

THE FOOD OF TROUT IN NEW SOUTH WALES. 1933-1934.

By KEITH C. MCKEOWN

(Assistant Entomologist, the Australian Museum).

THIS paper contains the results of the investigation into the food of trout in New South Wales carried out during the season 1933-1934, and gives details of the stomach contents of 118 Rainbow Trout (*Salmo irideus* Gibbons), 27 Brown Trout (*Salmo fario* Linnæus), and 2 Loch Leven Trout (*Salmo levenensis* Walker).

A preliminary report¹ published in 1934 covered the results of the work carried out in 1931-1933. This investigation aroused so much interest among anglers and those concerned in the propagation of trout in our streams that the work was carried on throughout the past season, members of the Rod Fishers' Society of New South Wales kindly submitting collections of trout stomachs from time to time.

A notable feature of the stomachs examined was the large number of caddis cases found, which numbered 6,648 from 146 fish as against 188 in 1931-1933 from 44 fish. These figures conform very closely to those which have been obtained in New Zealand.

Dragonflies and their nymphs were found to be considerably in excess of those found in the previous season's work; 475 in 146 fish as against 56 in 44 fish. One fish contained no less than 256 adult Zygopterid dragonflies. The proportion of aquatic to terrestrial insects is practically reversed, the terrestrial species being in very much smaller numbers this season; a condition due, possibly, to the extremely wet season experienced throughout the State, which would tend to render the terrestrial species less available, and force the fish to feed more upon the aquatic forms.

One small Cat-fish obtained from a Rainbow Trout is of interest in view of the contention that the trout feed upon fry.

The opinion was freely expressed in some quarters that the Brown Trout feeds more upon the surface of the water than does the Rainbow. A comparison of the averages of the various Orders of animals eaten shows that there is little in the figures available to support the contention, whatever may be disclosed when larger

¹McKeown.—Notes on the Food of Trout and Macquarie Perch in New South Wales. Rec. Aust. Mus. **xix**, 2, 1934, pp. 141-152, pl. xvii.