

with an expensive joint and the mutton cost 5½d. per pound. As things turned out this was fortunate, for we found that, despite its cheapness, the joint after fifteen hours cooking was delicious beyond all expectation.

The next experiment was with a boiling fowl which, when roasted in the same way for fifteen hours, was found to be as tender as a chicken and as full-flavoured as a turkey. Further tests with beef and mutton have confirmed the superfine quality of meat cooked at a low temperature, and the cooking of fish and other comestibles is now being studied.

It is important to observe that this method of cooking has been made practicable by the development of the heat-insulated thermostatically controlled oven. Strangely enough, however, it does not appear to have been discovered by the cookery schools or by the experts who advise the stove manufacturers.

In my household, the adoption of the new technique results in a saving estimated at not less than one penny per head per day: when it is realised that for the population of Great Britain a saving of one penny per head per day amounts to £70,000,000 a year, it is evident that scientifically directed experimental inquiry into the cooking of foodstuffs is of considerable economic importance.

In the great renaissance promised by Prof. Armstrong we may find perhaps the answer to Rumford's question: "How many cheap articles may there be of which the most delicate and wholesome food might be prepared, were the art and the science of cooking them better understood?"¹

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¹ "Essay on the Construction of Kitchen Fire-Places and Kitchen Utensils", 1802.

Dementia nomenclatorica americana

FOLLOWING upon the protests against the proliferation of nomenclature in the Foraminifera that have appeared in NATURE, I observe that in the fascicle of Protozoa in the "Zoological Record" for 1934 three hundred and fifty-four new genera, species and varieties are added to the nomenclature.

American protozoologists are not the only offenders (if offence it be), for no less than seventy-three of these new species are recorded in Part 3 of the "Discovery" Reports on the Foraminifera, published in 1934.

Now comes a letter from Dr. Hans E. Thalmann, the most diligent and accurate bibliographer of the Foraminifera since Dr. C. D. Sherborn, in which he says:

"With great interest I read a few weeks ago your article in NATURE and I would be more than glad if many of our American colleagues would read it earnestly as well. My 'Bibliography of Foraminifera for the year 1933' (at present in press) contains not less than 390 papers dealing with Foraminifera—and therein are published not less than about 40 new genera and subgenera, 390 new species and varieties. The manuscript for the year 1934 so far counts about 340 papers, 25 new genera, more than 300 new species. I am sure that more than 80 per cent of these so-called new species can easily be placed amongst already published forms, and that most of all the new generic names since 1927 have only subgeneric value. This *dementia nomenclatorica americana* is not

only a serious problem to-day but will burden the poor minds of future workers in Foraminifera. It is really to be deeply deplored that at present only a few systematists and taxonomists realise the fact that nomenclature is *not* a science, but should be an aid to science."

EDWARD HERON-ALLEN.

Large Acres,
Selsey Bill,
Sussex.

Estimation of Ascorbic Acid by Titration

SOME time ago I observed an increase in the ascorbic acid value of cabbage on cooking¹. McHenry and Graham² have found a similar increase in cauliflower, carrots, parsnips, beets and potatoes, though not in cabbage, and have expressed the view that the increase on boiling was due to the setting free of bound ascorbic acid, possibly from an ester. Van Eekelen³, however, is of the opinion that the apparent increase is due to the destruction of an oxidase present in these vegetables.

Working with Darjeeling cabbage obtained from local markets, I have repeatedly obtained a very much increased ascorbic acid value by boiling for 10 minutes before extraction with 20 per cent trichloroacetic acid. The value obtained in the cold is about 13 mgm. per 100 gm. vegetable, and increases to 40 mgm. per 100 gm. after boiling. Even boiling with water alone yields an appreciably richer extract than that obtained with cold trichloroacetic acid.

It is evident that at least in this case no destruction of an oxidase is concerned, because in the cold the vegetable was ground up under 20 per cent trichloroacetic acid. The view of McHenry and Graham may appear to be more plausible.

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¹ Ahmad, *Biochem. J.*, **29**, 275; 1935.

² McHenry and Graham, *NATURE*, **135**, 871; 1935.

³ Van Eekelen, *NATURE*, **136**, 144; 1935.

Presence of Roes in New Zealand Marlin Swordfishes

IN view of the scarcity of data on the breeding of marlin swordfishes, the following note may, perhaps, be of interest. Swordfishing has been a popular sport in this locality, the Bay of Islands, New Zealand, since 1911. Yet in spite of the fact that many fishermen and scientific workers have examined the fish caught, primarily to distinguish the sexes and, if possible, discover secondary sexual characters, no swordfish with ovaries containing roe had been discovered. With the view of increasing our knowledge of the breeding habits of these fish, I examined systematically a number of them, and on February 28 of this year dissected a Striped marlin, *Makaira (Tetrapturus) mitsukurii*, Jordan and Snyder, weighing 238 lb., which contained well-filled, firm ovaries measuring approximately 37 cm. in length and 5.5 cm. in diameter in the widest part. The ova were separate and measured 0.004 inches. On April 3, I examined the roes of another Striped marlin of similar proportions. These fish seemed to exhibit no outstanding sexual characteristics.