

deal of the percentage of alkalies must be referred to the presence of sea-salts retained in the deposits, as is shown by the following experiment.

In speaking of the analyses of Red Clay and Globigerina Ooze, it was pointed out that, in their examination, the sea-salts that might be retained in the deposits should be taken into account. In order to arrive at an approximate notion on this point, the following determinations were made with a specimen of the Red Mud from Station 120, 675 fathoms, of which we have just given the analysis. The substance was washed with warm and cold distilled water till the water no longer gave the reaction of chlorine. It was afterwards pulverised and treated with hydrofluoric and sulphuric acids. 1.4088 grms. of substance dried at 100° C. gave 0.0496 grm. of chloride of sodium and potassium, and 0.1013 grm. of chloroplatinate of potassium, which corresponds to 0.0195 grm. of oxide of potassium and 0.0099 grm. of oxide of sodium—

[No. 55.]	Na ₂ O	.	.	.	.	0.70 per cent.
	K ₂ O	.	.	.	.	1.38 „

In comparing this analysis with that given above, so far as regards the alkalies, it will be seen that there is about 1 per cent. more oxide of sodium in the unwashed than in the washed sample, which is doubtless due to the presence of chloride of sodium.

The Red Muds probably occupy along the Brazilian coast about 100,000 square miles of the sea-bed. Similar red deposits are formed in the Yellow Sea off the Chinese coast near the mouth of the Yang-tse-kiang.

GREEN MUDS AND SANDS.

In their composition, origin, and distribution these deposits resemble in many respects the Blue and Red Muds. Their chief characteristic is the presence in them of a greater or less abundance of glauconitic grains and glauconitic casts of the calcareous organisms. There is also in these muds, mixed with glauconite, a greenish amorphous matter, which in part at least appears to be of an organic nature, for it blackens on being heated on platinum foil, leaving an ash coloured by oxide of iron. These muds and sands are almost always developed along bold and exposed coasts, where no very large rivers pour their detrital matters into the sea.

The collections of the "Tuscarora" indicate that in depths of 100 to 400 fathoms, off the coast of California, there are black sands which, if the specimens be in the state in which they were collected, are almost wholly composed of particles of dark green glauconite. The average diameter of the grains is about 0.6 mm., and mixed with them are a few Foraminifera and mineral particles of the same dimensions. It is rare, however, to find pure glauconitic sands like these, for the deposits contain, as a rule, many remains of calcareous organisms, mineral particles from the continental rocks, and a considerable