

REPORTS FROM THE SCIENTIFIC EXPEDITION TO THE NORTH-WESTERN
PROVINCES OF CHINA UNDER LEADERSHIP OF DR. SVEN HEDIN

— THE SINO-SWEDISH EXPEDITION —

III. Geology

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GEOLOGY
OF
WESTERN QURUQ TAGH
EASTERN TIEN-SHAN

BY

ERIK NORIN

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WITH 43 PLATES AND 19 ILLUSTRATIONS IN THE TEXT, THREE PLATES
OF SECTIONS AND TWO MAPS IN POCKET AT END

STOCKHOLM 1937

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To the Memory

of

DR. V. K. TING

*The Late Secretary General
of the Academia Sinica*

this paper is inscribed

by the author

INTRODUCTORY NOTE

In publishing the first parts of our scientific results it is my duty to extend to the SWEDISH GOVERNMENT and DIET of 1935 my deep and sincere gratitude for the generous State subvention granted towards the publication of the very extensive material from the Scientific Expedition to the North-Western Provinces of China (The Sino-Swedish Expedition) 1927—1933.

To the ROYAL SWEDISH ACADEMY OF SCIENCE I also express my sincere thanks for the substantial support and advice extended to the Expedition both in the field and during the working out of the collections and observations.

I wish to express my obligation to Professor ASSAR HADDING of the Geological Institute, University of Lund, and to Professor K. D. P. ROSÉN. The net of coordinates for the maps in the present volume as well as of all the maps of the Expedition has been constructed under the supervision of Professor K. D. P. ROSÉN.

In the period of great unrest that preceded the political unification and stabilization of China our Expedition began its work in the most friendly and sympathetic collaboration with Chinese Scholars.

I will never forget the generous and noble way in which Doctor WONG WEN-HAO, the able and prominent Leader of the Geological Survey of China, embraced and supported our desires and projects. In consultation with him it was decided that the reports on fossil Fauna and Flora should be included in the *Palæontologia Sinica* of the National Geological Survey of China, where all important previous palæontological material from China had been brought together. In the same Chinese Series all the prehistoric Archæology is going to be published.

In the Swedish Series of scientific publications, of which the present volume is the first one, the subjects to be dealt with are the following:

Geography, Geodesy, Geology, Meteorology, Astronomy, Botany, Ethnography and Historical Archæology. As regards the Zoological collections they have already been worked out and reports on them have been published in the "Arkiv för Zoologi" of the ROYAL SWEDISH ACADEMY OF SCIENCE.

The present volume, "Geology of Western Quruq tagh, Eastern T'ien-shan" by ERIK NORIN, is the first of a series of monographs on the geology of Eastern T'ien-shan.

The Cambrian and Silurian marine fossils collected by NORIN in Quruq tagh

have been studied by Dr. G. TROEDSSON and Dr. O. M. B. BULMAN, and their reports are now ready for the press. The astronomical observations made by N. AMBOLT in Quruq tagh and other parts of Eastern Turkistan have been worked out by AMBOLT himself and will soon be published.

In a following volume the Middle Ranges of Eastern T'ien-shan including the Turfan Basin will be dealt with by NORIN whereas the Northern Ranges of the same mountain system, the Bogdo-ula and the Qarliq tagh will be described by Professor P. L. YUAN. Dr. NORIN'S reports on the geological reconnaissances in Mongolia, K'un-lun, Tibet, and Tsaidam will follow at a later date.

At the beginning of our work in the field Professor SIU PING-CH'ANG, Peiping, acted in a most congenial way as Chinese Leader of the Expedition at my side until he retired, in January 1929.

I should like to take this opportunity of thanking all our Chinese, German, and Swedish members of the Expedition. To everyone of them is due a great share in the successful accomplishments of our task.

Most appropriately Dr. Norin has dedicated this volume to the memory of Dr. V. K. TING who, since many years, was my very best Chinese Friend and who gave all my endeavours of scientific exploration in Central Asia his most valuable and strong support. Most heartily I participate with the whole scientific world of China in the deep sorrow and regret that everywhere was felt at the loss of this brilliant Chinese Scholar.

Likewise I will always bear in grateful remembrance the late Professor LIU FU, Peiping, Chairman of the Committee of our Expedition.

Stockholm, May 5. 1937.

SVEN HEDIN

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