

SpringerBriefs in Geography

For further volumes:

<http://www.springer.com/series/10050>

Arie S. Issar

Strike the Rock and There Shall Come Water

Climate Changes, Water Resources
and History of the Lands of the Bible

Arie S. Issar
The J. Blaustein Institute for Desert Research
Sede-Boqer Campus
Ben-Gurion University of the Negev
Beer-Sheva
Israel

ISSN 2211-4165 ISSN 2211-4173 (electronic)
ISBN 978-3-319-01936-9 ISBN 978-3-319-01937-6 (eBook)
DOI 10.1007/978-3-319-01937-6
Springer Cham Heidelberg New York Dordrecht London

Library of Congress Control Number: 2013947784

© The Author(s) 2014

The facts and opinions expressed in this work are those of the author and not necessarily those of the publisher.

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Printed on acid-free paper

Springer is part of Springer Science+Business Media (www.springer.com)

Preface

The book presented hereby is an updated and revised version of my book *Water Shall Flow from the Rock—Hydrogeology and Climate in the Lands of the Bible*, published by Springer-Verlag in 1990. The reason for updating and revising and not just reprinting of the book is due, in the first place, to the enormous quantity and quality of the new data added since 1990. Another reason is the better understanding achieved since the book was first published, of the role which climate changes played in shaping the history of the Lands of the Bible. Albeit the fact that the impact of climate change was touched upon rather widely in the first book, still, without interweaving the new data and its interpretation, the picture would have remained partial.

Other books which I published report on these changes and their impact. In 2003, *Climate Changes during the Holocene and their Impact on Hydrological Systems* was published by Cambridge University Press. Later with Dr. M. Zohar, *Climate Change—Environment and Civilization in the Middle East* was published by Springer in 2004 and in 2007 with the same co-author *Climate Change—Environment and History of the Near East* was also published by Springer. The papers as well as chapters in books focusing on a certain period or an area or both will be cited in the following chapters.

This book takes a stand in the dispute between scholars, historians, and archaeologists, investigating the history of the people of Israel, with regard to the factual background of the stories of the Pentateuch. This dispute reached headlines after the publication of Finkelstein and Silberman's book *The Bible Unearthed*, wherein the authors proclaim that: “[A] careful critical perusal of this work—which certainly has much to say about both archaeology and the biblical writings—reveals that we are dealing very largely with a work of imaginative fiction, not a serious or reliable account of the subject” (p. 464). The author of this book disagrees with Finkelstein's and Silberman's statement. Although he did not dig archaeological sites in the Sinai and Negev, as these archaeologists did, he lived for quite a few years, in these deserts, investigating its surface and subsurface water resources. Many times he camped with the local Bedouin, learning from them about their way of life, especially how to locate a meager supply of water, sometimes brackish and sometimes bitter, in the desert. He learnt from them where and how to hit the rock for the water to come out, or where to dig a well to obtain fresh water. Many

times he ate with them their unleavened *pita*, baked on embers, and grilled quail. Many times he could fetch from his knapsack his copy of the Bible and read a chapter describing the episode which he experienced.

These experiences brought the author to the conclusion that many stories of the Bible contain an historical core, which a scientist knowing and understanding the natural environments of the region, can bring to light and share with an interested audience.

Thanks are due to Dr. Matanya Zohar, a partner in writing the books mentioned above which were published by Springer Publishing House. Zohar's extensive knowledge in the field of the archaeology of the Land of Israel and his comments were very helpful. Thanks to Yaakov Issar for his help in translating from Hebrew to English and last but not least to Margalit, wife and partner for her help and philological criticism. Thanks are due to Mrs. Marcia Ruth for editing the book.

Arie S. Issar

Contents

1	Caves, Dripstones and Soils Tell About Past Climates	1
	References	7
2	In the Beginning	9
3	When Tiamat and Marduk Ruled the Worlds	13
	References	20
4	Tiamat and Marduk Depart, Enter Adam and Eve the Tool Makers	23
	References	27
5	Adam and Eve Depart, Enter Cain the Planter and Abel the Shepherd	29
	References	40
6	The Deluge Flooding the Cradle of Civilization	41
	References	49
7	From the Tower of Babel to the Laws of Hammurabi	51
	References	65
8	From Shem the Son of Noah to Abraham Son of Terah	67
	References	72
9	The Destruction of Sodom and Gomorrah	75
	References	80
10	Abraham and Isaac Explore the Groundwater Resources of the Negev	83
	References	90
11	Egypt: A Land Like a Garden of Herbs	91
	References	100

12 Foreign Rulers: The Hyksos. Foreign Climate: The Ten Plagues . . .	101
References	108
13 Crossing the Land of Swamps and Reeds	109
References	112
14 That Great and Terrible Wilderness	113
References	120
15 To Smite the Rock and Water Shall Come Out	121
References	127