depaminergic receptors, involvement of a direct cholinergic effect of the drug cannot be ruled out. Because, after large oral dose it produces deterioration in Parkinson's patients and the drugs used in the treatment of extrapyramidal reactions induced by metoclopramide are anticholinergic in nature[13] and cholinomimetic drugs are tremorogens[15]. Thus, it appears, the extrapyramidal reactions induced by metoclopramide may be an extention of its therapeutic action.

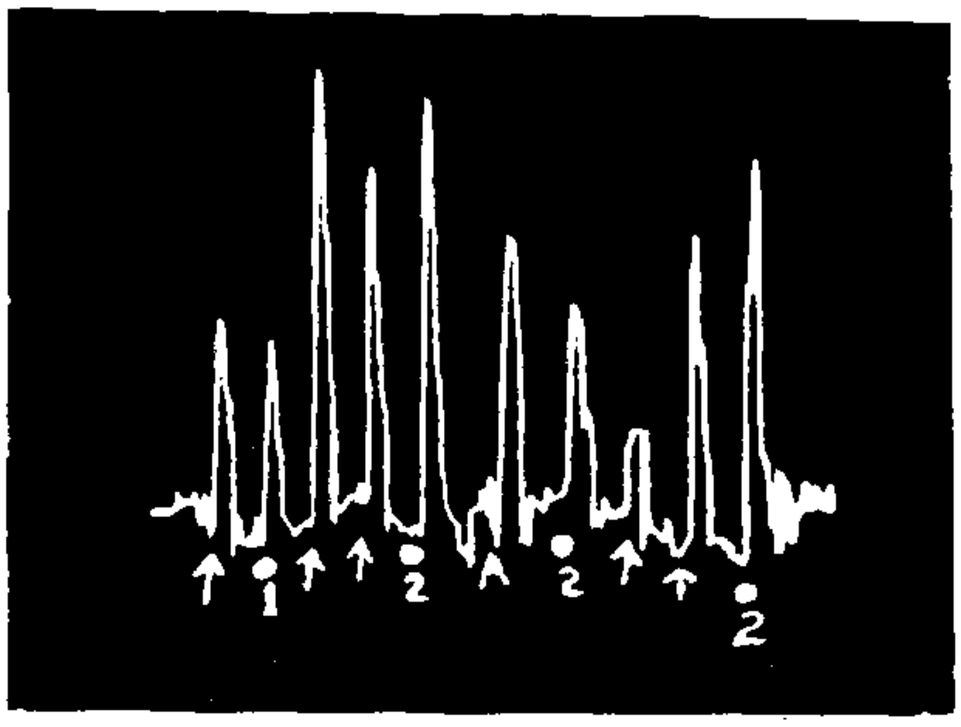

FIG. 2. Showing the action of metoclopramide on guineapig ileum, arrow indicates the addition of 1 pg of Ach, 1 and 2 indicate, 1 and 10 ng of metoclopramide only. A–0·1 mcg of Atropine. Note the contraction induced by atropine, after which 10 ng of metoclopramide and Ach are partially blocked.

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THE OCCURRENCE OF GABBROIC INTRUSION IN DECCAN TRAP BASALTS NEAR KHOPOLI IN THE KONKAN AREA (MAHARASHTRA)

WHILE interpreting the aerial photographs of Lonavala, Khandala and Khopoli area (Maharashtra), a medium grey toned low lying ridge, extending in ENE-WSW direction was noted about 3 km west of Khopoli (73° 21′ E, 18° 47′ N). The ridge shows distinct relief on the aerial photographs (scale 1 : 22700). The area around this ridge is covered by paddy fields and exhibits light tone on aerial photographs. The country rock, Deccan Trap basalts, wherever exposed, also show slightly lighter tone than the ridge. Seven basic dykes, which occur in this area, have produced three different types of lineaments on aerial photograph[2]. The linear valley controlled by dyke No. 4 has given rise to a negative lineament while dyke No. 5, which formed low lying linear ridge, appeared as a positive lineament on aerial photograph. All other dykes are more or less at the ground level and produced tonal lineaments, either light toned when the dyke is covered by dry grass or dark toned when the dyke is barren. Field checks revealed that the ridge is due to a coarse grained melanocratic rock which has clear cut discordant relationship with the associated Deccan Trap basalt flows. The intrusive body has lenticular outcrops which extend for about 3 to 4 km in length and with a maximum width of about 1/2 km (Fig. 1). On following the gabbro body towards SW, it was found that the country rock has been fractured with individual master joints trending in ENE-WSW direction. Further towards SW it was observed that a tributary of Patalganga river, near

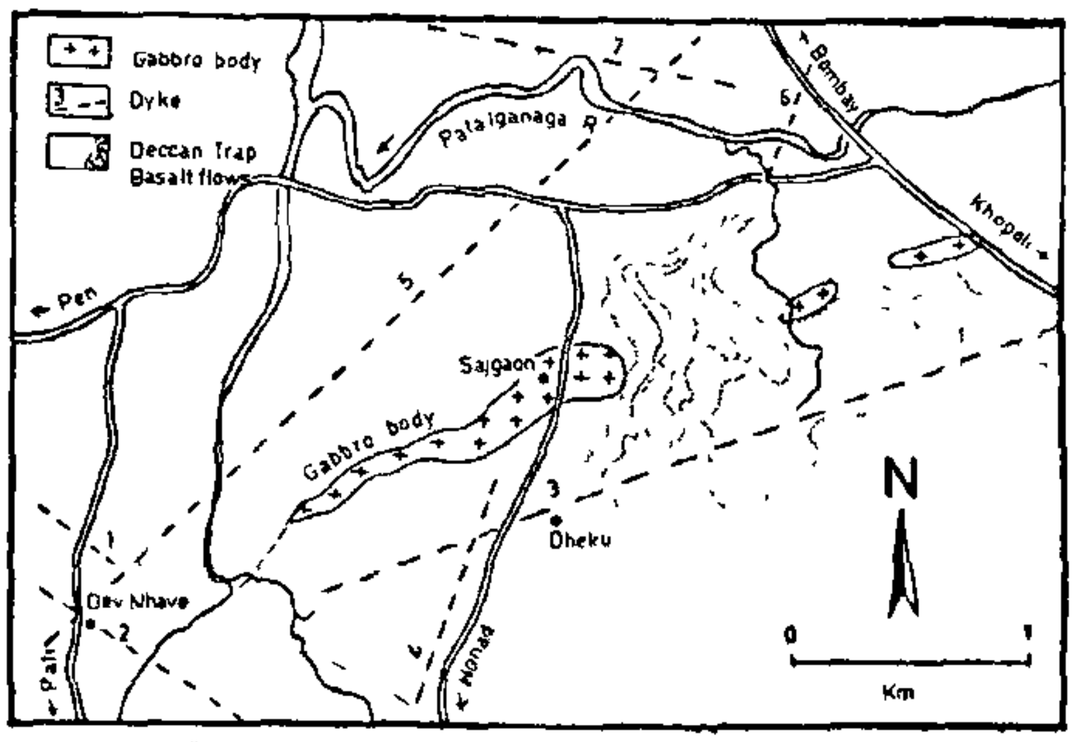

FIG. 1. Photogeological map of the area around Khopoli showing the location of the Gabbro body.

Dev Nhave is also controlled by this fracture zone. This indicates that the magmatic material has followed a fracture zone. The occurrence of dyke, near Dheku village, having the same ENE–WSW trend, supports the view that the fracture pattern trend in ENE–WSW direction was existing in this area prior to the intrusion of magmatic material. The gabbro body exhibits typical tor topography and probably because of this nature, the intrusive body has been indicated as 'stony waste' on Survey of India toposheet No. 47 F/5. The country rock in this area is amygdaloidal basalts and has become reddish along the boundary of the intrusive body due to the contact effects.

In thin sections under microscope plagioclase plates enclose pyroxene and olivine giving rise to poikilitic texture. The modal analysis shows that olivine is 45%, pyroxene 25%, plagioclase 18% and glass, iron ore, etc., 12%. Alteration of olivine to iddingsite is very common. The vertical section of the intrusive body is not available. Therefore samples of the rock specimens were collected only from the outcrop which in all probability is the top portion of this body. That the exposure of this intrusive body represents the top of it, is evident from the fact that the outcrop is concealed at one place below a ridge and at another by a hummock of basalt flows into which it has intruded. The presence of glass can therefore be attributed to fast cooling near the top surface of the intrusive body.

The occurrence of gabbro intrusions has been reported north of Bombay in Bassain area near Nale Sopara and near Bhoyapada[1] along coastal tracts. However this is probably the first report of the occurrence of the gabbroic intrusion in this area and that too far towards east from West coast and immediately below the Western Ghats. Near Vajrat there is a gabbroic intrusion[3] but it is in Precambrian rocks.

The petrographical and petrochemical study of the gabbro body is in progress which is likely to throw some light on the post-trappean igneous activity of the Deccan trap basalts of this region.

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DISCOVERY OF CONODONTS IN THE CAMBRIAN OF SPITI, TETHYS HIMALAYA*

IN connection with the demarcation of Precambrian-Cambrian boundary and for advancing the knowledge of the Cambrian stratigraphy under the aegis of the International Geological Correlation Programme Project No. 29, the authors have recovered an assemblage of conodonts from the dolomitic bands of the Cambrian Parahio Series (Hayden[1], Pascoe[2]) of the Spiti region of Tethys Himalaya.

The meagre record of conodonts in the Cambrian rocks in the world so far, consists only from North America (Muller[3], Koucky *et al.*[4], Goodwin[5], Lochman[6], Miller[7], etc.), Sweden (Muller[3,8]), Iran (Muller[9]), China (Nogami[10,11]) and Australia (Jones[12]).

The present find consisting of 5 elements constitutes the first record of Cambrian conodonts from the Indian sub-continent. One of the elements recorded here is presently kept under paraconodonts.

Location and Stratigaphic Horizon

The dolomite samples which have yielded the conodonts were collected from the left bank of the Parahio river (a tributary of Pin river), about 1·75 km upstream of Thidim (32° 02′ : 77° 57′), Pin valley, Lahaul and Spiti district, Himachal Pradesh. The Pin river constitutes one of the main tributaries of the Spiti river.

In all there are eight bands of grey dolomite, weathering to brown colour, in the section examined;