in seaworthiness as shown by tests in rough water. In the Alfred Yarrow Tank it is proposed to replace the wave making apparatus which after twenty-one years service is badly deteriorated. The new equipment will be of 12 b.h.p. instead of 7 b.h.p. and will, by being run from a separate electric supply, be able to give a longer test. Numerous researches have been carried out on screw propellers and in several cases the results have been published. Other researches have been in connexion with the shape of ship bows, natural frequency relative to ship vibration, and the effects of helm action on propulsive efficiency. For a special tug, a programme of research on a pair of paddle wheels will shortly be put into operation.

These are but a selection of the activities which are treated in the report, in which particulars of the several papers published by each of the departments are given.

Nutritional Surveys of Inland Australia

Problems of Child Nutrition

FEW of the various national nutrition committees appointed following the recommendations of the League of Nations have brought more enthusiasm and resource to their task than the Commonwealth of Australia's Advisory Council on Nutrition. Its recently published fourth report provides ample evidence not only of painstaking endeavour to arrive at a true assessment of the nutritional state of white children living in urban and rural districts of Australia, but also of the need for devising means whereby the revealed deficiencies may be corrected.

Dr. F. W. Clements, who is engaged on a three-year programme of surveys designed to cover a large section of the interior mainly beyond the railway system, presents his preliminary findings for certain inland areas of Queensland, New South Wales and Victoria. Of the children examined in New South Wales, 23·7 per cent showed signs of unsatisfactory nutrition; in Queensland the figure was 18·8 per cent, and in Victoria, 13·3 per cent. Amongst pre-school children of Melbourne examined during the same period, the corresponding percentage was as high as 21·7. Although the numbers examined were necessarily small, there is no reason to suppose that they were in any way selected or unrepresentative of the prevailing conditions. The Council, therefore, finds itself faced with two distinct problems, the undernourished child of the city, and the undernourished child of the remoter outback districts.

Chief consideration has been given to the occurrence of rickets and nutritional anæmia, the incidence of both of which was found to be considerable. In Victoria, for example, a high incidence of anæmia among pre-school children was discovered, boys apparently being more prone to develop the symptoms than girls; and the conclusion is reached that the average hæmoglobin level in children of the Queensland outback is distinctly lower than that of children living in the cities of Scotland. A careful watch for scurvy was unrewarded save for one doubtful case of hypertrophic gingivitis. That fruit is rare may be gathered from one of those touches of significant observation which make this whole report of unusual interest. At a backwood's race meeting the author purchased from a wandering salesman a dozen small shrivelled apples at a cost of 2½*d.* each. Fresh tomatoes are also a luxury, but potatoes and pumpkin are largely eaten. Further inquiry into the circumstances of those children found to be suffering from rickets, elicited the fact that they were accustomed to a low intake of protective foods, little milk and no cod liver oil. It is reported, too, that in several towns no milk is available for the feeding of children in infancy.

The section on the Mount Isa communities is perhaps the most interesting in the report. Here, two almost distinct towns have grown up around the Mount Isa lead-silver mines. At the mine site the enterprising company has built for its employees comfortable houses adequately planned and situated amid sylvan surroundings. Rent is reasonable, electricity is free, and many other advantages play an important part in maintaining a sense of citizenship. On the town side, on the other hand, are to be seen shacks improvised from carbide drums, kerosene tins and hessian, where a shiftless and improvident population has no incentive to maintain a decent standard of living. The following reflects the difference in condition, and it is to be noted that the parents of children suffering from rickets in the Mines School were all new arrivals to the district and had been long unemployed.

Deficiency Diseases	*Town School*	*Mines School*
Nutritional anæmia	12·0 per cent	3·4 per cent
Active Rickets	17·0 ,,	10·3 ,,
Chronic infections	4·0 ,,	1·7 ,,

In view of their importance and bearing on similar problems being investigated in other parts of the Empire, it is to be hoped that these Australian results will be placed on permanent record and be made easily available to all who are engaged on nutrition survey work.