

A PRELIMINARY NOTE ON THE MESOZOICS OF JAISALMER AREA, RAJASTHAN

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ABSTRACT—The present paper embodies a record of the marine Mesozoic faunal assemblage identified from the different formations exposed around Jaisalmer and a revised stratigraphic succession.

Blanford (1877) recorded the presence of marine Mesozoics in Jaisalmer and divided them into three groups, assigning them to Jurassic period. Oldham (1886) while revising the stratigraphy divided the sedimentary succession into five units namely; Lathi, Jaisalmer, Bhadasar (=Bedesir=Bedasar), Parihar and Habur (=Abur). Since then minor contributions to the Mesozoic stratigraphy of this area have been made by Allison (see Arkell), Taylor (see Sahni), Swaminath (see Krishnan) and Narayanan *et al.* (see Srivastava). It is surprising to note that inspite of these rocks been known for long to be highly fossiliferous, only in recent years a few publications by Sahni (1958), Lubimova *et al.* (1960), Subotina *et al.* (1962) have appeared.

The stratigraphy given in Table I has been constructed on the basis of the study of fossils, systematically collected along several traverses

mentioned below, taken during short field seasons in the years 1964, '67 and '68.

1. Dabla ($26^{\circ} 51' N, 71^{\circ} 00' E$)—Jaisalmer ($26^{\circ} 54' N, 70^{\circ} 57' E$) traverse.
2. Thaiyat ($26^{\circ} 56' N, 70^{\circ} 4' 30'' E$)—Jaisalmer traverse.
3. Jaisalmer—Gugadi ($27^{\circ} 12' N, 70^{\circ} 57' 30'' E$) traverse.
4. Jaisalmer—Bhadasar ($27^{\circ} 6' N, 70^{\circ} 48' E$)—Habur ($27^{\circ} 10' N, 70^{\circ} 33' E$) traverse.
5. Jaisalmer—Amarsagar—Lodarva ($27^{\circ} 00' N, 70^{\circ} 43' E$)—Rupsi ($27^{\circ} 3' N, 70^{\circ} 40' E$)—Kuchri ($27^{\circ} 5' N, 70^{\circ} 35' E$) traverse.
6. Jaisalmer—Kuldhar ($26^{\circ} 52' N, 70^{\circ} 45' E$) traverse.

TABLE 1

STRATIGRAPHIC SUCCESSION

	Age	Rock formation	Lithology	
CRETACEOUS	Middle Albian to Barremian	Habur series	Hard shell limestones.	
	Hautervian to Barremian	Parihar series	Felspathic sandstones.	
Tithonian				
Kimmeridgian				
JURASSIC	Oxfordian	Bhadasar series	Dark red, ferruginous grits, sandstones with gypseous clay intercalations.	
	Callovian	~~~~~unconformity~~~~~	Calcareous sandstones and clay with hard limestone bands.	
		Upper		
	Lr. to Mid.	Jaisalmer series	Rupsi stage	Calcareous sandstones, sandy limestones, clays and marls with intermittent hard limestone bands.
			Kuldhar stage	
Bathonian	Jaisalmer stage	Arenaceous, ferruginous limestones with sandy bands.		
TRIAS	--- ? - ? ---	~~~~~unconformity~~~~~ Lathi series	Sandstones with shale and clay interca- lations.	

The important genera and species identified in the different stratigraphic units are as follows :—

I. JAISALMER SERIES

1. JAISALMER STAGES

Pelecypoda : *Palaeoneilo* spp., *Nucula* spp., *Palaeonucula* spp., *Nuculana* spp.,

Nuculoma spp., *Paralellodon* spp., *Grammatodon* spp., *Lycettia* spp., *Oxytoma* spp., *Posidonia* spp., *Inoceramus* spp., *Pinna* spp., *Echinotis* spp., *Mytilus* spp., *Pholadomya* spp., *Chlamys* spp., *Pecten* spp. *Corbula* spp., *Trigonia* spp.

Echinoidea : *Collyrites* sp., *Hemicidaris jaisalmerensis* Sahni and Bhatnagar, *Pygorythis* sp.

2. KULDHAR STAGE

Pelecypoda : *Palaeonucula* spp., *Nuculana* spp., *Nuculoma* spp., *Posidonia* spp., *Corbula* spp., *Pecten* spp., *Trigonia* spp., *Ostrea* spp., *Lopha* spp., *Gryphaea* spp.

Nautiloidea : *Paraceras* *kumagunensis* (Waagen)

Ammonoidea : *Eucycloceras* sp., *Epimorphoceras* sp., *Idiyocycloceras perisphinctoides* Spath, *Idiyocycloceras* sp., *Indocephalites* aff. *transitorius* Spath., *Macrocephalites chariensis* (Waagen), *Macrocephalites madagascarensis* Lemoine, *Nothocephalites asaphus* Spath, *Nothocephalites* sp., *Reineckeia indosabuda* Parona & Bonarelli, *Reineckeia* spp., *Subkossmatia opis* (Waagen), *Subkossmatia* sp.

Brachiopoda : *Rhynchonella* spp., *Stolmorhynchia nobilis* Sowerby, *Stolmorhynchia microrhynchia* Sowerby, *Rhynchonella drotae* Agarwal, *Kutchirhynchia kutchensis* Kitchin, *Cryptorhynchia pulcherrima* Kitchin.

Foraminifera : *Lagena* sp., *Spirillina* sp., *Citharina* sp., *Vaginulina* sp., *Saracenia* sp., *Tristix* sp., *Nodosaria* spp., *Lingulina* sp., *Astacolus* spp., *Marginulina* spp., *Vaginulinopsis* spp., *Lenticulina* sp., *Fron-dicularia* sp., and *Spiroculina* spp.

Ostracoda : *Schuleridea* sp., *Hutsonea* sp., *Neocythere* sp., *Cytherelloidea* sp., *Cytherella* sp. and *Veenia* sp.

3. RUPSI STAGE

Ammonoidea : *Reineckeites* sp., *Indosphinctes* sp., and *Alligaticeras* sp.

II. BHADASAR SERIES

Nautiloidea : *Paraceras hexaganoides* Spath.

Ammonoidea : *Dichotomosphinctes* spp., *Peltoce-ratooides propinquus* (Waagen).

III. PARIHAR SERIES

No fossils.

IV. HABUR SERIES

Ammonoidea : *Cleoniceras* sp., *Deshayesites aburensis* Spath, *Deshayesites* sp., and *Lemuroceras* sp.

The systematic description of the invertebrate fossil fauna shall be published soon.

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