

No. 10. *Three Carcharodon Teeth.*

Station 285 ; 2375 fathoms, South Pacific.

The largest of these teeth, weighing 22 grms., was taken for analysis. The outer shell was readily detached from the inner portion.

1. The outside portion was found to contain 33·66 per cent. of phosphoric acid, equal to 73·48 per cent. of tricalcic phosphate, and 2·28 per cent. of fluorine.

Ratio of equivalents of phosphoric acid and fluorine—

$$1 : 0.1$$

2. The inside portion was completely analysed, with the following results :—

	P.	E.	$\frac{P.}{E.}$
Silica and portion insoluble in hydrochloric acid,	13.34		
Moisture,	8.41		
Combined water (H ₂ O),	6.93		
Manganous oxide (MnO),*	35.51	35.5	= 1
Loose oxygen (O),*	6.85	8	= 0.8562
Ferric oxide (Fe ₂ O ₃),*	12.47	80	= 0.1556
Alumina (Al ₂ O ₃),	5.09		
Lime (CaO),	3.72		
Magnesia (MgO),	3.74		
Potash (K ₂ O),	0.56		
Soda (Na ₂ O),	1.31		
Phosphoric acid (P ₂ O ₅),	0.83		
Carbonic acid (CO ₂),	1.19		
Silica (SiO ₂) in solution,	0.30		
Chlorine and copper,	traces		
	<u>100.25</u>		

No. 9. *Eight Oxyrhina Teeth.*

Station 286 ; 2335 fathoms, South Pacific.

Colour, brownish black.

The teeth consisted of a tough outer shell filled up with a friable black mass.

Three of the teeth were taken, the inside portion separated from the shell, and the percentages of phosphoric acid determined, with the following results :—

	Inside.	Outside.
Per cent. of phosphoric acid (P ₂ O ₅),	7.97	32.58
Equivalent to tricalcic phosphate,	17.39	71.12

* The extra oxygen in the ferric oxide, as the quotients show, is more than sufficient to convert the manganous oxide into binoxide.