Bone beds, however, in their original state have furnished little to commercial supplies of phosphatic products, except those found in the Tertiary and Quarternary ages, such as Bordeaux, Carolina, Florida and Sombrero (breccia).

SHELL BEDS.

Since these must have existed from a time well into the Paleozoic periods, or that is to say, from the Cambrian age, we may expect and do find these mollusca remains, through a wide range of systems and strata and up to recent times.

The Silurian Lingula beds are remarkable, and have been already particularized as a probable abundant source of phosphoric acid.

The Welsh Silurian beds, and the French Bellegarde and Ardennes deposits in the lower Green-sand (Cretaceous), exhibit evidence of this origin, while the Tertiary and Quaternary phosphates contain very frequently these marine and fluvatile remains as a contribution to their value in phosphate of lime.

Some very interesting specimens are on the table from the Dutch West Indies, containing from 75 to 80% of tribasic phosphate of lime, and exhibiting in some cases, one mass of shells belonging to recent times.

COPROLITES.

Owe their name to Professor Henslow, and should be applied only to the fossil exuviæ of animals. The appelation has extended itself to many rolled or gravelly products, chiefly found in the Cretaceous formation. In England they have been worked to a large extent in Bedfordshire and Cambridgeshire, where they appear in the (Neocomian) strata, between the chalk and the subjacent Jurassic system, in nodules and pebbles of size from a pea to a hen's egg, and sometimes cemented by ferruginous sand into a hard conglomerate; organic remains are present, and casts and fragments of fossils with abundance of ammonites, vegetable remains and other debris of the Jurassic epoch, (*Iguanodon* and *Megalosaurus*, etc.).

The commercial products contain from 45 to 55% phosphate of lime.

The Coprolites of Suffolk occur in the Tertiary, being in the older Pliocene (the Red Crag and Coralline Crag). They are poorer in phosphate of lime, more ferruginous and harder in texture.