

filled the same drainage system. 3. "Channel" Facies - well rounded, exotic pebbles, locally with large boulders, fill a channel in rocks of the Judea Group close to Nahal Hameishar south of the main fault.

Structural Geology

Three main elements form the structural pattern of the mapped area:

1. Areif-Bature fault: This fault is part of the Negev-Sinai shear zone. It was mapped in the present work between Ma'ale Hameishar to Har Massa. It is a right lateral strike-slip fault, indicated by the direction of secondary structures and by the sense of movement on joints sub-parallel to the main fault. The amount of movement was calculated by measuring the shortening in structural cross-sections parallel to the fault which in the measured area has an en echelon pattern. The result was 250 m. Stratigraphic evidence suggests movement during the Neogene.

2. Mezaq-Neqarot Fault: This fault trends N-S to N20E; it joins the Areif fault in the south, and almost reaches the Ramon fault in the north. It is sinistral strike-slip, with 170 m movement measured from sub-horizontal slickensides. It is also Neogene.

3. Badad Anticline: The anticline has a moderately dipping northern flank, and a steep flexure to the south which parallels the Areif and Mezaq Neqarot faults.

The trends of the two main faults are not ideally oriented for a conjugate set of strike-slip faults. However, evidence for Senonian activity along parts of these faults, suggests that they are rejuvinations of one or more

lines of weakness which could explain the geometric relationship between them. Movement on two sets of joints which are parallel to the main faults, suggest that the latter are contemporaneous.

Geological History

Lower Cretaceous to Coniacian - sedimentation of all units in relatively stable conditions, with no tectonic activity.

Coniacian to Lower Eocene - this period was characterized by the formation of fold structures along the Har Gevim-Har Massa-Nahal Hadav line (proto Areif-Bature line); erosional channels at base of Menuha Formation; truncation and variation in thickness in Mishash Formation and angular unconformities between the Mishash and overlying formations.

Lower-Upper Eocene - a tectonically inactive period of sedimentation of the Avedat Group (Arava and southern Negev facies).

Neogene-Recent - red sandstones filled relief formed due to post-Eocene uplift; faulting on the two main faults accompanied by folding and formation of the Badad anticline.

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REGIONAL STRATIGRAPHY OF ISRAEL: A GUIDE TO GEOLOGICAL MAPPING

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The present version of the regional stratigraphy of Israel is based on the lithostratigraphic units accepted and mapped today. These units are defined, in most cases, according to the International Code of Stratigraphic Nomenclature for the establishment of Groups, Formations and Members.

In special cases, names have been retained (although not valid), because of common use. Most of the units presented herein have been published in geological maps of Israel on a scale of 1:100,000 and 1:50,000.

The chart is not intended as a correlation table but only as a compilation of the stratigraphic sequence exposed in the geographic regions mentioned, i.e., Sinai, Southern Israel, Central Israel, Northern Israel, and the Golan. However, in the setup presented, the reader will be tempted to carry out his or her own correlation. In cases where such a correlation is not obvious, the reader is advised to refer to the list of sources given below.

The color and stratigraphic symbol which will be

allotted to the various mapping units will be in accordance with international conventions.

In general, the reader should remember that such a chart as presented, is part of an ongoing process of research and recording of geological mapping and as such is open to discussion. Nevertheless, the authors feel that this chart will serve as a guide to geological mapping in Israel, and in general, assist those interested in gaining an insight into the stratigraphy of the country.

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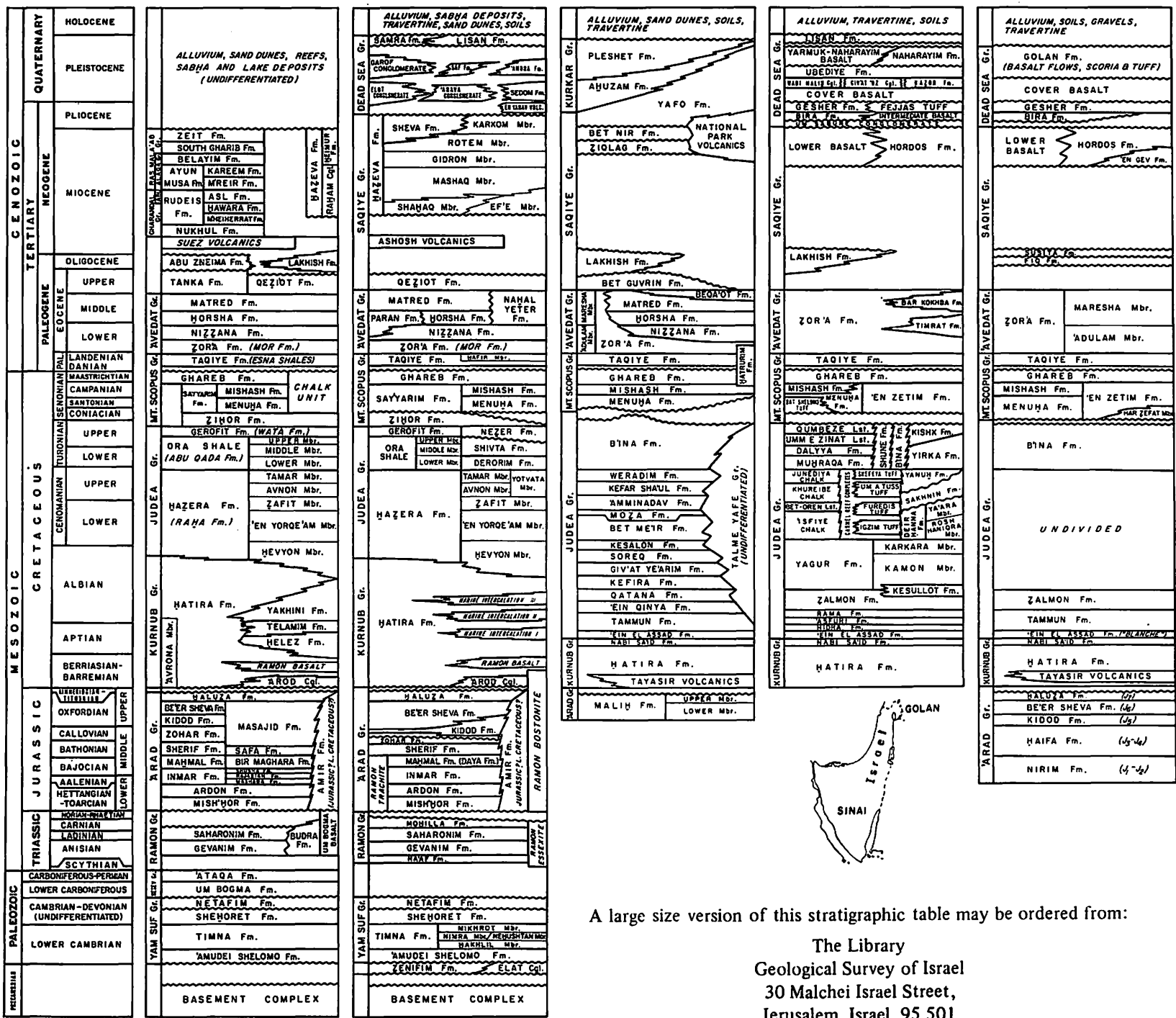
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A large size version of this stratigraphic table may be ordered from:

The Library
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