Silurian and Early Devonian Biostratigraphy in Northwest Thailand

By Horst Bastin, Eckart von Braun, Andreas Hess, Klaus-Erich Koch, Volker Stein, Dieter Stoppel & Reinhard Wolfart

With 1 figure and 2 tables

Abstract: This report on Silurian and Early Devonian fossil localities outlines the present state of knowledge on the two systems in Northwest Thailand. It includes notes on lithology, faunal assemblages, and age of the marine deposits. A table correlates the faunal successions with the international standard divisions.


Introduction

A first note on Ordovician and Early Silurian graptolites from the Fang Region, Northern Thailand, has been published by Kobayashi & Igo (1965). Since then a German Geological Mission to Thailand started a mapping survey of Northern and Western Thailand, sampling among others the above mentioned localities. Determinations by Jaeger et al. 1968, Jaeger et al. 1969 showed the strata in question to be of Early Devonian age. A number of additional findings in either Silurian or Early Devonian deposits of the region yielded graptolites, brachiopods, tentaculitids, and conodonts.

For the general geological setting of the region one should refer to a paper on the geology of Northern Thailand prepared by the German Geological Mission presently in print (s. references). The Silurian and Early Devonian rock sequence of Northern Thailand was formed in an area of marine sedimentation extending from Malaysia, Burma, and Thailand to Southern China, probably not surpassing 200 metres in thickness. Whereas the Silurian mainly consists of fine clastics with local chert and limestone intercalations, the lower Devonian is characterised by prevailing cherts, graptolite bearing black shales, limestones and minor amounts of sandy material. Due to complicated tectonics and thick vegetation so far continuous sections of these strata have not been spotted in Thailand.

This paper intends to demonstrate our present knowledge on Silurian and Early Devonian biostratigraphy based on collections of the German Geological Mission. Investigations on the problems are not yet completed. It is hoped to fill some of the still existing gaps in our knowledge of paleontological recording in the future.