

Feeding an Expedition

by

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By Robert A. Blair.

"Man shall not live by bread alone."

—Matt., iv., 4.

This July the Department of Zoology of this University sent an expedition to the Island of Canna, Small Isles Parish, Inverness-shire, about ten miles south of Skye. The expedition honoured me by entrusting to my care the organisation of the food supply.

Difficulties.

That men who would be working in the open all day (and sometimes half the night) must be well and regularly fed was obvious, but not till the actual working-out of what was to be ordered and in what amounts was begun, were the many difficulties appreciated. There was it seemed a fair amount of information on how to cater for hundreds, and there was much informative literature on "how to feed a man, his wife and four children (two under twelve)," but as to what was required for a small expedition of eleven men and what was the average daily or weekly consumption of many common foods, the pundits maintained a baffling silence. It was unfortunate, too, that we had little knowledge of local conditions beyond the fact that facilities would be limited. The engagement of a cook was delayed until the initial orders had been compiled and placed so that one potential channel of information and advice was closed. The boat times were another complicating factor, which had to be carefully considered when arranging the despatch of orders. The R.M.S. "Lochmor" called on Tuesday and Friday at 4 a.m. on her way to Mallaig and at 4 p.m. bound from Mallaig to Kyle of Lochalsh, via the Islands. Therefore orders had to be posted before 4 a.m. on Fridays to arrive the subsequent Tuesday. Should any hitch occur one was left to deal with the situation as best one might till the next boat day. We all have clear memories of one black Tuesday when no bread came off the "Lochmor" and the even blacker Friday when the "lost order" arrived together with an emergency supply ordered by telegram and the next Tuesday's supply as well, 108 lbs. of white and 18 lbs. brown! (It is a mystery, incidentally, how the letter got away in time to permit the occurrence of the last error.)

Dietary.

This expedition would doubtless have afforded an excellent opportunity to carry out some dietetic experiments, it was decided, however, to provide an ordinary mixed and well varied diet. This decision was reached because the task of working out a diet on a scientific basis, i.e., calories,

etc., content, was impossible in the time available and because the members had to be fit to fulfil the main object of the expedition. One could not risk impairing their efficiency by experiments in another sphere of science.

Ordering.

The method of ordering finally adopted was as follows. Three initial orders were placed with a Glasgow firm, the first consisted of essentials for the advance party and some of the non-perishable goods to arrive at Canna with the advance party. The remainder of the good "keeping" food stuffs for, we hoped, the month, and perishable for the week, came with the main party on the following Tuesday, 30th June. A third order was placed to arrive a week later. Thereafter orders were posted on Friday to arrive the subsequent Tuesday. They were compiled on the advice of the cook and in accordance with the rate at which the original amounts were consumed. It is interesting to record that while during the first two weeks the amount of food disposed of caused moments of anxiety as to whether or not certain commodities would last till the next boat arrived, yet orders based on that rate proved excessive in the last two weeks. Though there was little change in the eagerness with which a meal was hailed and the cooking was as much appreciated as before, the amount consumed was definitely less.

These orders were supplemented by supplies of milk, mutton and fresh vegetables purchased locally. In this last respect we were unlucky because the dry early summer had killed many of the vegetables normally obtainable on the island.

One or two "emergency" orders and our last order were obtained from Mallaig because by delaying the posting of the order we could reduce to a minimum the amount of superfluous food of which we should have to dispose. (It was possible by posting a letter before 4 a.m. on a boat day to have orders sent back by the 4 p.m. boat the same day.)

All orders on arrival were unpacked and checked by invoice enclosed and by a copy of the order sent away.

Accommodation.

We were well provided with storage accommodation because there was a bothy, attached to the barn in which we lived, with two wooden beds with "floor-boards" which provided excellent shelving for the storing of dry goods. Heavy goods like flour were stored on the floor. In addition we had a fly-proof safe brought from Glasgow, which stood out of doors and in which

we kept meat, ham, cheese and butter even in the hot weather without difficulty.

Notes on Food Stuffs Used.

Milk was obtained, as noted above, locally. It was not delivered but had to be brought from the farm by the personnel themselves. The average daily consumption was 8½ pints, ordered in two lots—one of 6 or 7 pints brought in the evening for the next morning's breakfast and for cooking purposes the next day, and one of 2 pints—from the morning's milking—for the evening meal. We carried in addition reserves of condensed and tinned milk.

Meat was provided in three forms—tinned and frozen beef and fresh mutton. We found that half a sheep with care lasted us about three days. Mutton and ham bones were used for making stock for soup which was made up with various pulses or with tinned soups. Ham was ordered in the piece for its keeping qualities, boned and rolled for economy and ease of cutting. The average daily consumption of all meats, including ham, was 11 oz. per man.

For vegetables we used peas, dried and fresh, beans, dried and baked (tinned), onions, tomatoes, lettuce and of course potatoes.

Puddings were chiefly made by the cook who had a well-stocked repertoire of excellent recipes. In addition we had in store a fair selection of tinned fruits. Fresh fruit was represented by gooseberries, rhubarb, apples, bananas (1 stem) and a case of oranges. Jam and marmalade were ordered in 1 lb. glass jars with metal lids to give greater variety, and to minimise the time that the jam would be exposed in the open pot. In addition the pots, which served also as jam-dishes, did not get so sticky as larger ones would have done. Lastly, pots of this type were useful to the Expedition when they had been emptied. These advantages offset the slight increase in price which this practice entailed.

Average Amounts of Food Stuffs Used.

FIG. I.

Article	Amount per head per week.
Butter	½ lb.
Cooking Fat (Mar., Suet, Trex)	½ lb.
Cheese	½ lb.
Bread (White)	2½ lbs.
„ Brown	½ lb.
Oatmeal	1¼ lbs.
Flour	2¼ lbs.
Semolina and Sago	each 1½ oz.
Cornflour	½ oz.
Custard Powder	1 oz.
Sugar	1½ lbs.
Marmalade	¼ lb.

Jam	½ lb.
Syrup	½ lb.
Treacle	1½ oz.
Gingerbread	¾ lb.
Cakes	½ lb.
Biscuits	1 lb.
Eggs (incl. bad and broken)	1½ doz.
Milk, Fresh	5¼ pts.
„ Nestles	1-10th pt.
„ Ideal	½ pt.
Mutton	1¼ lbs.
Beef	1 lb.
Rolled Beef (tinned)	¼ lb.
Corned Beef (tinned)	5-6th lb.
Ox Tongue (tinned)	¼ lb.
Ham, Smoked	1¾ lbs.
„ Boiled	¼ lb.
Salmon (tinned)	¼ lb.
Fresh Fish (approx.)	¾ lb.
Kippers	1½
Herring (tinned)	1-5th tin.
Sardines (tinned)	¼ tin.
Tinned Soups	¾ lb.
Apples	1 lb.
Oranges	3½
Lemons	1
Bananas	6
Gooseberries	5-16th lbs.
Rhubarb	½ lb.
Prunes and Figs	each 1 oz.
Raisins	1 oz.
Sultanas, Currants	each 1½ oz.
Tinned Fruit	1 lb.
Tomatoes	1 lb.
Onions	1 lb.
Fresh Peas	1 lb.
Dried Peas and Beans, Lentils	each 3 oz.
Baked Beans	1½ lb.
Macaroni	½ oz.
Spaghetti (tinned)	1 lb.
Potatoes	7 lbs.
Lettuce (approx.)	1
Salt, Table	1 oz.
„ Kitchen	1 lb.
Pepper	½ oz.
Baking Powder	1 oz.
Cream of Tartar	1 oz.
Baking Soda	½ oz.
Tea	1 lb.
Cocoa	1 lb.
Cocoa	1 oz.

	Amount used per month.
Vinegar	1 bot.
Sauce, Worcester	1 bot.
„ Tomato	1 bot.
„ H.P.	2 bot.
Mustard	fraction lb.
Essence Lemon	1 bot.
„ Vanilla	1 bot.
„ Almond	1 bot.

Water.

There were two sources of supply available. One was piped from a spring in the hills above our camp to a tap about 300 yards from the barn. Two "water-men" were detailed daily and, making a morning and an evening trip, they carried about 18 gallons in all. This amount was augmented as required, from a more doubtful source just beside camp. It was used for such purposes as washing and was always boiled before use.

Times of Meals and Menus.

Meals were arranged with several points in mind:—

1. To give as much time as possible between meals to enable the members to go out to their work.

2. To avoid too long intervals between meals to prevent undue fatigue.

3. To keep within fairly reasonable bounds the working time of the cook; and the following scheme was eventually adopted.

Breakfast dinner and tea prepared by the cook and served at 8 a.m. (approximately), 1 p.m. and 6 p.m. respectively. When individuals were working at a distance which made it inconvenient to return for a midday meal, dinner was advanced to 6 p.m. and a lunch, sandwiches for those away, and the same food, not made up, with tea, for those at home, was provided in its place. It was made a rule that notice had to be given at the last meal the previous night to enable the cook to make the lunches before breakfast. This was designed to permit him to arrange his day's work ahead and to let the members concerned depart as soon after breakfast as they wished.

Supper was prepared by the members themselves and was produced when it was wanted, usually near midnight, but 3 a.m. was not unusual. Biscuits, cheese, bread and scones were served with tea. It was at this meal that sundry members of the expedition revealed latent culinary abilities and we have many pleasant memories of freshly caught and cooked fish, and of "flap-jacks"—from the hands of our leader—served hot with syrup, at some of these lamplit sessions. "Brews" were made whenever anyone felt the need of such stimulant.

Here are four typical menus:—

Breakfast.—Porridge with milk.
Ham and Egg.
Bread and Butter, Marmalade,
Tea.

Dinner.—Boiled Shoulder of Mutton,
Mashed Potatoes, Macaroni and
Tomato.

Stewed Gooseberries, and Custard, Lemonade.

Coffee, Biscuits and Cheese.
(When soup was served, this course was omitted.)

Lunch.—Ham and Tomato Sandwiches.
Bananas (2).
Tea (for those at home).

Tea.—Ham Steak and Baked Beans.
Bread and Butter, Scones and
Pancakes (made by cook),
Cake, Tea.

Refuse.

The rocky nature of the camp site and the shallowness of the subsoil rendered the digging of proper dumps impossible, but we were fortunate in having as downstairs neighbours perfect pigs who ate all our wet refuse with gusto and apparent appreciation. Dry refuse was burned and tins were collected in sacks and eventually buried at sea.

Surplus.

We found that when the time came to wind up our affairs that we had over-estimated the consumption of some articles and the problem arose how to deal with these goods. Such articles as matches were equally divided among the personnel, a little was sold to individual members, some was given to those who could use it, and a fair amount was sold to the local merchant. The extra bread, mentioned above, had been sold mostly to visiting yachts.

Cost.

The cost of feeding was being borne by members themselves and every effort had to be made to keep the expenses as low as possible consistent with good feeding. Our final figures gave a messing cost of 3/6 per head per day. This is not very high when one remembers that food was not rationed and part freightage on orders had to be paid. With the more detailed knowledge now available, the same scheme could, I think, be repeated at a lower cost fairly easily.

Acknowledgments.

I have to thank Professor Hindle of the Zoology Dept. for permission to publish this article. I should like to take this opportunity to express my thanks to those who guided my first stumbling steps in organising the food supply, to Mr. D. S. Bertram, B.Sc., Leader and Treasurer, for his constant support and encouragement, to Mr. A. M. Hannah ("Cookie") without whom all these efforts would have achieved very little, and lastly, to "the innocent victims of the indiscretions of others," the members of the expedition.