NOTE ON A REVISED CLASSIFICATION OF THE BAGH BEDS, MADHYA PRADESH

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THE marine Cretaceous rocks of Madhya Pradesh, which form the subject of this paper, were divided by earlier workers (Blanford, 1869, Bose, 1884) as follows :

Upper series	Coralline limestone Deola marl
Lower series	Nodular limestone Nimar sandstone

This classification was followed by later workers—Oldham (1893), Vredenberg (1907), Chiplonker (1937, 1938, 1939, 1941) and others.

Roy[1] Chowdhry and Sastry (1954) raised doubts concerning the existence of the Deola marl and observed :

"*The so called Deola and Chirakhan marls are not recognised by the present writers as a distinct horizon of the Bagh Beds as they are found to represent the weathered patches of the Nodular limestone.*"

The above important observation has, however, escaped the attention of Indian Geologists for no reference to it occurs in any of the research contributions or text-books on Indian Geology.

During the course of recent detailed field investigations in the type areas (Deola, Chirakhan and Bagh caves) the junior author also failed to locate the so called Deola and Chirakhan marls as a distinct horizon. At a number of localities, particularly in recently dug wells, the Coralline limestone was found to rest directly over the Nodular limestone as can be observed in the accompanying photographs.

The authors fully agree with the emendation proposed by Roy Chowdhry and Sastri (1954, 1958) in that the Deola and Chirakhan marls do not exist as a distinct horizon, but differ from the view that the so called marl represents the weathered patches of the Coralrine limestone. This has been proved by the fact that on boiling the marl is shown to contain numerous fragments of the Coralline limestone. It may also be noted that both the Coralline and Nodular limestones have weathered into the so called marl and clay respectively but the weathered products retain the colour of the original rocks. Thus it is not difficult to distinguish the weathering products of the two formations.

To account for the presence of the 5 -10′ thick band of weathered Coralline limestone, Deola and Chirakhan marls (of previous workers) between an upper layer of hard Coralline limestone and the lower Nodular limestone,

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EXPLANATION OF PLATE 5

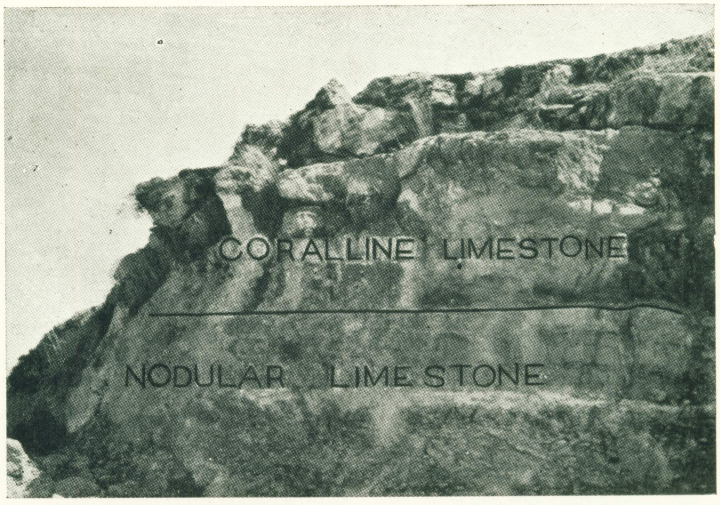
1. Interior of well at Nandgaon. Note the absence of Deola marl between the Coralline limestone and Nodular limestone.
2. Section in Man River, near Avalda. Here also the Nodular limestone with typieal 'Nodular' weathering is succeeded directly by a thin layer of Coralline limestone.


CORALLINE LIMESTONE
NODULAR LIMESTONE

1


CORALLINE LIMESTONE
NODULAR LIMESTONE

2



1

2

weathering by ground water should be taken into consideration. The upper surface of the Coralline limestone shows typical Karst topography with innumerable sink holes (Pl.6, Fig. 2). Rain water thus easily percolates through these holes till it encounters the more argillaceous Nodular limestone which does not permit its quick downward movement. In this manner the weathering of both the Nodular limestone and the Coralline limestone at and near the contact has given rise to the so called marl and clay at places.

In view of the above the Bagh Beds are classified as follows :

DECCAN TRAPS

Coralline limestone Nodular limestone Oyster bed thickness 1′-5′	Marine
Nimar sandstone	Fresh water

Detailed examination of the microfauna of these beds is in progress and is likely to throw interesting light on the above problem.

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EXPLANATION OF PLATE 6

1. Section exposed above Bagh caves. Coralline limestone overlying Nodular limestone.
2. General view. Coralline limestone country around Thuati with typical Krst topography.