



Proposal year:
2019

东南亚古生代碳酸盐岩建造

Palaeozoic Carbonate Build-ups in South East Asia



陈吉涛



中国科学院南京地质古生物研究所
现代古生物学和地层学国家重点实验室

2021. 11. 14

(北京线下+线上会议)

东南亚古生代碳酸盐岩建造

Palaeozoic Carbonate Build-ups in South East Asia

汇报提纲

- 一、项目概况
- 二、进展成果
- 三、研究计划



1、项目负责人



Hathaithip (Thassanapak) Udchachon, Assistant Professor, Department of Biology, Faculty of Science, and Palaeontological Research and Education Centre, Mahasarakham University (玛哈沙拉堪大学), Kantharawichai, Maha Sarakham, 44150, **THAILAND**;



陈吉涛, Professor, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, **CHINA** (中国科学院南京地质古生物研究所)



Halay Tsegab Gebretsadik, Assistant Professor, Department of Geosciences, Universiti Teknologi Petronas (国油科技大学), 32610 Bandar Seri Iskandar, Perak, **MALAYSIA**



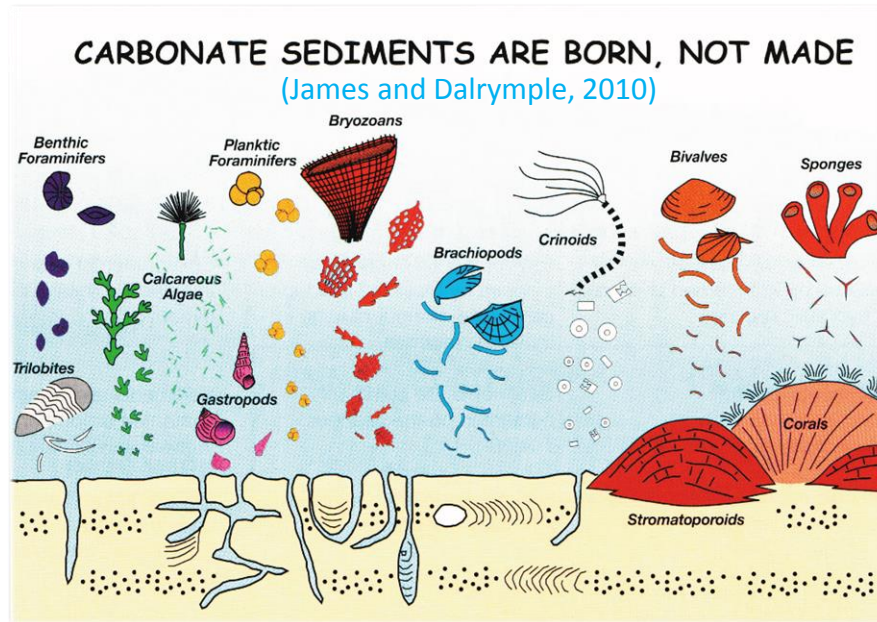
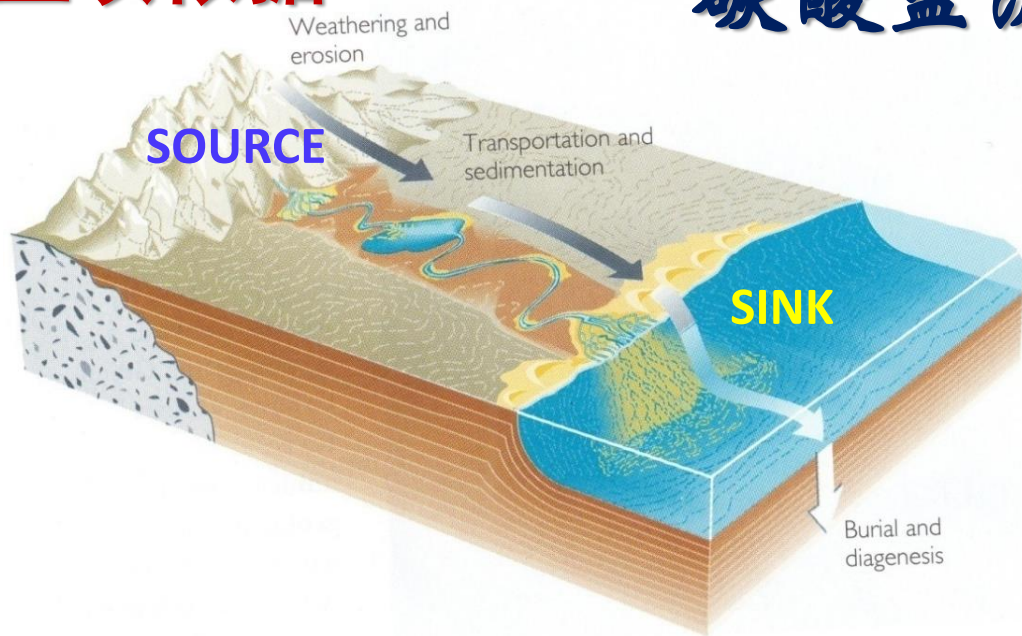
Pradit Nulay, Ph.D., Office of Mineral Resource region 2 (KhonKaen) 270/1 Mittraphap Road, Muang District, Khon Kaen Province (孔敬省), 40000, **THAILAND**



Mongkol Udchachon, Associate Professor, Palaeontological Research and Education Centre, Mahasarakham University (玛哈沙拉堪大学), Kantharawichai, Maha Sarakham, 44150, **THAILAND**

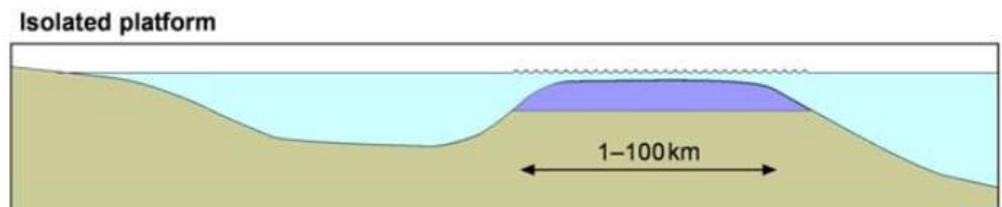
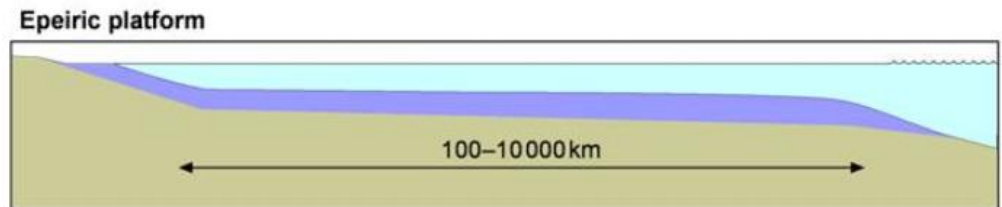
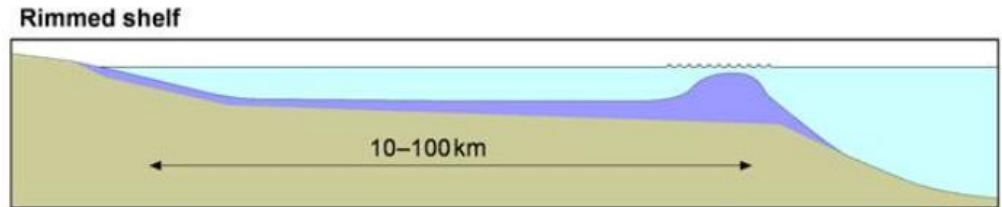
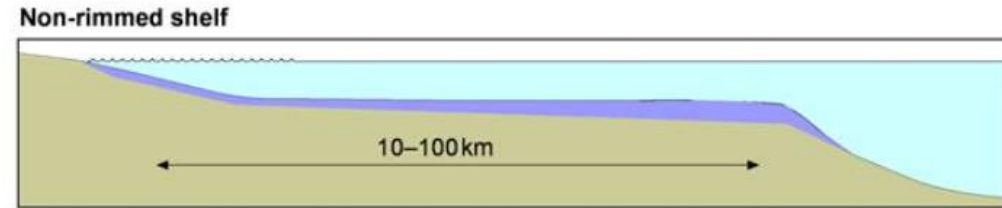
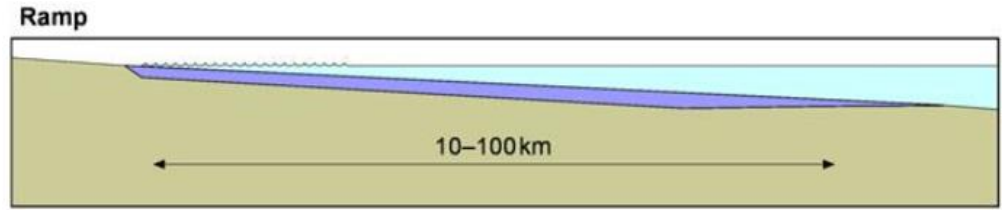
2、立项依据

碳酸盐沉积



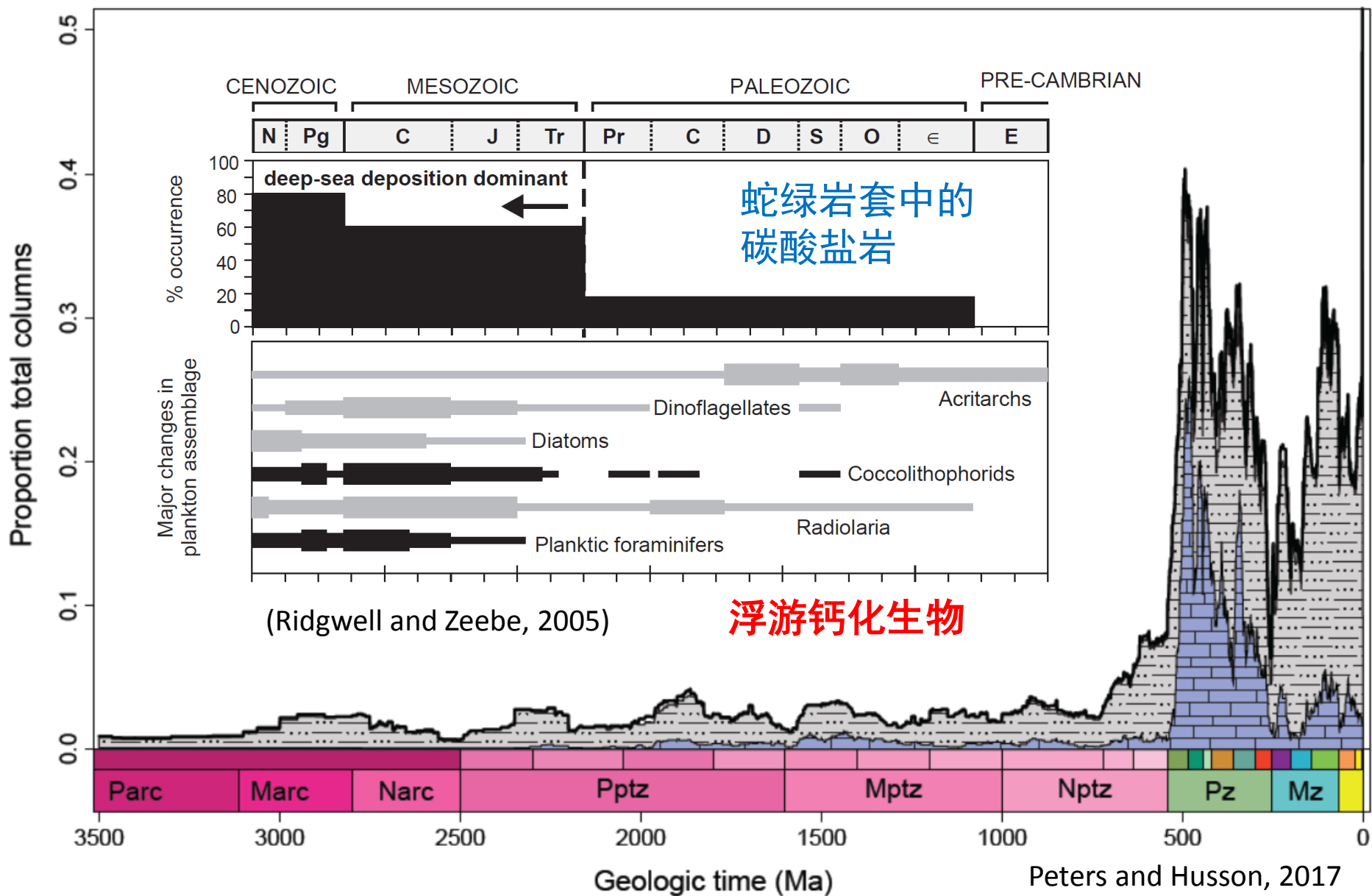
2、立项依据

碳酸盐岩建造与台地类型



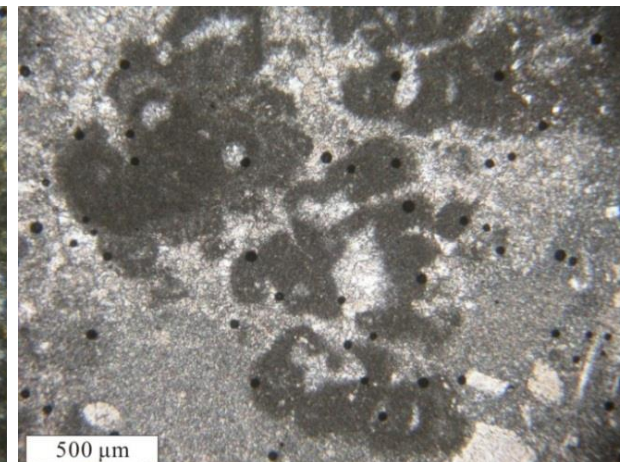
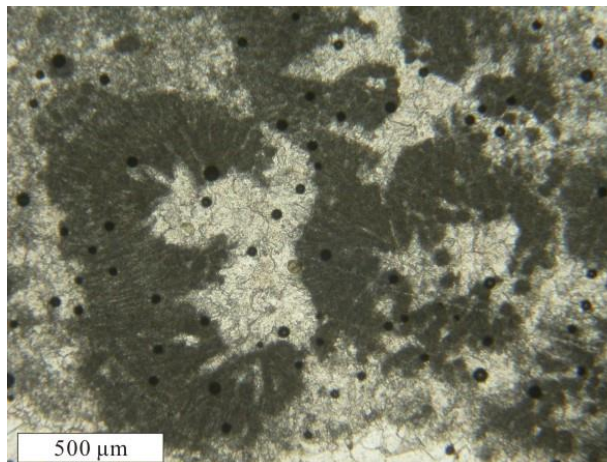
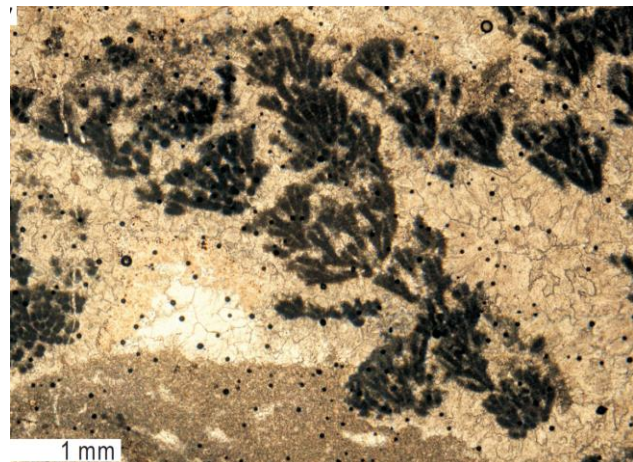
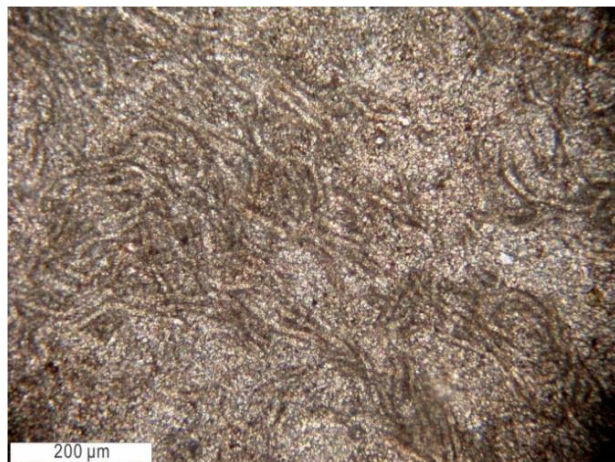
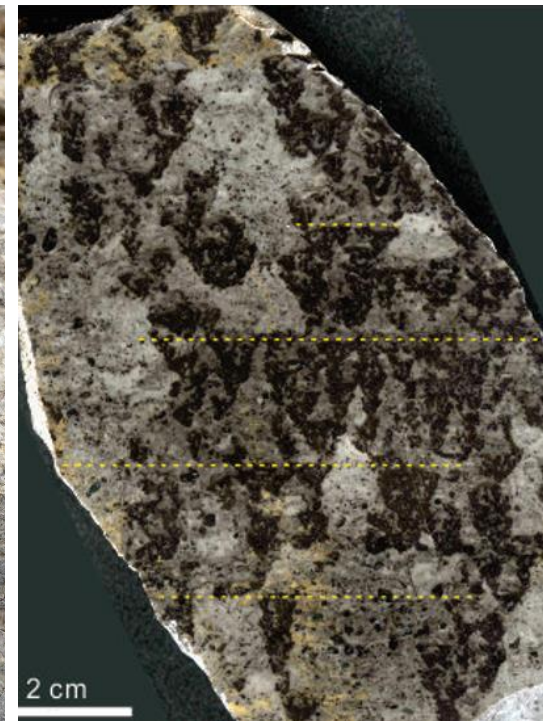
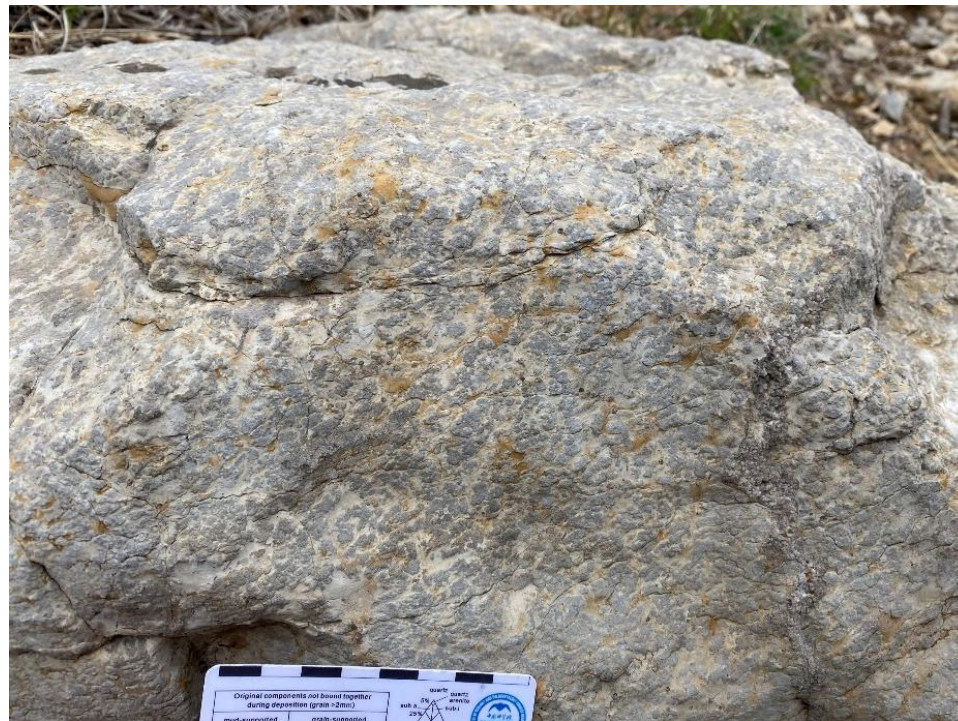
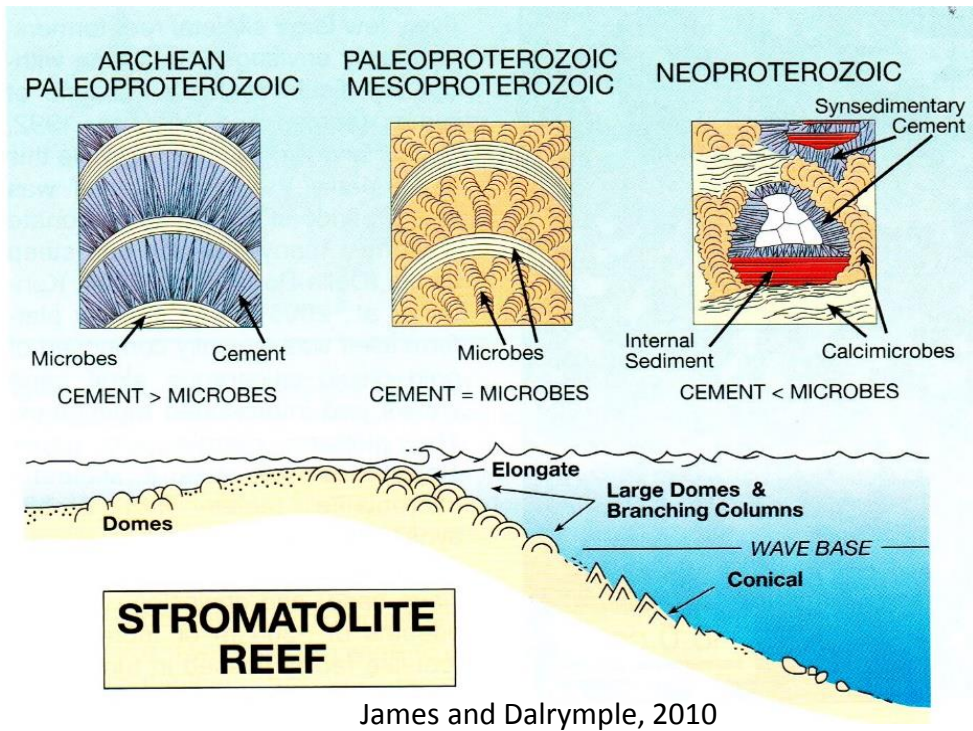
2、立项依据

地史中碳酸盐岩的分布



2、立项依据

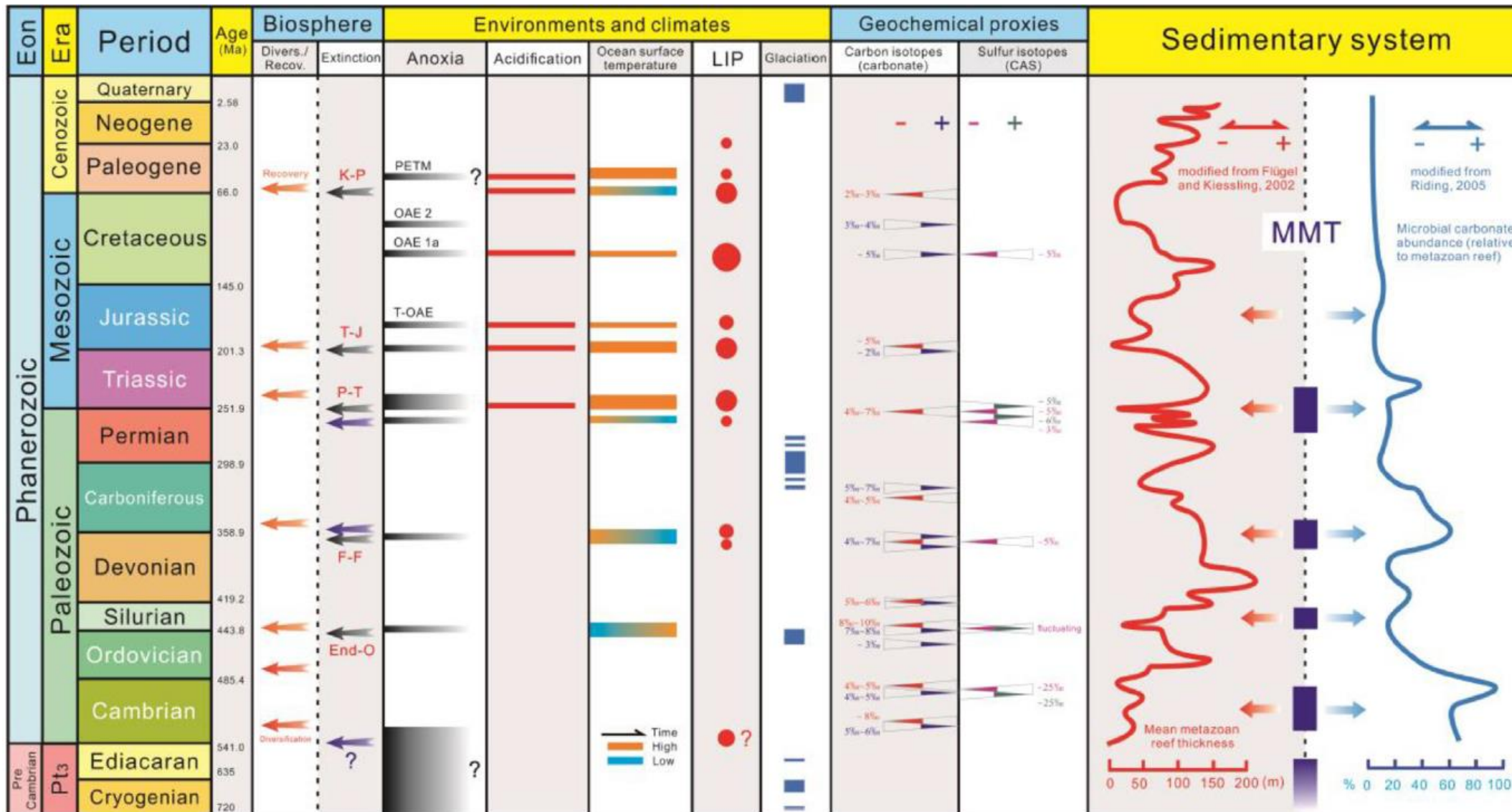
微生物碳酸盐岩



2、立项依据

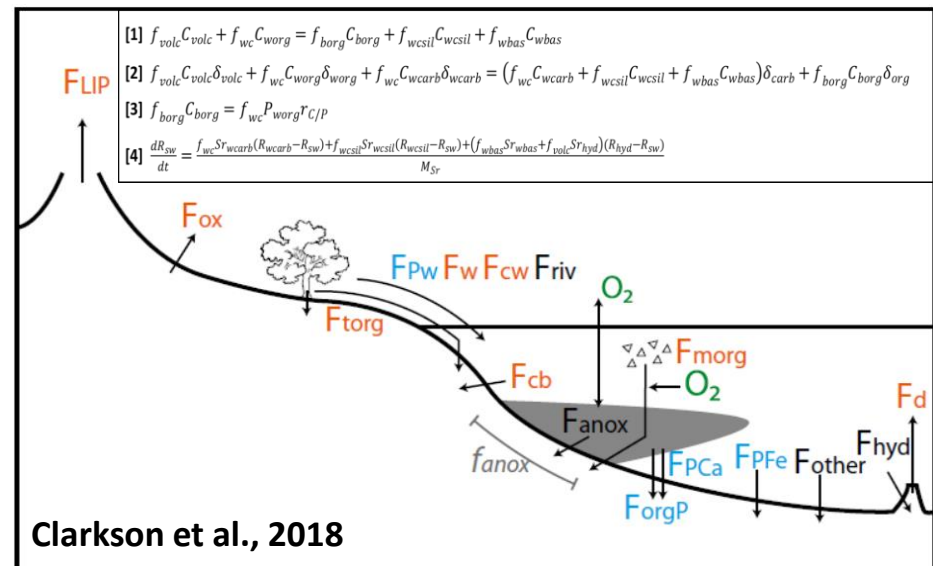
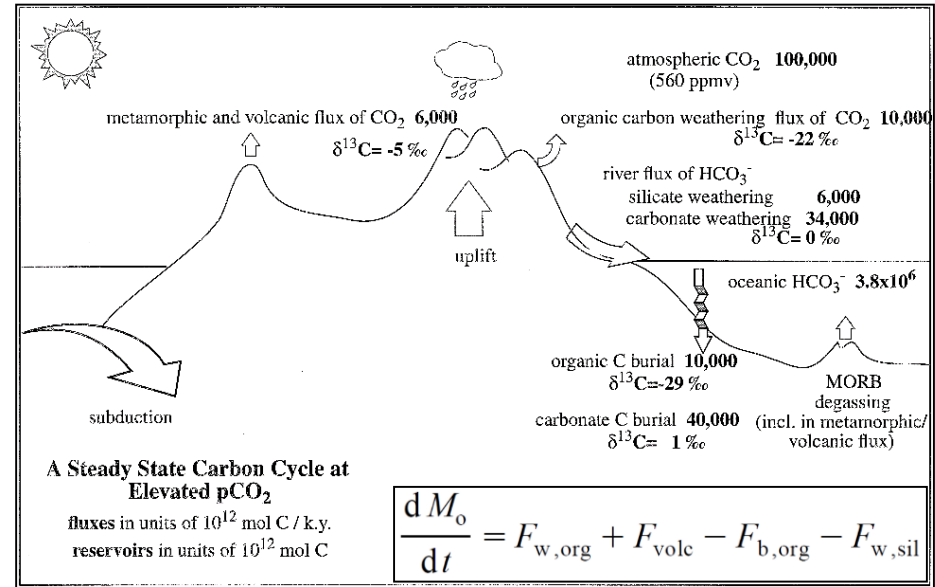
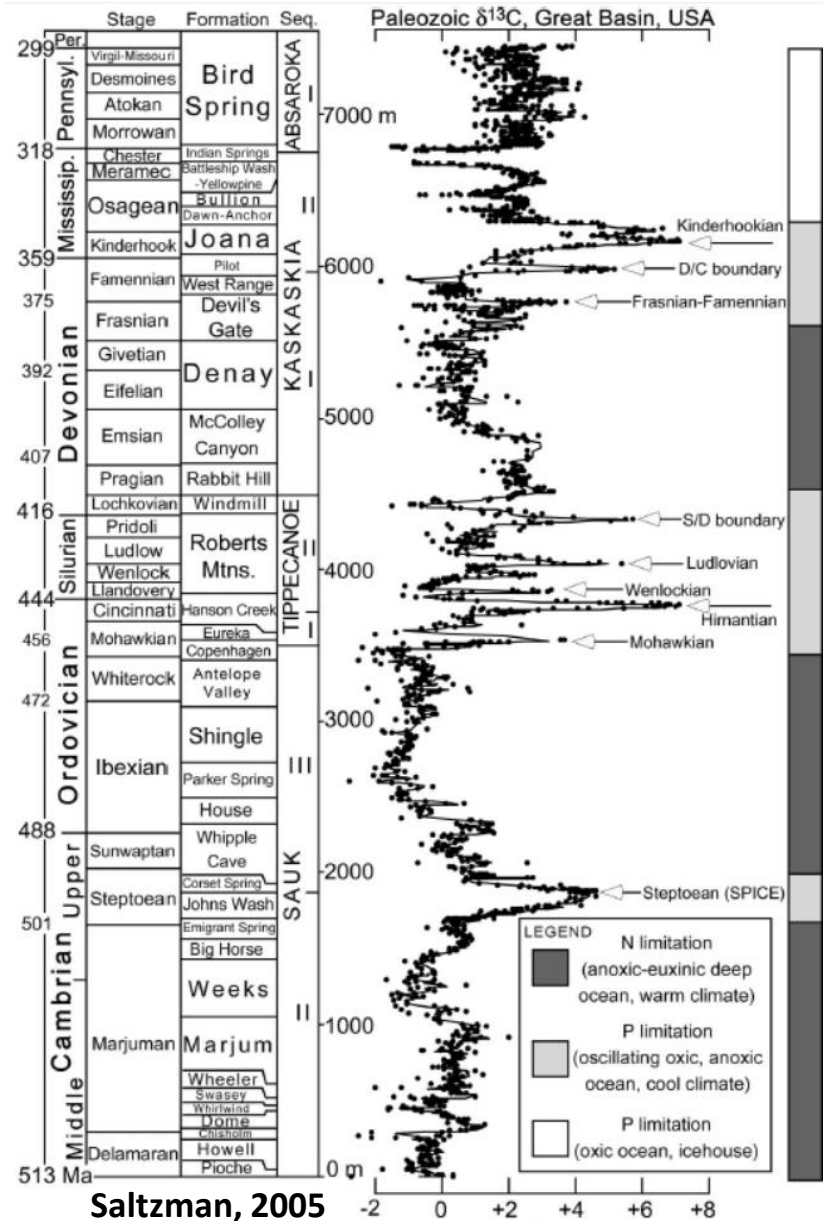
Chen et al., 2019, ESR

晚新元古代以来5次重要的微生物主导 向后生生物主导沉积体系过渡期 (MMT)

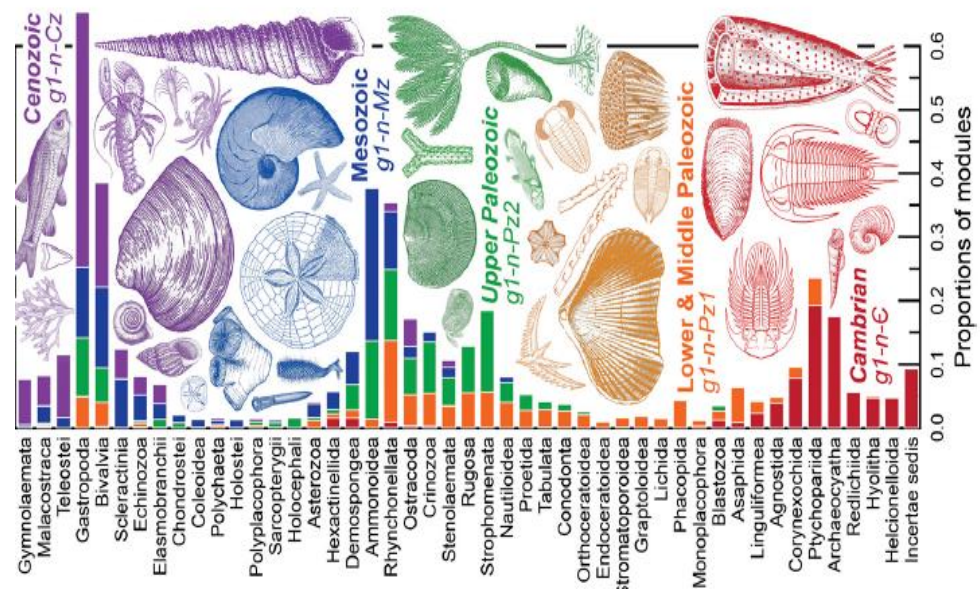
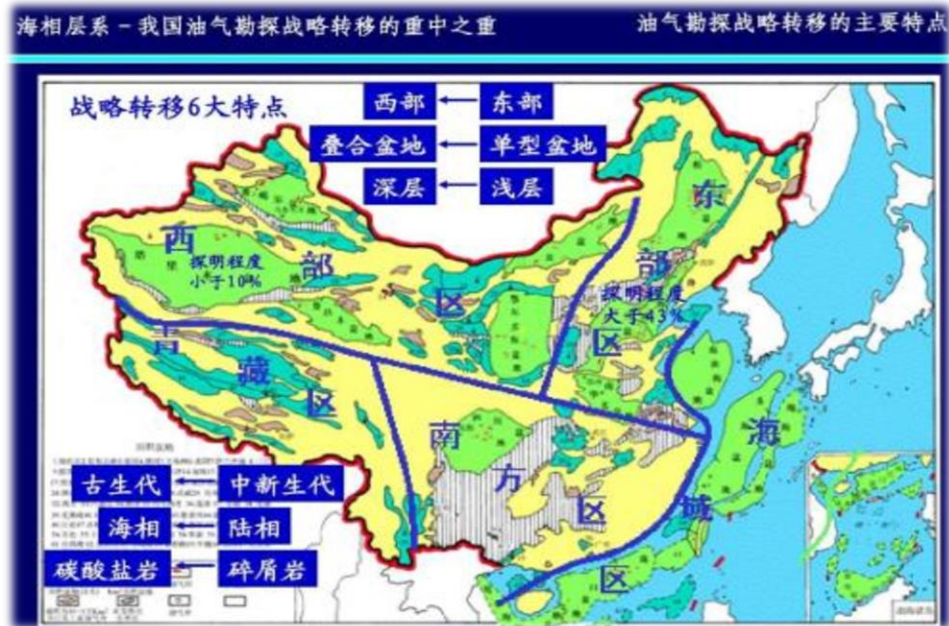


2、立项依据

全球生物地球化学循环的重要载体



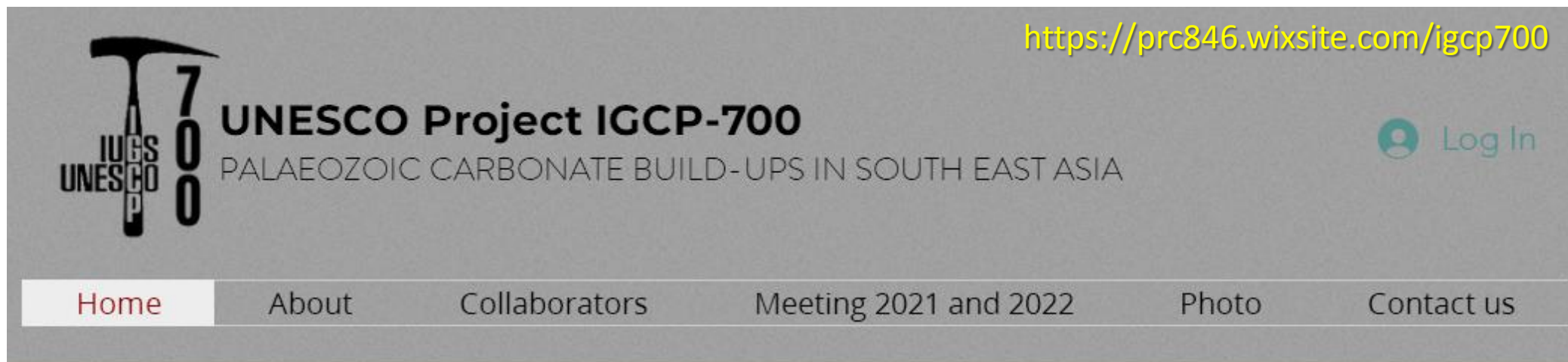
2、立项依据



3、研究内容

- 古生代碳酸盐岩台地的生长与消亡
- 古生代碳酸盐岩建造的分布与几何形态
- 古生代气候变化与生物礁发育
- 古生代造礁生物多样性变化

4、网站建设



5、年会组织

First Circular

UNESCO Project IGCP-700

PALAEOZOIC CARBONATE BUILD-UPS IN SOUTH EAST ASIA



(Year 1: Meeting + fieldtrip training for students/academics and young geoscientists on Palaeozoic carbonate build-ups in Loei-Phetchabun fold belt and regional correlation)

13th - 16th December 2021

Year 1 (2021)--Meeting in NE Thailand and fieldtrip to northern and NE Thailand

THAILAND

[Download File](#)

Registration (choose only one option)

option 1 : online

option 2 : filled-in form and submit via e-mail

[Registration option 1](#)

[Registration option 2](#)

[Click here!!](#) [Example of abstract](#)

Covid-19 prevention policy

1. Participants and staff who join the IGCP-700 need to show their full covid-19 vaccination certificate.
2. Participants without full vaccination, will need to pass an Antigen Test Kit (ATK) test on arrival. In this case participants need to bring their own ATK.
3. Standard measures including wearing masks, 'social' distancing and hand washing are required during the meeting and field trip.
4. For further infection prevention, all participants need to cooperate and follow the "Guidelines on clinical practice, diagnosis, treatment, and prevention of healthcare-associated infection for COVID-19" issued by Department of Disease Control of the Thai Government.
(https://ddc.moph.go.th/viralpneumonia/eng/file/guidelines/g_CPG_04Aug21.pdf)

东南亚古生代碳酸盐岩建造

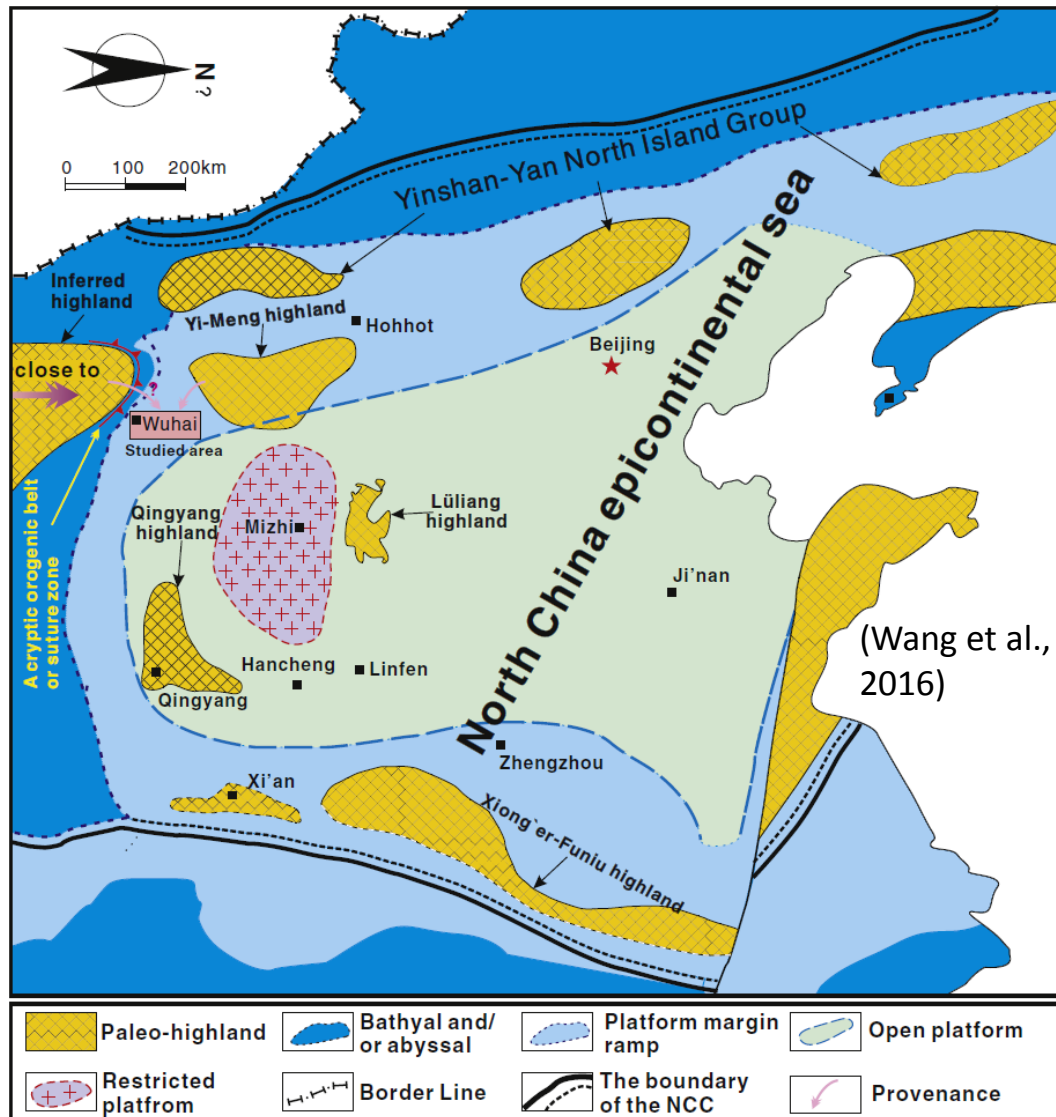
Palaeozoic Carbonate Build-ups in South East Asia

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1、华北西缘奥陶系碳酸盐台地消亡及盆地演化



Middle Ordovician paleogeography of the NCC

SEDIMENTOLOGY

THE JOURNAL OF THE INTERNATIONAL ASSOCIATION OF SEDIMENTOLOGISTS



ORIGINAL ARTICLE

Middle Ordovician mass-transport deposits from western Inner Mongolia, China: Mechanisms and implications for basin evolution

Wenjie Li, Jitao Chen✉, Anne J. Hakim, Paul M. Myrow,

First published: 20 October 2021 | <https://doi.org/10.1111/sed.12949>

This is a contribution to IGCP 700

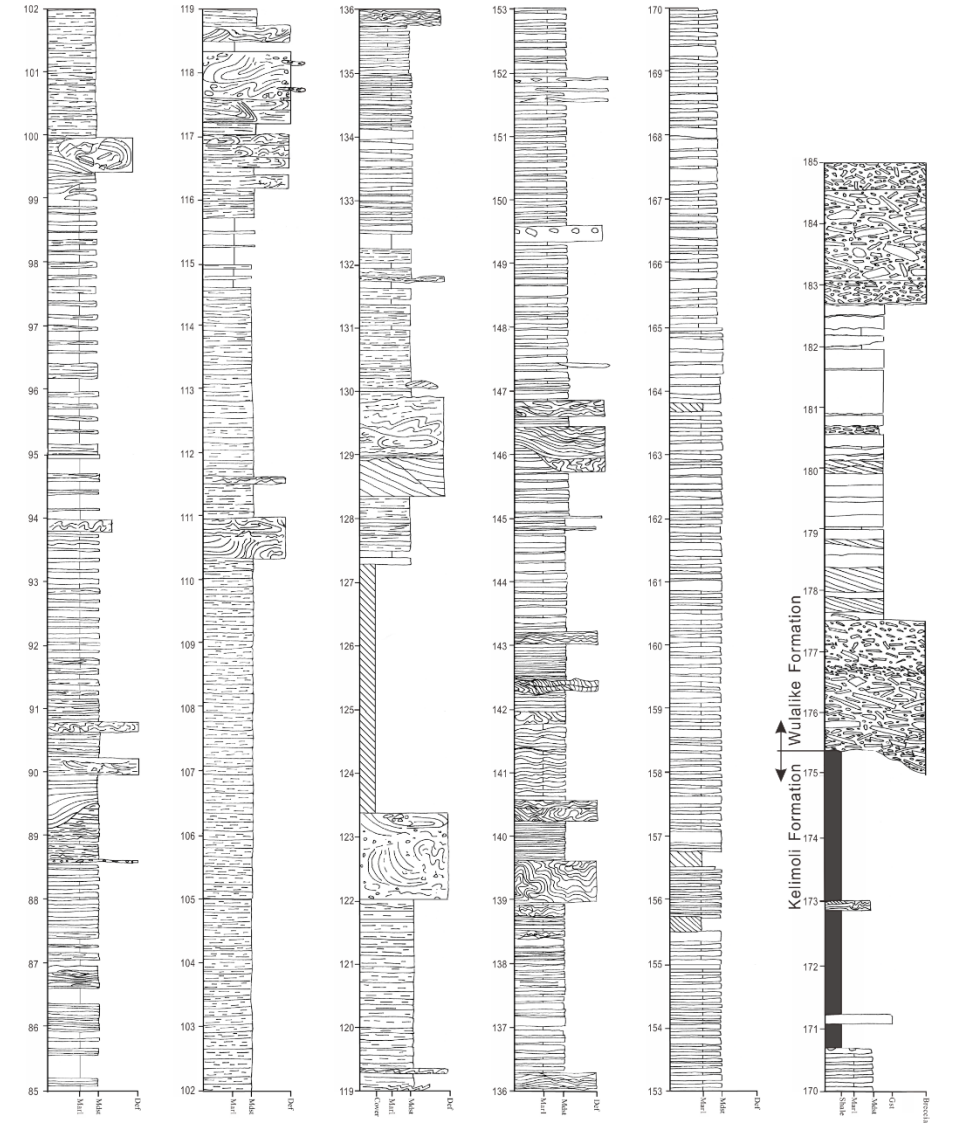
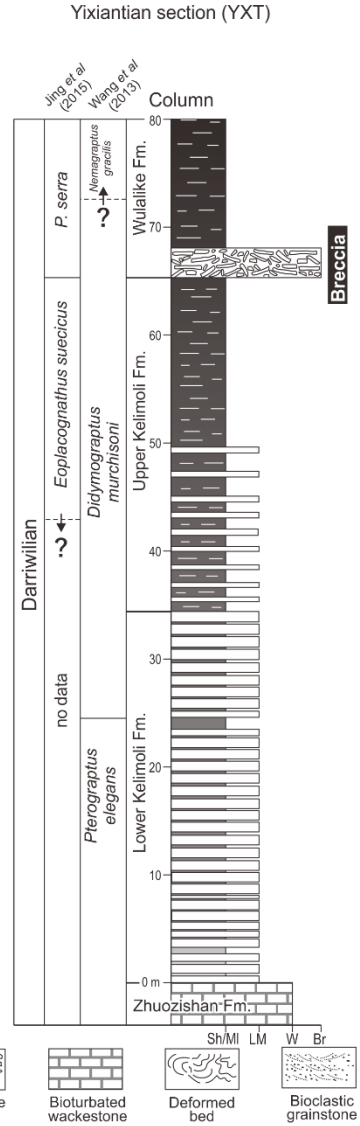
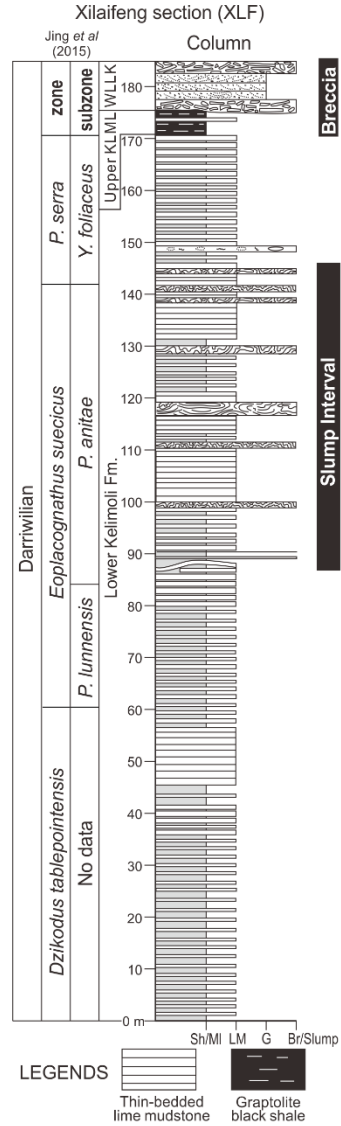
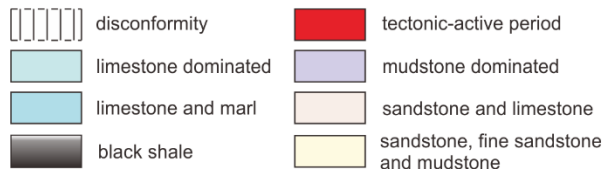
中国典型沉积剖面暨21st ISC野外路线建设交流会议 2021.4.18

第21届国际沉积学大会野外路线1/18

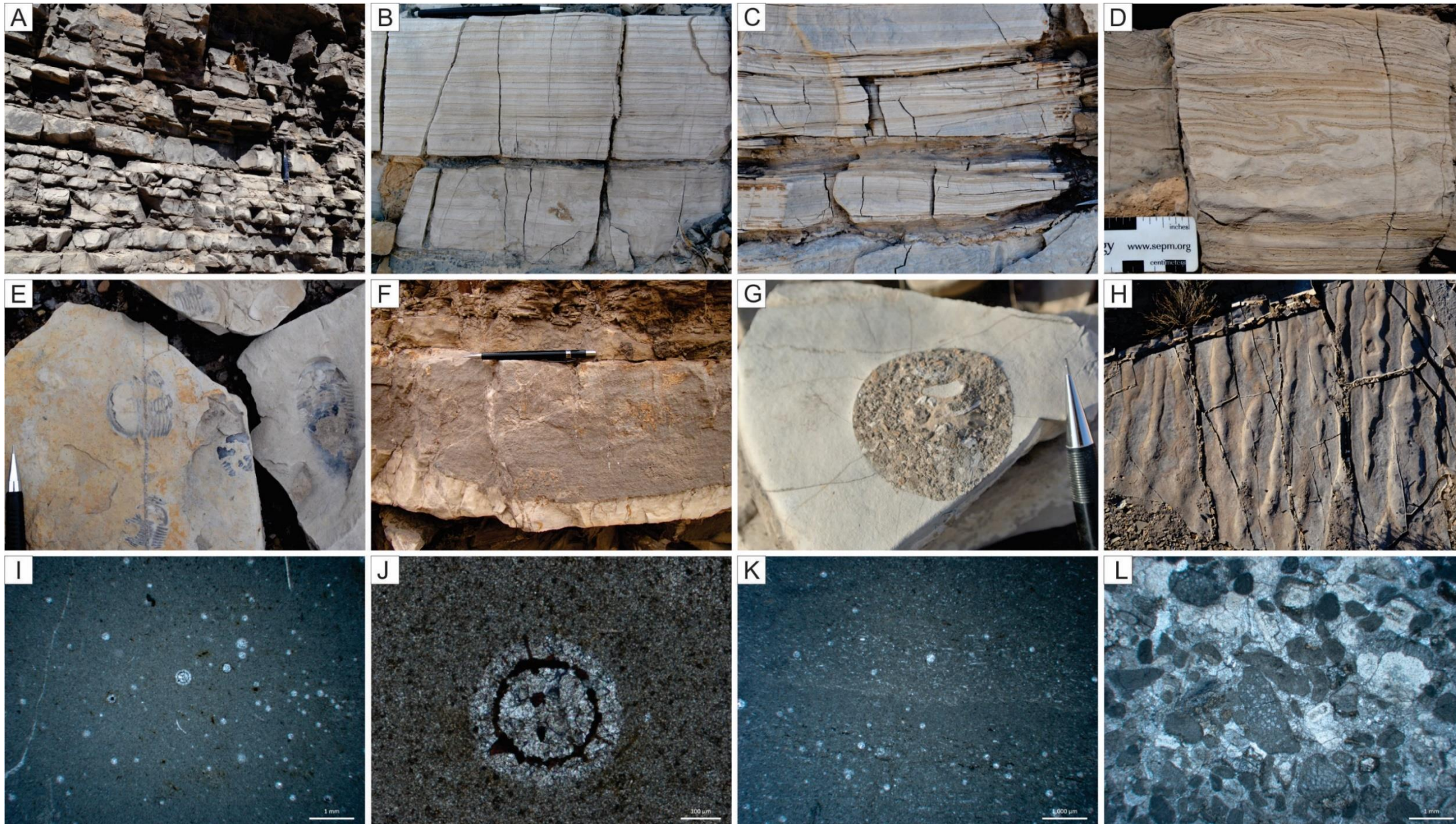
带队：陈吉涛、李文杰、Paul Myrow

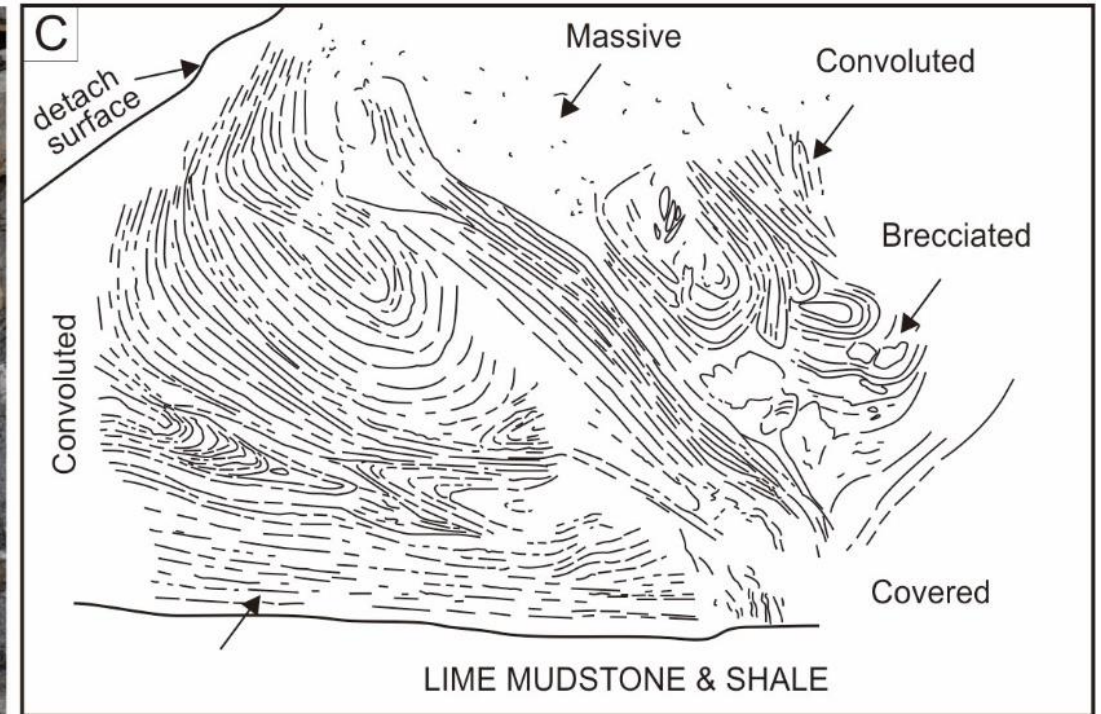
1、华北西缘奥陶系碳酸盐台地消亡及盆地演化

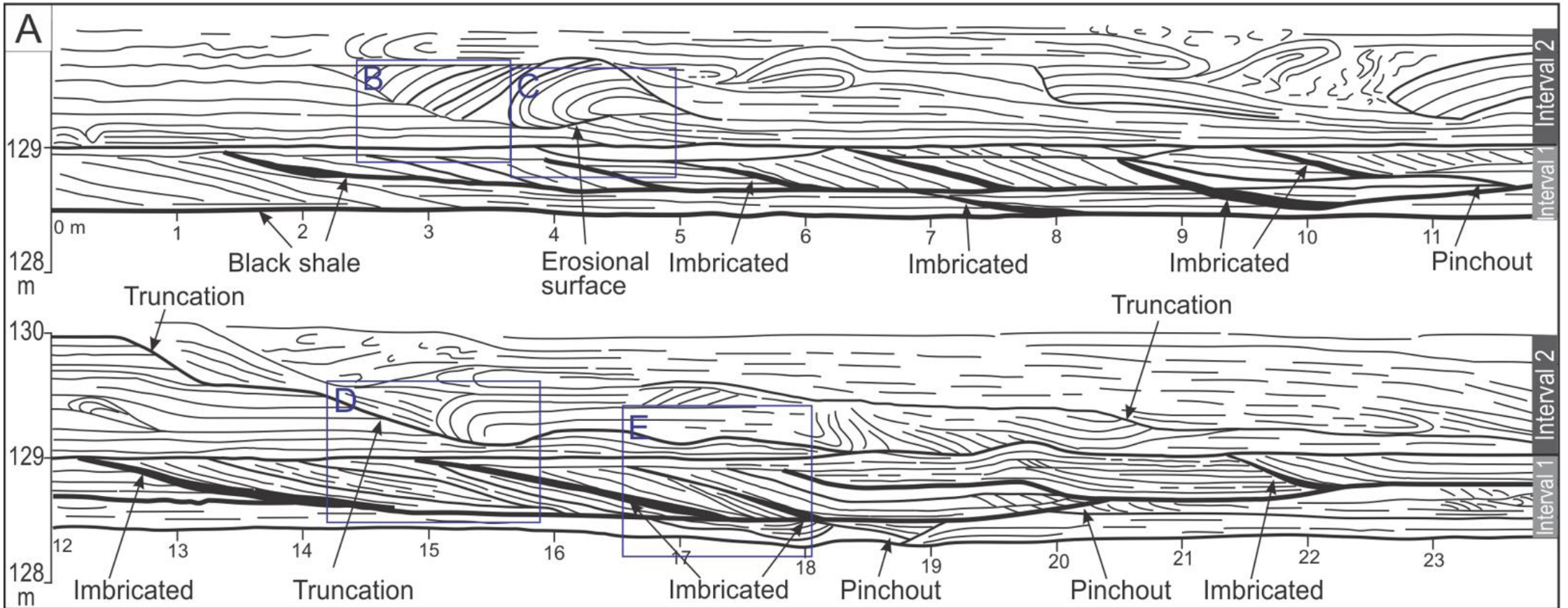
Chronostratigraphy		Lithostratigraphy	
Series	Stage	Wuhai (this study)	Ordos Basin
Pennsylvanian	Bashkirian	Yanghugou	Benxi
	Katian	Sheshan	
Upper Ordovician	Sandbian	Gongwusu	
		Lashizhong	
		Wulalike	
Middle Ordovician	Darrivilian	Kelimoli	Majiagou
		Zhuozishan	
		Sandaokan	Beianzhuang
Lower Ordovician	Floian		Liangjiashan
			Yeli
Furongian	Fengshanian	Abuqiehai	Chaomidian



1、华北西缘奥陶系碳酸盐台地消亡及盆地演化







Slump, debris flow, or xxx?



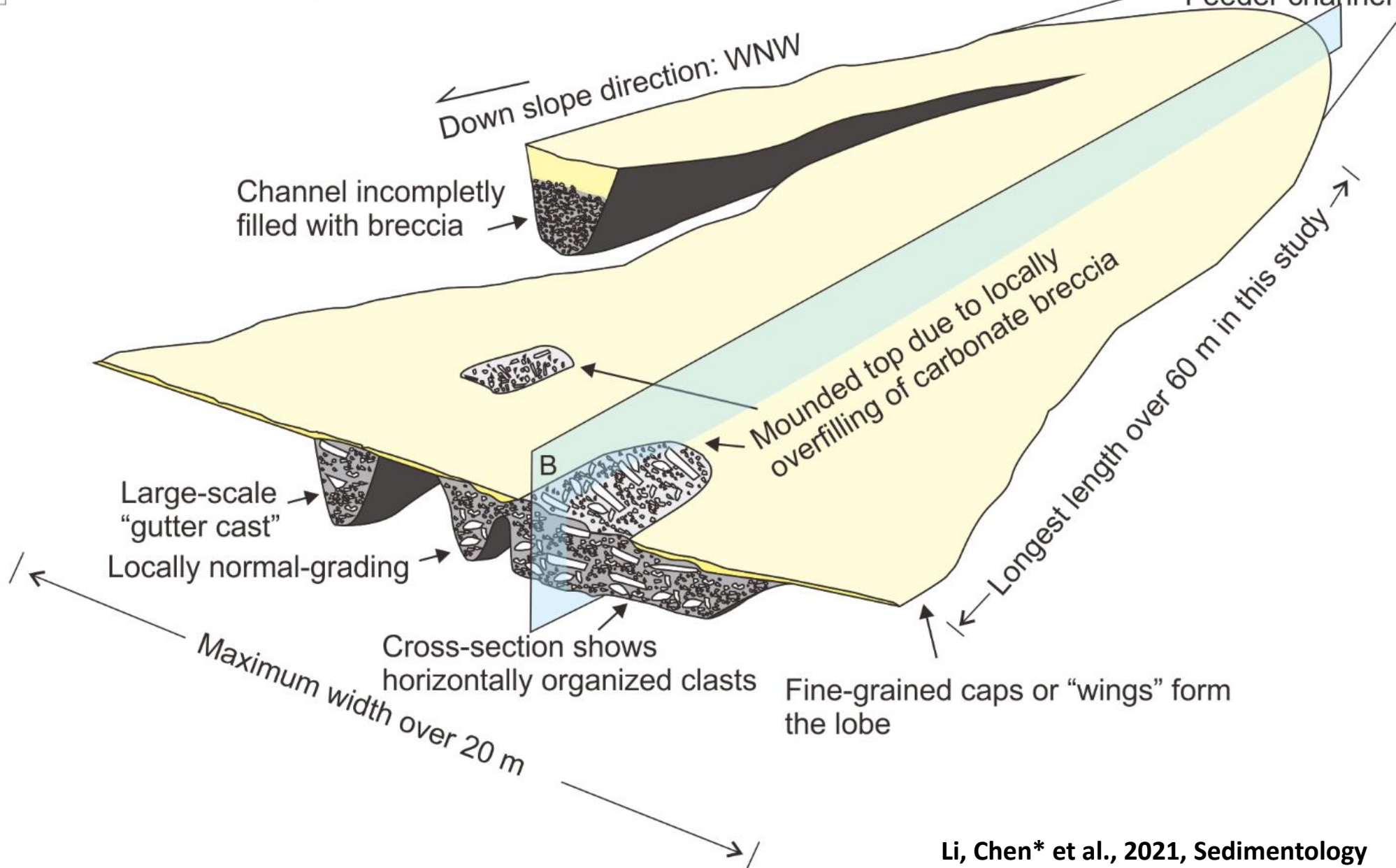


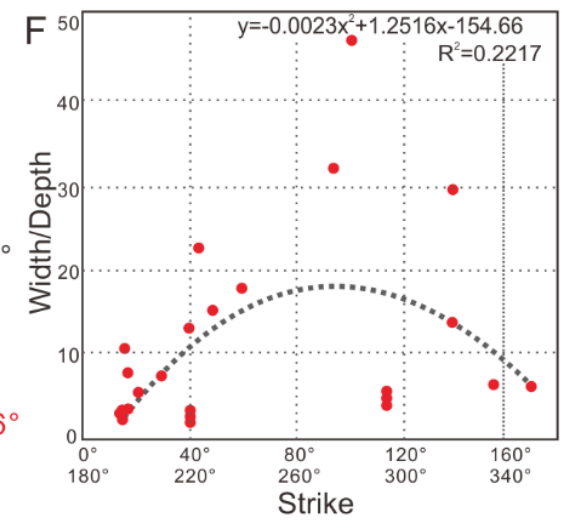
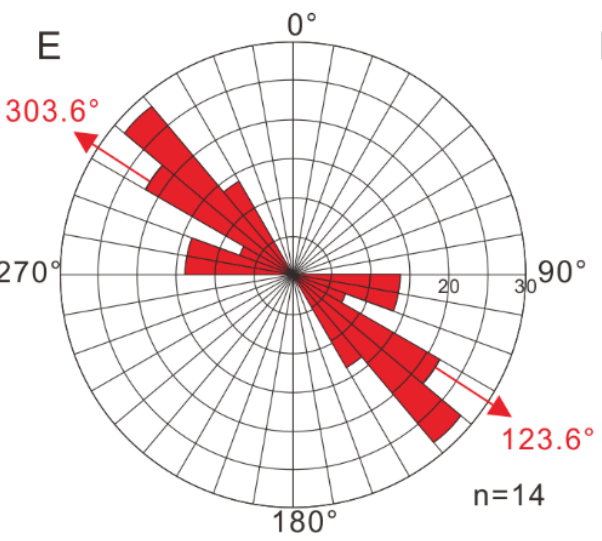
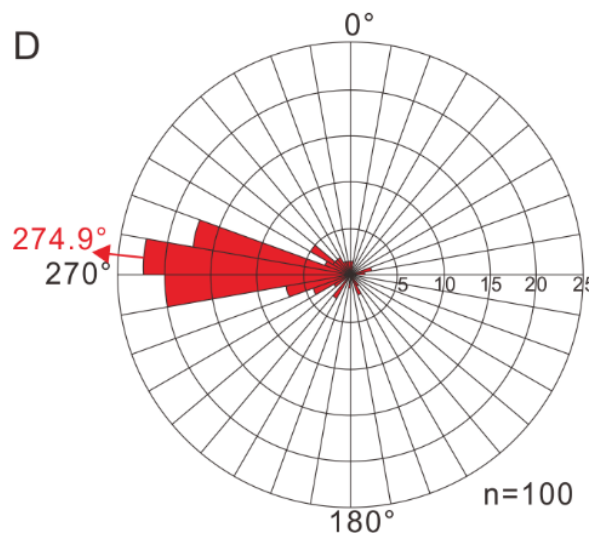
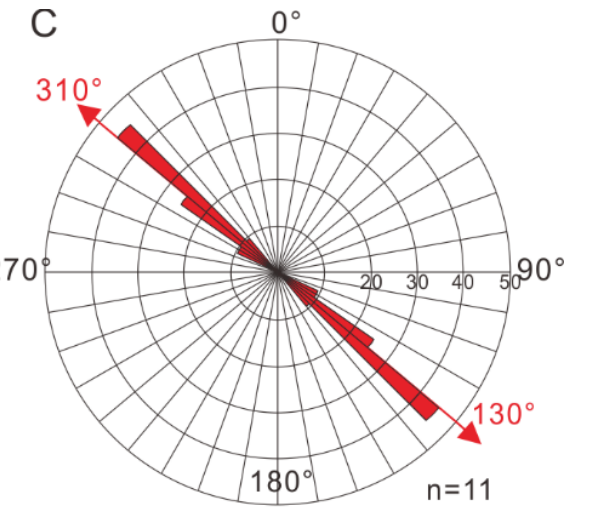
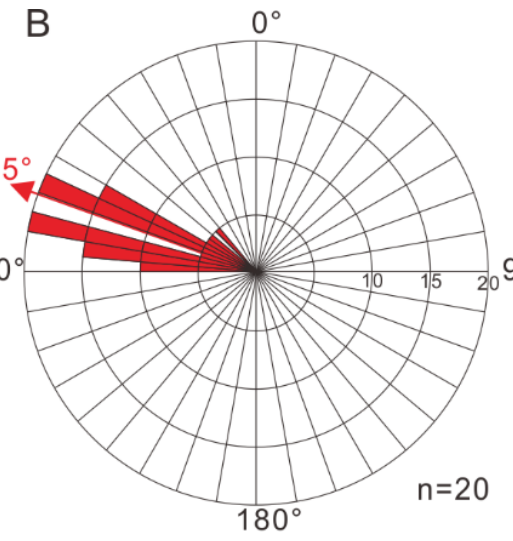
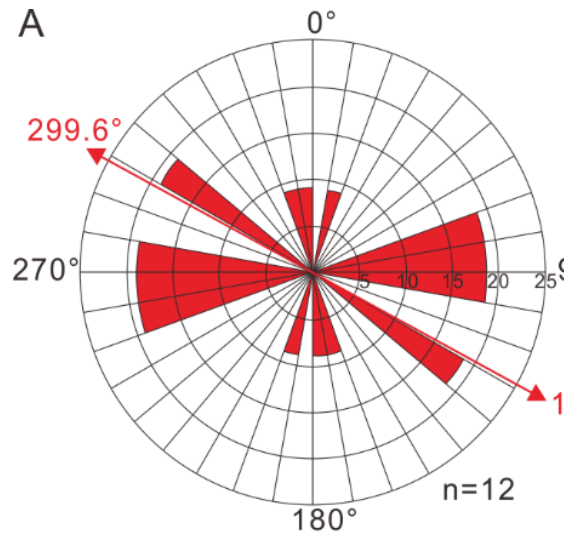
These are channel margins, not faults!

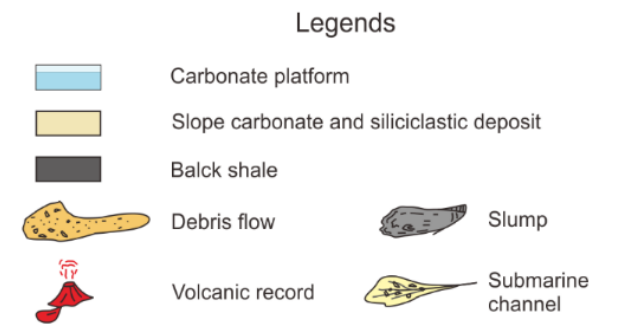
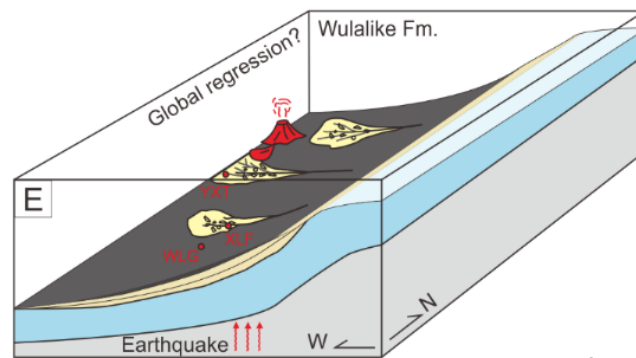
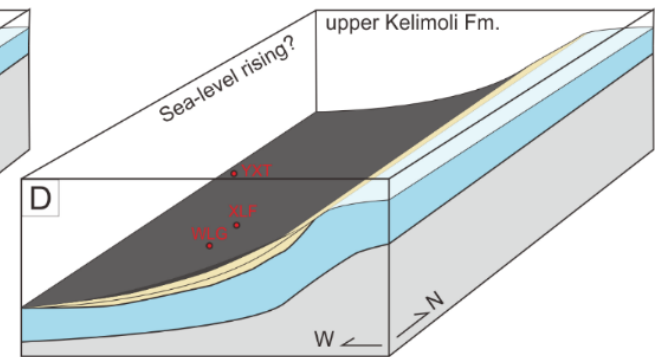
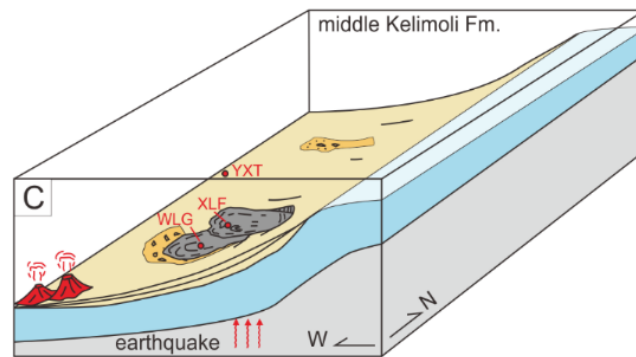
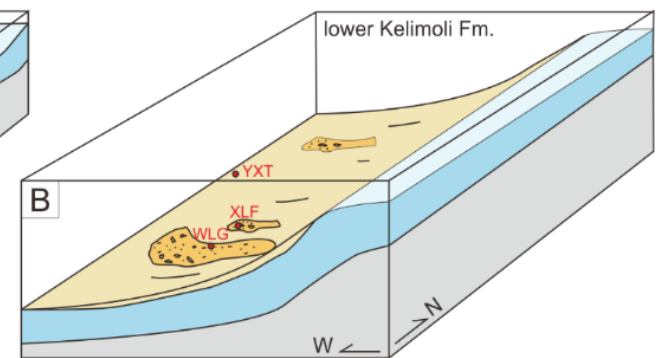
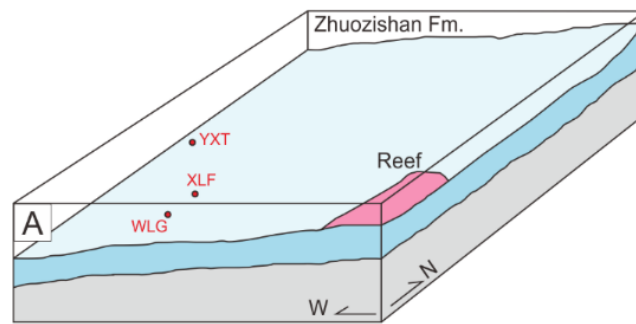
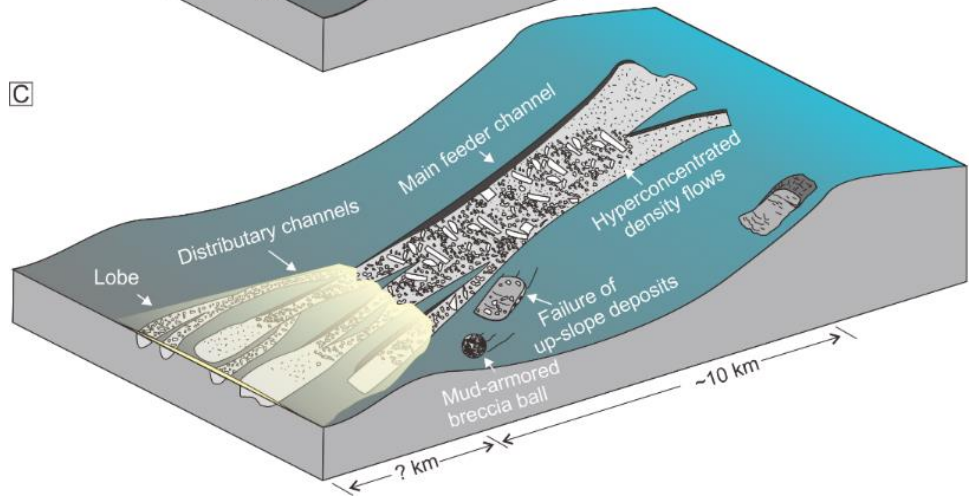
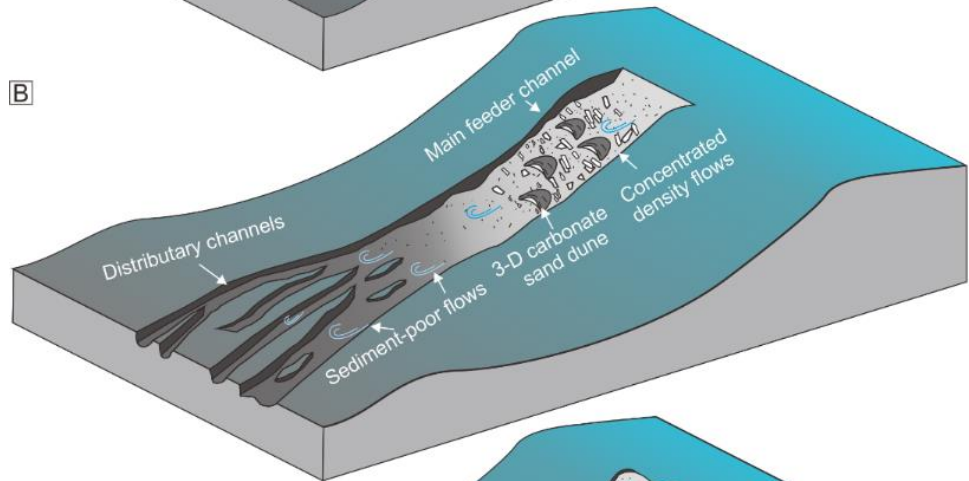
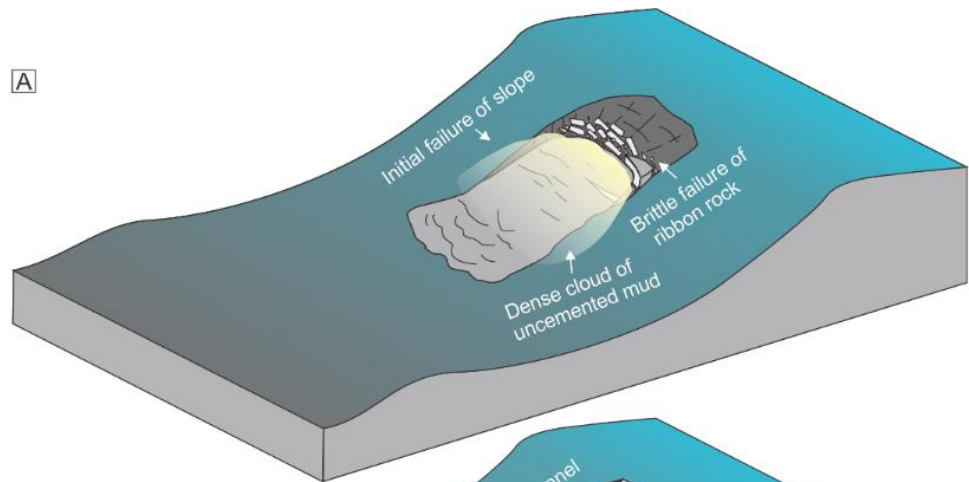




A Three-dimensional deposition model of the Yixiantian submarine channel system



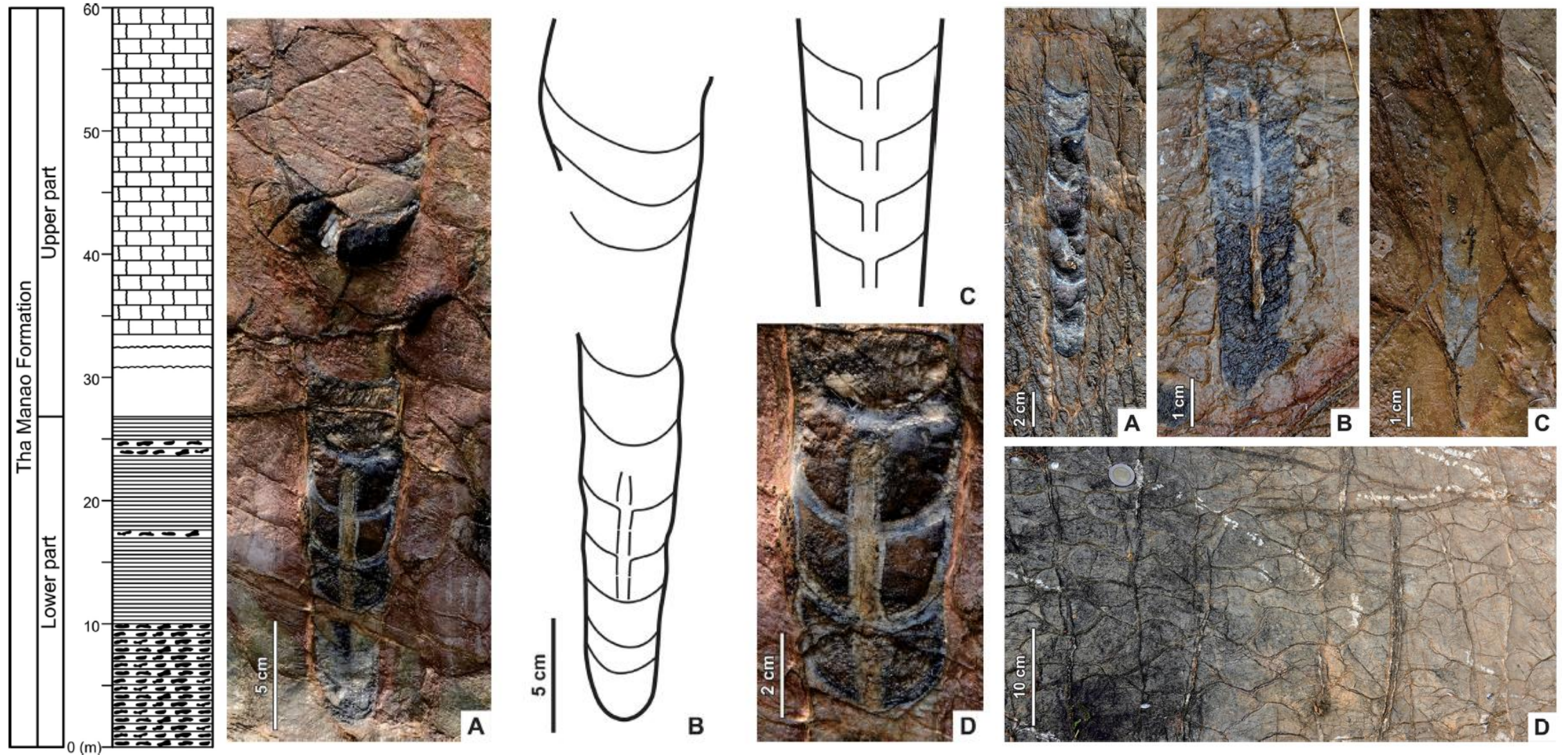




2、泰国Nautiloid Site Geopark剖面中-上奥陶统

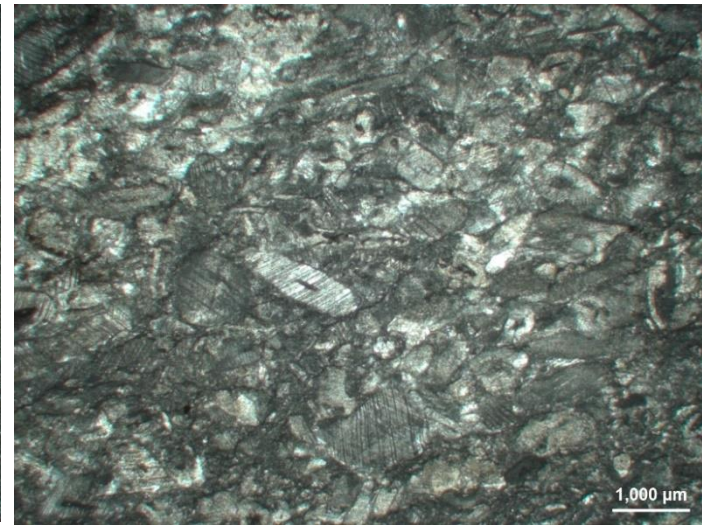
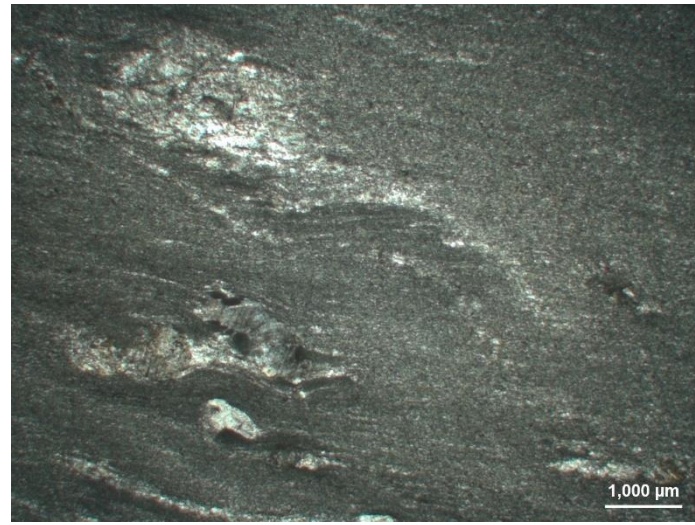
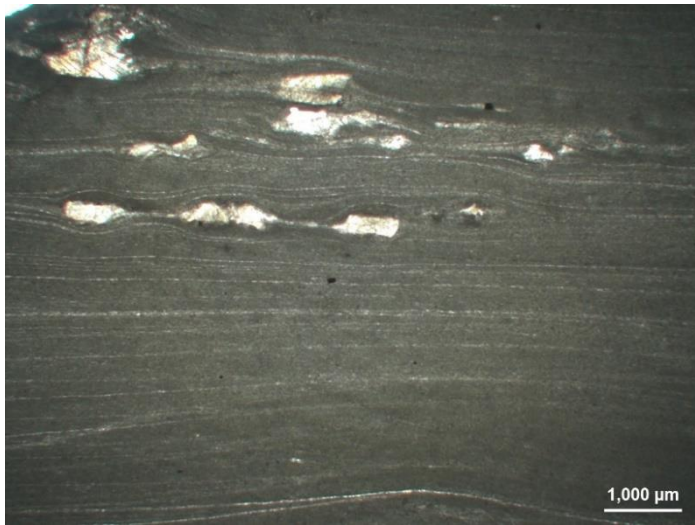
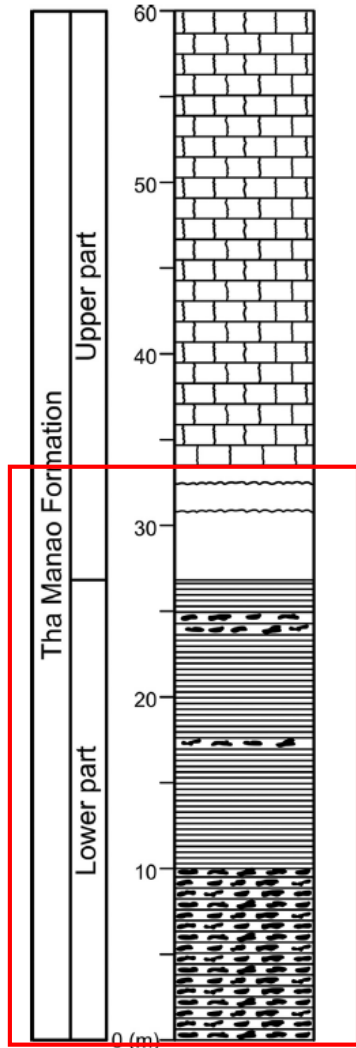


2、泰国Nautiloid Site Geopark剖面中-上奥陶统



认识1：在中国之外首次发现中华震旦角石 (*Sinoceras chinense*) Fang et al. (2021)

2、泰国Nautiloid Site Geopark剖面中-上奥陶统

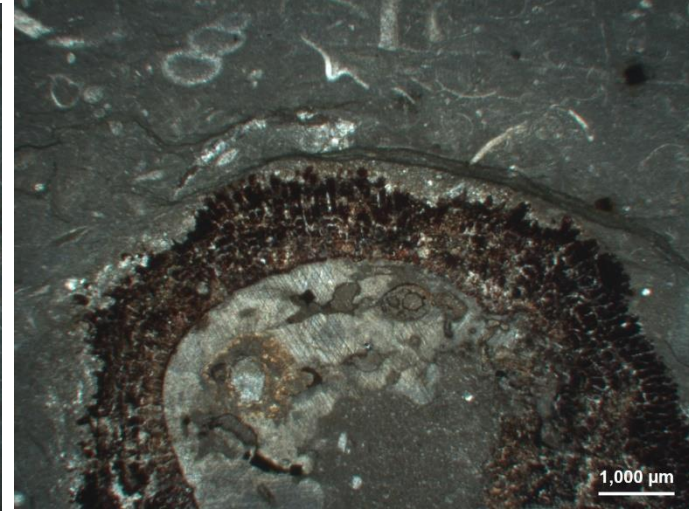
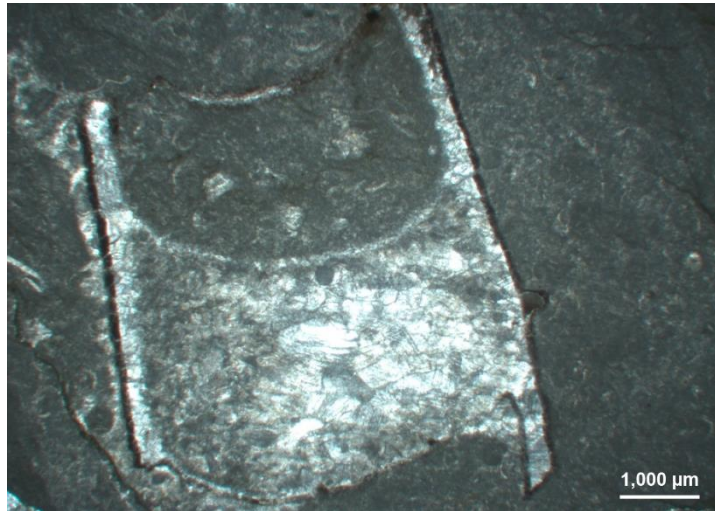
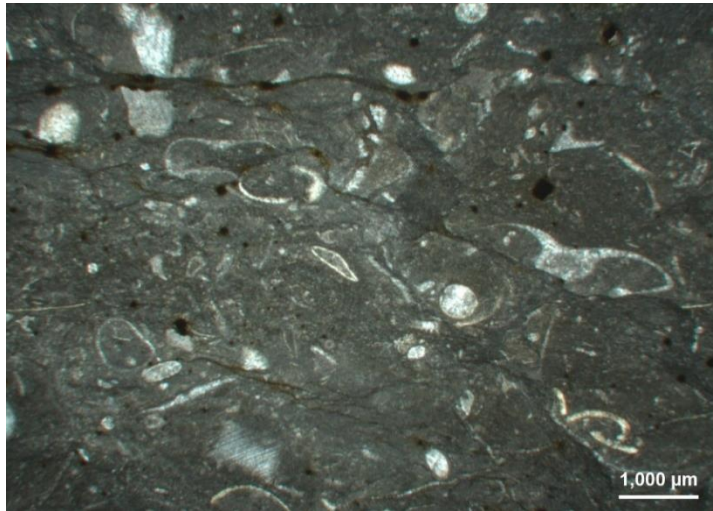
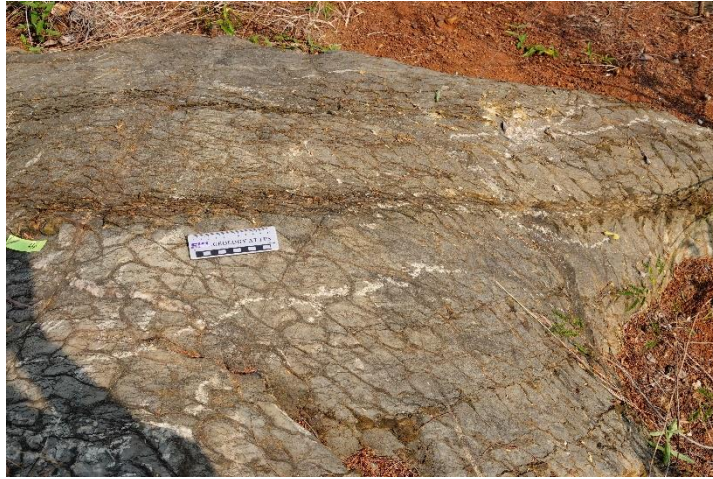
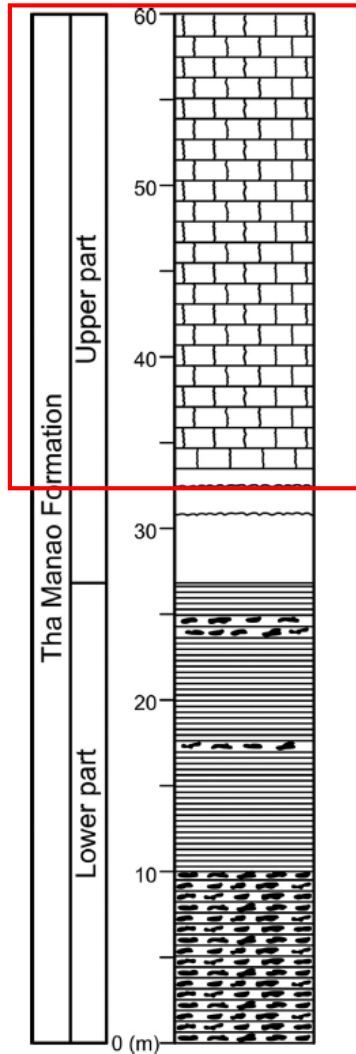


Fang et al. (2021)

Tha Manao Fm.

认识2：依据岩相特征建议将原Tha Manao Fm.分为上下两个组，分别为Tha Manao Fm. 和上覆的Pa Kae Fm.

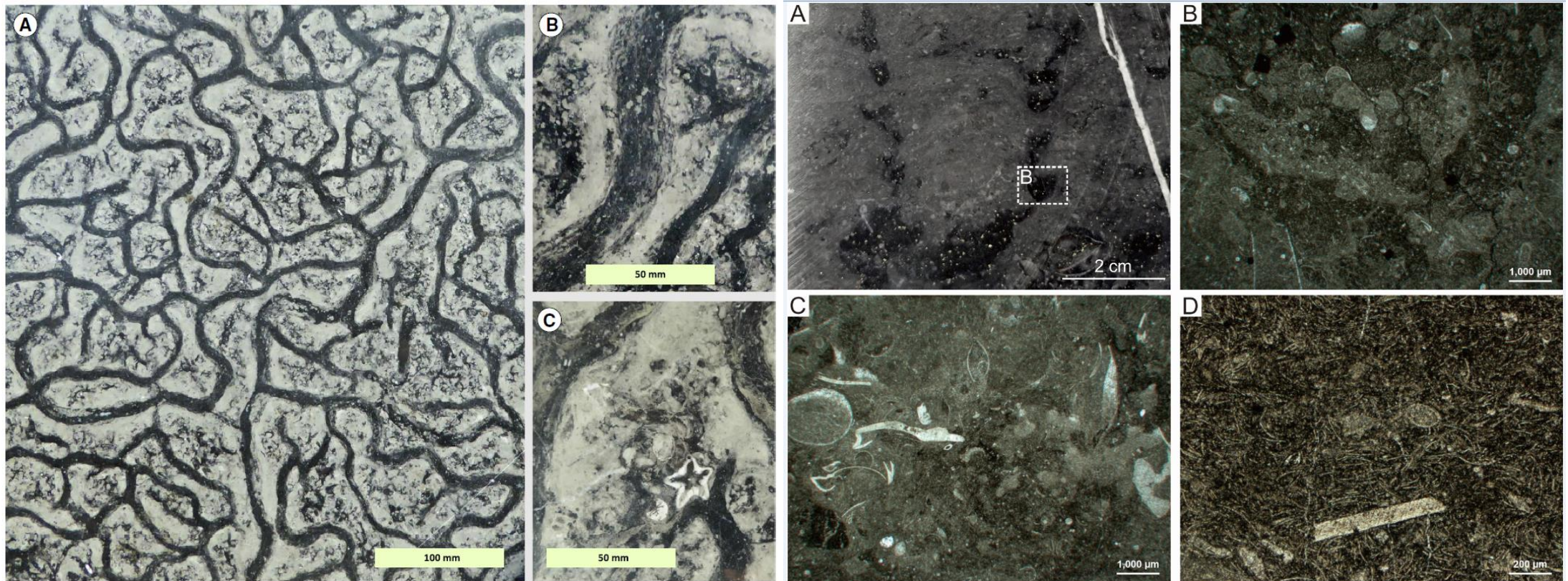
2、泰国Nautiloid Site Geopark剖面中-上奥陶统



Fang et al. (2021)
Pa Kae Fm.

认识2：依据岩相特征建议将原Tha Manao Fm.分为上下两个组，分别为Tha Manao Fm. 和上覆的Pa Kae Fm.

2、泰国Nautiloid Site Geopark剖面中-上奥陶统



Kershaw et al. (2019)

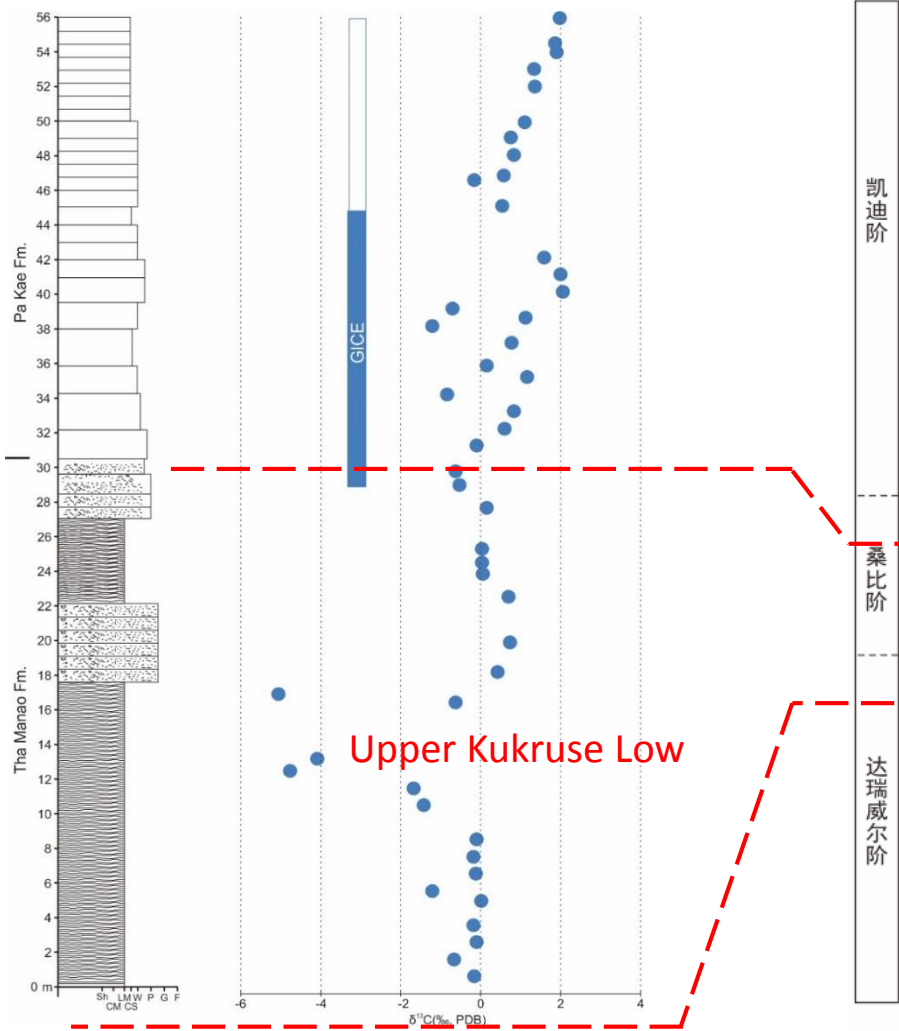
李文杰 (2021) 博士论文

宝塔组

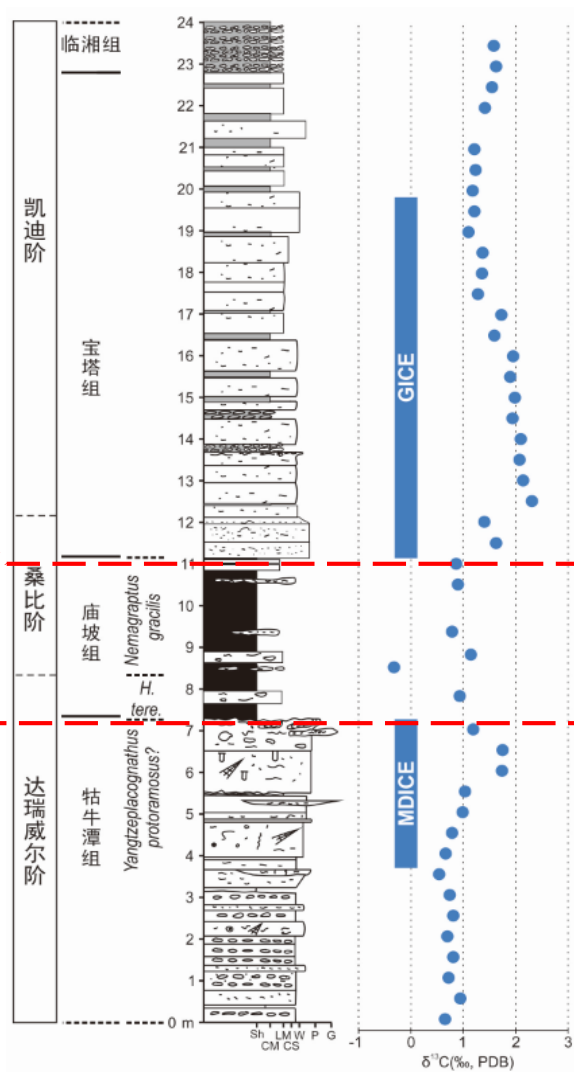
认识3: Tha Manao Fm. 和上覆的Pa Kae Fm. 可与华南庙坡组和宝塔组对比, Pa Kae Formation 与宝塔组:

1. 时代一致 (桑比-凯迪)
2. 宏观构造一致 (多边形网纹)
3. 化石类群一致 (震旦角石类为主)
4. 微相特征一致 (三叶虫、介形虫W, 生物扰动...)
5. 同识别出GICE事件
6. 颜色、层厚.....

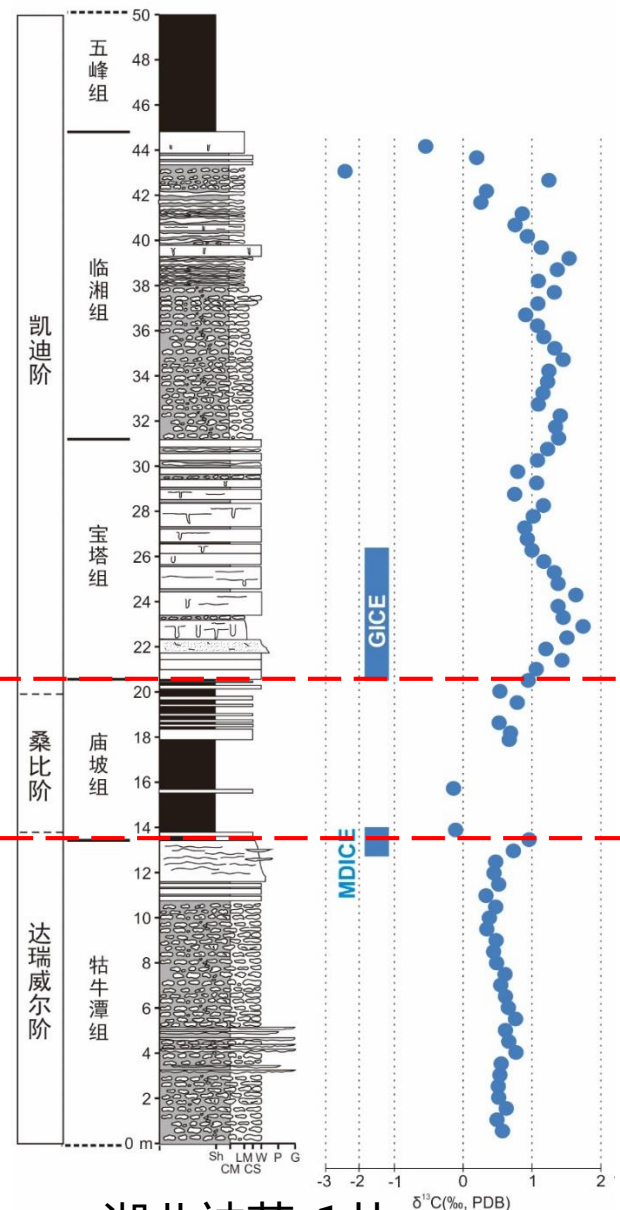
2、泰国Nautiloid Site Geopark剖面中-上奥陶统



Nautiloid Site Geopark



湖北螺祖剖面



湖北神茨-1井

(Li et al., in prep.)

东南亚古生代碳酸盐岩建造

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年度计划

Year 1 (2021)--Meeting in NE Thailand and fieldtrip to northern and NE Thailand.

Year 2 (2022)--Meeting in Malaysia fieldtrip to proposed geopark in Kinta Valley or Langkawi UNESCO Geopark and other areas in Indonesia and Timor-Leste.

Year 3 (2023)--Meeting/Fieldtrip in Myanmar. Fieldtrip/Carbonate Workshop in central Thailand and Cambodia.

Year 4 (2024)--Meeting/Fieldtrip/Carbonate Workshop in Lao PDR and Vietnam Geopark.

Year 5 (2025)--Synthesis Meeting in Nanjing and fieldtrip in South China.

谢谢，
敬请批评指正！



乌海苏拜沟
陈吉涛拍摄
2014年6月