The Correlation of the Pre-Cambrian Granites by means of Heavy Mineral Analyses.

IN many localities correlation of isolated outcrops of igneous rocks by thin sections and field studies are beset with numerous difficulties. In recent times such obstacles have been overcome to a certain extent by the study of the heavy mineral analyses, and in most cases successful correlations have been established. J. T. Stark and F. F. Barnes (*Geological Mag.*, 1935, No. 854) during the course of their study of the closely related Pikes Peak and Silver Plume Granites of the Pre-Cambrian Age in the Sawatch Range of Central Colorado have shown by means of the heavy mineral analyses that outcrops belonging to the two series of granites differ fundamentally, in their heavy mineral constituents. In the Silver Plume granite there is a large percentage of Zircon, while the Pikes Peak granite is characterised by a large percentage of Titanite. By a series of curves they have shown that though there are a large number of minerals common to both the series of granites yet the relative proportions of certain of the important minerals like Zircon and Titanite are sufficiently marked for being made use of in correlation.

Sugar Industry of India, 1933—34.*

THE year 1933–34 was one of general depression in the sugar industry of the world. The total production of sugar during that year exceeded the consumption by about 740,000 tons. But mainly as a result of protective tariffs, the Indian sugar market did not suffer any dislocation and on the other hand accommodated the produce of 112 factories which operated during that year. There was a marked decline in the total sugar imports into India. On the cultivation side, though the acreage under cane was less than in 1932, the cane grown exceeded the figure for that year in consequence of the increasing adoption of improved varieties of cane. The severe earthquake in Bihar on 15th January 1934 was responsible for a large damage to the cane crop. The factories designed to work were 123 during 1933–34 but only 112 were in operation. The total produce was 453,965 tons which was 163,788 tons more than the produce of 1932–33. In spite of a large number of new factories working and the loss in Bihar due to earthquake, the average recovery for the whole of India showed a slight increase over the previous year's figure.

Advancement in technical and scientific work was not lacking. The research stations in Coimbatore and Pusa and those in other provinces demonstrated the increasing usefulness of many Coimbatore varieties of cane which are rapidly ousting the local varieties out of cultivation. Financed by the Imperial Council of Agricultural Research the work on the design of a small power-driven mill started in 1931 resulted in success and the mill was standardised for cane conditions in Bihar and Orissa.

Of great importance to Indian Sugar Industry are the Government of India Acts Nos. XIV and XV of 1934 which provide for the levy of an excise duty of factory sugar and empower local governments to restrict sugarcane dealings and fix cane prices in such a manner as to secure to the growers a fair price for their produce.

The total value of sugar machinery imported into India during 1933–34 was Rs. 3.36 crores of which nearly Rs. 2 crores were spent on British machinery alone. The import of machinery in 1932 was only half of this value.

Besides the 453,965 tons of sugar made in factories direct from cane, 225,000 tons were produced by indigenous process and 60,000 tons by refineries making a total production of 738,965 tons. Consequent to this large production there was also a sharp fall in the quantity of imported sugar. Gur production in 1933–34 was 10.8 per cent. higher than in the previous year with a corresponding fall in molasses imports.

The position of sugar trade of Java and Cuba is of interest. Java suffered enormous fall in her sugar exports owing to severe competition from other countries and the large increase in the production of British India. Under the management of sales by the 'NIVAS', quantities of sugar in excess of the production of 1933–34 were disposed of. During the year under review only 99 factories operated in Java as against 166 in the preceding year. The acreage under cane was only 208,947 in 1933–34 as against 423,924 in 1932. The Cuban sugar trade of 1933 was influenced considerably by the inflationary policy of the U.S. Government, the attempt at the formation of a sugar crop restriction and marketing agreement, the possibility of reduction in Cuban duty and finally the overthrow of Mochado Government in Cuba.

Though the world sugar industry of 1933–34 shows a large excess of production over consumption figures in contrast to the previous year, the outlook of Indian sugar industry is definitely better to-day, inasmuch as fear of over-production is lessening. The excise duty has put a wholesome check on excessive expansion of factories and, at the same time, the country has shown signs of increasing sugar consumption.

G. GUNDU RAO.

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* Review by R. C. Srivastava, Supplement to the *Indian Trade Journal*, Aug 15, 1935.