

CO₂ and *Pourquoi-Pas?*

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During the explorations of *Pourquoi-Pas?*, commanded by Jean Baptiste Charcot, in the Southern Ocean in the period 1908–1910, Ensign R.-E. Godfroy collected, between latitudes 64°09'S and 70°05'S, eleven samples of air, according to instructions given by Muntz and Luné (1911) for measuring the concentrations of CO₂ in the atmosphere. The samples were later analysed in the laboratories of the Conservatoire des Arts et Metiers, Paris using basically the same methods as for the samples collected by the French First Polar Year expedition 1882–1883 (Baker 2009). The maximum concentration of CO₂ was 255 ppm, the minimum 145 ppm (the sample taken at sea at 69° 30' S) and the mean 205 ppm. The average of the concentrations in the samples made by the French first IPY

expedition at Bahia Orange was 256ppm and the minimum was 231 ppm.

It seems strange that only eleven samples were collected, since the number is small in relation to the large amount of scientific work carried out during a voyage of 22 months, but perhaps there are several explanations: Ensign Godfroy was involved in many other measurements (oceanography, topography, chemistry of the air) and exploratory trips on land and sea and, as Charcot (1910) indicated, he and other members of the expedition, including Charcot, himself, continued working in spite of the beginnings of scurvy.

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Plasmon

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Those readers of *Polar Record* who are familiar with the narratives of Scott, Shackleton and Mawson during the 'heroic age' of Antarctic exploration, will have come across a sledging food called 'plasmon'. Here, therefore, for their amusement is an outside page of an advertisement for that product, probably of the 1890's or early 1900's (Fig. 1). It measures 12 × 9 inches. Only the front and back pages form the advertisement which indicates on the back page that plasmon is available from all groceries and that a teaspoon a day 'will prove a great aid to health and strength'. The centre pages carry the words and music of a song entitled 'Humpty and Dumpty' said to have been sung by Miss Ellaline Terriss (1871–1971), the well known, and long lived, actress and singer.

Only Sir Douglas Mawson says much about 'plasmon'. In *The home of the blizzard* he states that the daily sledging allowance for one man included plasmon biscuit (12ozs) and plasmon chocolate (2ozs):

Plasmon biscuit was made of the best flour mixed with 30 per cent. of plasmon powder. Each biscuit weighed 2.25 ozs., and was made specially thick and hard to resist shaking and bumping in transit as well as the rough usage of a sledging journey. The effect of the high percentage of plasmon, apart from its nutritive value, was to impart additional toughness to the biscuit, which tested our teeth so severely that we should have preferred something less like a geological specimen and more like ordinary 'hard tack.' The favourite method of dealing with these biscuits was to smash them with an ice-axe or nibble them into small pieces and treat the fragments for a while to the solvent action of hot cocoa. Two important proteins were present in this food: plasmon, a trade-name for casein, the

chief protein of milk, and gluten, a mixture of proteins in flour (Mawson 1914, I: 188).

CHARLES WILMOTT and HERMANN E. DAREWSKI'S POPULAR SONG,
"HUMPTY AND DUMPTY" sung with great Success by Miss Ellaline Terriss in the "GAY GORDDO"

PLASMON
PLASMON COCOA
& CHOCOLATE
PLASMON OATS
" BISCUITS

" I WILL BE STRONG "

PLASMON IS THE BEST PART OF THE BEST MILK CONVERTED INTO A TASTELESS AND COLOURLESS POWDER. IT GREATLY INCREASES THE NUTRITIVE VALUE OF ANY FOOD WITHOUT AFFECTING THE TASTE OR FLAVOUR AND IS A MOST VALUABLE AID TO DIGESTION. PLASMON WILL MAKE YOU STRONG AND HEALTHY.

Fig. 1. Page 1 of the plasmon advertisement

References

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