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ADDITIONAL FORAMINIFERA FROM THE JURASSIC ROCKS OF KUTCH, INDIA

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The Jurassic rocks of Kutch constitute one of the most significant fossiliferous marine sequence of the Tethyan realm. They have received considerable attention mainly from palaeontologists for more than 100 years. Sowerby (1840) was the first to illustrate megafossils from them. It was the great abundance of ammonites in these rocks which stimulated workers to study their megafaunal assemblages, but it is rather surprising that no comprehensive work on their microfaunal content has yet appeared. In recent years, the increasing attention paid by the Oil and Natural Gas Commission for finding oil and gas in the region has accentuated the need for a detailed micropalaeontological investigation of these rocks. In view of this, the present authors undertook a study of the microfaunal assemblage, particularly foraminifera, of the Jurassic rocks of Kutch. An excellent section exposed at Habo hills in central Kutch, was worked out and the study has revealed the presence of a rich and varied foraminiferal fauna in the Patcham and Chari strata.

A study of the literature reveals that Tewari (1957) was the first to record Foraminifera – *Aulotortus*, *Textularia*, *Bigenerina*, *Spiroplectammina* and *Gaudyrina*—from the Jurassic rocks of Kutch. He was followed by Agrawal and Singh (1960) who listed the following genera from the Habo beds (= Chari strata), exposed near Walakhawas Tank and Fakirwari: *Rhabdammina*, *Ammodiscus*, *Ammohaculites*, *Quinqueloculina*, *Triloculina*, *Robulus*, *Lenticulina*, *Nodosaria*, *Saracenaria*, *Vaginulina*, *Palmula*, *Nonion*, *Elphidium*, *Rotalia*, and *Anomalina*.

Subbotina *et al.*, (1960) described 34 species of Foraminifera from the Jurassic exposures of Chari series on the eastern flank of Habo hills, Khawda (in the Patcham island) and also from the Jurassic sequence in Rajasthan. The species occurring in the Kutch region are: *Ammobaculites* exgr. *coprolithiformis*, *Nodosaria fontinensis*, *N. lirulata*, *Tristix* cf. *suprajurassica*, *Astacolus anceps* (Terquem) var. *indica*, *A. aphrastus* Loeblich and Tappan var. *minuta*, *A. renominata*, *Vaginulinopsis aduncus*, *V. cf. enodis*, *V. hybrida*, *V. instabilis* (Terquem) var. *micra*, *Robulus carunocordatus* *Saracenaria malaviyai*, *Vaginulina cryptospira*, *V. orthonota*, *V. pseudotruncana*, *V. renomina*, *V. subharpa*, *Citharina pseudolatissima*, *Epistomina ghoshi*, *E. gracilis*, *Brotzenia khawdensis*. *Reinholdella quadricula*, *Spirillina radiata*, *Trocholina conosi-milis*, and *Patellinella poddari*.

During the course of present investigation, 65 species of Foraminifera were recovered. The assemblage is dominated by the family Nodosariidae which is represented by 40 species. Some of the species in the present assemblage are common to the findings of the earlier workers while the following species are being reported here for the first time from these rocks: ?*Hemidiscus* Schellwien, *Psamminopelta bowsheri* Tappan, *Haplophragmoides agrawali* n. sp., *H. cf. H. kingakensis* Tappan, *H. rajnathi* n. sp., *H. srivastavai* n. sp., *H. tewarii* n. sp., *Ammobaculites ahmadi* n. sp., *A. hagni* n. sp., *A. irregulariformis* Bartenstein and Brand, *A. reophacoides* Bartenstein, *Ammobaculites* sp. A, *Ammobaculites* sp. B, ?*Flabellamina* Cushman, *Spiroplectammia longa* Lalicker, *Verneuilinoides tryphera* Loeblich and Tappan, *Quinqueloculina* sp. A, *Quinqueloculina* sp. B, *Quinqueloculina* sp. C, *Triloculina* sp. A, *Triloculina* sp. B, *Nodosaria* cf. *N. cylindrica* Deprat, *N. daedala* Loeblich and Tappan, *N. cf. N. hortensis* Terquem, *N. cf. N. larina* Tappan, *N. marginata* Marsson, *N. cf. N. simplex* (Terquem), *Nodosaria* sp. A, *Nodosaria* sp. B, *Astacolus pauperatus* Jones and Parker, *Astacolus* sp. indet., *Citharina* cf. *C. colliezi* (Terquem), *C. hetropleura* (Terquem), *Citharina* sp. A, *Citharina* sp. B, *Dentalina gümbeli* Schwager, *Fronicularia kutchensis* n. sp., *Lenticulina subalata* (Reuss), *L. suturofususus* n. sp., *L. tricarinella* (Reuss), *L. varians* (Bornemann), *Lenticulina* sp. A, *Lenticulina* sp. B, *Marginulina haynesi* n. sp., *Marginulina woodi* n. sp., *Saracenaria triquetra* (Gümbel), *Saracenaria* sp. indet., *Vaginulina barnardi* Gordon, *V. kochii* Roemer, *Vaginulina* sp. A, *Vaginulina* sp. B, ?*Vaginulina* sp., *Vaginulinopsis* sp. A, *Vaginulinopsis* sp. B, *Brizalina* sp., and *Spirillina polygyrata* Gümbel.

The foraminiferal assemblage throws considerable light on the palaeoecology, age and correlation of the Jurassic rocks of Kutch. A detailed study on these lines is in progress and will be published in due course.

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