

The insoluble residue consisted apparently of amorphous silica. The part soluble in hydrochloric acid seemed to be a mixture of—

Phosphate of lime,	60.0 per cent. of the whole substance.
Carbonate of lime,	9.4 " "
Fluoride of calcium,	1.4 " "
Binoxide of manganese,	1.6 " "
Ferric oxide,	4.8 " "

and minor constituents.

A portion of a flat whale's bone, much impregnated with manganese, was submitted to analysis. A small portion in the centre, comparatively uncoloured by the manganese, was used for the following determinations:—

Moisture,	2.87 per cent.
Phosphoric acid,	29.13 "
Fluorine,	1.44 "
Lime,	36.05 "
Substances insoluble in hydrochloric acid,	2.91 "

There was an appreciable quantity of manganese present, and also a trace of cobalt. The outer manganiferous portion was completely analysed, with the following results:—

Portion insoluble in hydrochloric acid,	5.76
Total water,	9.77
Manganous oxide,	20.22
Loose oxygen,	3.49
Ferric oxide,	6.54
Alumina,	1.66
Lime,	19.71
Magnesia,	7.42
Potash,	0.55
Soda,	1.12
Phosphoric acid,	18.59 = 40.90 per cent. tricalcic phosphate.
Carbonic acid,	3.87
Traces of copper, chlorine, fluorine, and loss,	1.30
	100.00

The manganese is probably present mostly as hydrated binoxide, and partly as protoxides.

Another portion of a flat whale's bone, in which the manganese was pretty well diffused throughout, was used for the following determinations:—

Moisture,	5.49 per cent.
Combined water,	6.88 "
Phosphoric acid,	13.05 "
Fluorine,	0.65 "