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**FUSULINACEAN FAUNAS IN PERMO-CARBONIFEROUS LIMESTONES OF  
THE EASTERN PART OF CHANGWAT LOEI**



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พิมพ์ต้นฉบับบทความวิจัยวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว



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จุดประสงค์ของการทำวิจัยนี้เพื่ออธิบายคุณลักษณะ จำแนกชนิด และศึกษาวิวัฒนาการของกลุ่มฟอสซิลที่พบในหินปูนยุคเพอร์เมียน และยุคคาร์บอนิเฟอรัส บริเวณด้านตะวันออกของจังหวัดเลย นอกจากนี้ได้ทำการศึกษาการลำดับชั้นหิน การเทียบสัมพันธ์ อายุ และสภาพแวดล้อมของการสะสมตัวของหินปูนในบริเวณนี้ด้วย

ผลการศึกษาพบว่าฟอสซิลที่พบในพื้นที่ศึกษาสามารถจำแนกได้ 13 สกุล คือ Triticites sp., Daixina sp., Pseudoschwagerina sp., Darvasites sp., Jigulites sp., Pamirina sp., Chalaroschwagerina sp., Sphaerulina sp., Schubertella sp., Pseudofusulina sp., Parafusulina sp., Verbeekina sp. และ Yangchienia sp. บ่งบอกอายุตอนปลายยุคคาร์บอนิเฟอรัสถึงตอนกลางยุคเพอร์เมียน ฟอสซิลที่พบในพื้นที่ศึกษาเหล่านี้ สามารถจัดแบ่งได้เป็น 6 หน่วยหินทางชีวภาพ (Biozone) ซึ่งเรียงลำดับอายุจากมากไปน้อยได้ดังนี้คือ หน่วยหินทางชีวภาพของ Triticites, Daixina, Pseudoschwagerina, Pseudofusulina-Chalaroschwagerina, Pamirina และ Yangchienia zones ผลจากการศึกษาสีลาวรรณของหินปูนที่พบในพื้นที่ศึกษาสามารถจัดแบ่งชนิดของหินปูนได้เป็น dolomitic limestone, micritic limestone, biomicritic wackestone, bio-pelmicritic wackestone, packstone, grainstone, stromatolitic boundstone และ foreslope talus หินปูนชนิดต่างๆ เหล่านี้ได้บ่งชี้สภาพแวดล้อมของการสะสมตัวว่าอยู่ในทะเลตื้น ซึ่งถูกแบ่งออกเป็น 6 บริเวณย่อยได้แก่บริเวณ shelf lagoon, winnowed edge sands, organic build-up, foreslope, deep shelf margin และ open sea shelf

จากลักษณะของหินปูนอายุตอนปลายคาร์บอนิเฟอรัสถึงตอนกลาง เพอร์เมียนดังกล่าวข้างต้นพบว่าโดยทั่วไปมีการเปลี่ยนแปลงขนาดของ เม็ดตะกอนจากขนาดเล็ก เป็นขนาดใหญ่ตามลำดับในแนวตั้ง แสดงถึงระดับน้ำทะเลที่ตื้นขึ้นและมีการถอยกลับของระดับน้ำทะเล

ศูนย์วิจัยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย

ภาควิชา.....ธรณีวิทยา  
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ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....





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TITIMA CHAROENTITIRAT : FUSULINACEAN FAUNAS IN PERMO-CARBONIFEROUS LIMESTONES OF THE EASTERN PART OF CHANGWAT LOEI. THESIS ADVISOR : ASSIST. PROF. MALAI LIENGJARERN, Ph.D. 171 pp. ISBN 974-632-561-2

The purpose of this research is to describe morphology, classify and study the evolution of fusulinid assemblages in Permian and Carboniferous limestones exposed in the eastern part of Changwat Loei. In addition, the detailed stratigraphy, the age determination, the classification and the depositional environments of these limestones are also carried out.

The fusulinids found in the investigated areas belong to 13 genera viz. Triticites sp., Daixina sp., Pseudoschwagerina sp., Darvasites sp., Jigulites sp., Pamirina sp., Chalaroschwagerina sp., Sphaerulina sp., Schubertella sp., Pseudofusulina sp., Parafusulina sp., Verbeekina sp. and Yangchienia sp., indicating age during Late Carboniferous to Middle Permian Periods. Six fusulinacean biostratigraphic zones can be distinguished viz. Triticites, Daixina, Pseudoschwagerina, Pseudofusulina-Chalaroschwagerina, Pamirina and Yangchienia zones respectively in ascending order. The result of petrographic study indicates that these limestones are dolomitic limestone, micritic limestone, biomicritic wackestone, bio-pelmicritic wackestone, packstone, grainstone, stromatolitic boundstone and foreslope talus. These various types of limestones are deposited in six sub-environments in shallow marine water viz. shelf lagoon, winnowed edge sands, organic build-up, foreslope, deep shelf margin and open sea shelf.

Based on the carbonate rock types in Late Carboniferous to Middle Permian ages of the study areas, they gradually change grain size from fine to coarse grains in vertical section. It shows shallowing upward sequence of sea level and indicates regression in general.

ภาควิชา.....ธรณีวิทยา

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ศูนย์วิทยทรัพยากร  
จุฬาลงกรณ์มหาวิทยาลัย



## CONTENTS



	Page
ABSTRACT IN THAI.....	iv
ABSTRACT IN ENGLISH.....	v
ACKNOWLEDGEMENTS.....	vi
LIST OF TABLES.....	ix
LIST OF FIGURES.....	x
<b>CHAPTER</b>	
<b>I INTRODUCTION.....</b>	<b>1</b>
The study area.....	1
Objectives.....	3
Methodology of the study.....	3
Morphology of fusulinid.....	5
Previous works.....	7
Fusuline zonation.....	14
<b>II GEOLOGY OF THE STUDY AREA.....</b>	<b>22</b>
General geology.....	22
Stratigraphy.....	22
<b>III PETROGRAPHIC CLASSIFICATION OF CARBONATE ROCKS AND FUSULINACEAN ASSEMBLAGES.....</b>	<b>29</b>
Pha Mo (Location TCM 94-1).....	29
Pha Mo Noi (Location TCM 94-2).....	32
Phu Khao (Location TCM 94-3).....	32
Km 30+050 along Changwat Loei-Amphoe Na Duang road (Location TCM 94-4).....	41
Road from Ban Na Din Dam to Ban Nam Suai Tha Sawan.....	51
Wat Sunantharam (Location TCM 94-9).....	52
Along Amphoe Wang Saphung-Changwat Nong Bua Lamphu highway.....	68

	Page
IV	EVOLUTION AND DESCRIPTION OF FUSULINACEAN FAUNAS..... 80
	Evolutionary patterns of fusulinacean families..... 81
	Description of fusulinacean faunas..... 87
V	FUSULINACEAN BIOSTRATIGRAPHY..... 125
	<i>Triticites</i> zone..... 125
	<i>Daixina</i> zone..... 126
	<i>Pseudoschwagerina</i> zone..... 126
	<i>Pseudofusulina-Chalaroschwagerina</i> zone..... 127
	<i>Pamirina</i> zone..... 127
	<i>Yangchienia</i> zone..... 128
VI	DEPOSITIONAL ENVIRONMENTS OF CARBONATE ROCKS..... 131
	Late Carboniferous..... 131
	Early Permian..... 132
	Middle Permian..... 133
VII	CONCLUSION..... 139
	REFERENCES..... 143
	APPENDIX..... 151
	BIOGRAPHY..... 171



## LIST OF TABLES

Table		Page
1	List of the study locations in Amphoe Muang and Wang Saphung Changwat Loei.	4
1-1	Standard division of Upper Carboniferous and Permian Stages for the Eurasia, Mediterranean-Alpine fold belt and U.S.A. (Hag and Vaneysinga, 1987, Ingavat and others, 1980 and Racey and others, 1994)	8
2	Fusulinid zonation in Thailand and other parts of Tethys. (Toriyama and others, 1975)	17
3	Fusulinid zonation of the Ratburi Group in Thailand and its equivalents in Malaysia. (Ingavat and others, 1980)	18
4	Fusulinid zonation between the sections of Thailand and other parts in the Tethyan realm. (Ingavat and others, 1980)	19
5	Zonation and correlation on foraminiferal faunas from the western, central and eastern provinces in Thailand. (Ingavat, 1984)	20
6	Fusulinid assemblage zones from Saraburi Limestone. (Dawson and others, 1993)	21
7	List of faunas from the study areas.	30

## LIST OF FIGURES

Figure	—	Page
1	The research area in the eastern part of Changwat Loei.	2
2	Diagram of a fusulinid test ( <i>Triticites</i> sp.) showing structure features. (Moore and others, 1952)	8
3	Microspheric and megalospheric generations of <i>Fusulinella</i> sp. A) Tangential, B) axial and C) sagittal sections. (Boardman and others, 1987)	9
4	Spirotheca and septal structure of fusulinids. (Moore, 1964)	10
5	Diagram of spirotheca showing pendant-like walls of alveoli, choma and septal pore of <i>Schwagerina campensis</i> Thompson, Lower Permian. (Moore, 1964)	11
6	Comparison of fusulinellid (1) and schwagerinid (2) wall structure. (Moore and others, 1952)	11
7	Geological map of the study areas. (Bunopas, 1988)	23
8	Photomicrograph of Pha Mo sample showing matrix supported with some fragments of fusulinids in bio-pelmicritic wackestone.	34
9	Photomicrograph of Pha Mo Noi sample showing shell fragments with sparry calcite cement.	34
10	Measured section and sample locations of Phu Khao.	35
11	The abundant of fusulinids in fossiliferous limestone beds at Phu Khao.	36
12	Photomicrograph of TCM 94-3-1 showing A) Pseudo-algae, B) <i>Pachyploia</i> sp.	36
13	Photomicrograph of TCM 94-3-2 showing bioclasts with matrix supported in biomicritic wackestone. A) Pseudo-algae, B) Shell fragments, C) Crinoid plate.	37

Figure		Page
14	Photomicrograph of TCM 94-3-4, showing many types of bioclasts. A) Pseudo-algae ( <i>Epimastopora?</i> sp.), B) Crinoid debris.	37
15	Photomicrograph of TCM 94-3-5, showing bioclasts with mud-supported and sparry calcite cement in biomicritic wackestone. A) <i>Bacinella</i> sp., B) <i>Epimastopora?</i> sp., C) Crinoid debris.	39
16	Photomicrograph of TCM 94-3-6, showing some bioclasts and sparry calcite cement in this limestone. A) Pseudo-algae ( <i>Bacinella</i> sp.), B) Crinoid plate, C) Calcisphere.	39
17	The measured section and ages of Phu Khao.	40
18	Measured section and sample locations of TCM 94-4.	43
19	Photomicrograph of TCM 94-4-1, showing packed grains of bioclasts in packstone.	44
20	Photomicrograph of TCM 94-4-2, showing the grains of <i>Bacinella</i> sp.(A), <i>Schubertella</i> sp., <i>Tubiphytes obscurus</i> Maslov and mud-supported in biomicritic wackestone.	44
21	Photomicrograph of TCM 94-4-3, showing A) <i>Bacinella</i> sp., B) ostracod shell, C) <i>Tubiphytes obscurus</i> Maslov in biomicritic wackestone.	45
22	Photomicrograph of TCM 94-4-4, showing the bioclasts in biomicritic wackestone. Brachiopod shell is on the left.	45
23	Photomicrograph of TCM 94-4-5, showing the bioclasts in biomicritic wackestone. <i>Bacinella</i> sp.(A), Smaller foraminifer (B), <i>Tubiphytes obscurus</i> Maslov (C).	47
24	Photomicrograph of TCM 94-4-6, showing the bioclasts with mud-supported in biomicritic wackestone. (A) <i>Tubiphytes obscurus</i> Maslov.	47



Figure	Page	
25	Photomicrograph of TCM 94-4-7, showing the bioclasts with matrix supported in biomicritic wackestone. A) Calcisphere, B) <i>Epimastopora?</i> sp. Brachiopod shell is on the bottom.	49
26	Photomicrograph of TCM 94-4-6, showing the bioclasts with mud-supported in biomicritic wackestone. (A) <i>Globivalvulina</i> sp.	49
27	The measured section and age of Location TCM 94-4.	50
28	Photomicrograph of TCM 94-6, showing dolomitic limestone.	53
29	Photomicrograph of TCM 94-7, showing coral <i>Caninia</i> sp.(A), shell fragments with mud-supported in biomicritic wackestone.	53
30	Photomicrograph of TCM 94-8, showing oncoliths with shell fragments and fusulinid tests formed as nucleus.	54
31	Photomicrograph of TCM 94-8, showing fusulinids in grainstone.	54
32	The limestone breccia shows poorly sorted and angular clasts at Wat Sunantharam.	56
33	The fragments of giant pelecypods at Wat Sunantharam.	56
34	Measured section and sample locations of Wat Sunantharam.	57
35	Photomicrograph of TCM 94-9-9, showing micritic limestone.	58
36	Photomicrograph of TCM 94-9-19, showing packed bioclasts and stylolite in packstone.	62
37	Photomicrograph of TCM 94-9-20, showing packed shell fragments of giant pelecypod in packstone.	62
38	Photomicrograph of TCM 94-9-28 showing oolids in grainstone.	67
39	Photomicrograph of TCM 94-9-30 showing bio-pelmicritic wackestone. A) Wall of fusulinid, B) Peloid	67
40	The measured section and ages of Wat Sunantharam.	69

Figure		Page
41	Photomicrograph of TCM 94-10 (lower part), showing bioclasts with carbonate mud in biomicritic wackestone. Ostracod shell (A), Smaller foraminifer (B)	71
42	Photomicrograph of TCM 94-10 (middle part), showing bioclasts with carbonate mud in biomicritic wackestone. <i>Pseudovermiporella</i> sp. (A and B)	71
43	Measured section and sample locations of TCM 94-11.	73
44	The measured section and ages of Location TCM 94-11 and TCM 94-12.	79
45	Inferred phylogeny and known range of fusulinacean faunas down to generic level. (Kanmera and others, 1975)	82
46	An axial section of <i>Triticites</i> sp. showing chomata and tunnel.	94
47	A parallel section of <i>Triticites</i> sp. showing septa.	94
48	An axial section of <i>Triticites</i> sp. Location TCM 94-1 (Pha Mo).	95
49	A tangential section of <i>Triticites</i> sp. Location TCM 94-1 (Pha Mo).	95
50	A tangential section of <i>Triticites</i> sp. showing chomata, tunnel and wall structure. Sample no. TCM 94-3-5.	96
51	An axial section of <i>Triticites</i> sp. Sample no. TCM 94-3-5.	96
52	Axial sections of <i>Triticites</i> sp. Sample no. TCM 94-4-3.	97
53	<i>Daixina</i> sp. showing parachomata, septa, tectum and keriotheca.	98
54	<i>Daixina</i> sp. showing wall structure of schwagerinid type. It contains tectum, keriotheca and alveoli.	98
55	A sagittal section of <i>Daixina</i> sp. Sample no. TCM 94-3-1.	99
56	A parallel section of <i>Daixina</i> sp. Sample no. TCM 94-3-1.	99
57	A parallel section of <i>Daixina</i> sp. Sample no. TCM 94-4-3.	100
58	A sagittal section of <i>Daixina</i> sp. Sample no. TCM 94-4-3.	100
59	A parallel section of <i>Daixina</i> sp. Sample no. TCM 94-4-3.	101
60	A sagittal section of <i>Daixina</i> sp. Location TCM 94-8.	101

Figure		Page
61	A sagittal section of <i>Daixina</i> sp. Location TCM 94-8.	102
62	A sagittal section of <i>Daixina</i> sp. Tectum and keriotheca are clearly observed. Location TCM 94-8.	102
63	Axial sections of <i>Jigulites</i> sp. Location TCM 94-8.	103
64	Parallel sections of <i>Pseudoschwagerina</i> sp. Sample no. TCM 94-4-3.	104
65	An axial section of <i>Pseudoschwagerina</i> sp. Sample no. TCM 94-4-6.	105
66	A parallel section of <i>Pseudoschwagerina</i> sp. Sample no. TCM 94-4-7.	105
67	A tangential section of <i>Pseudoschwagerina</i> sp. Sample no. TCM 94-4-8.	106
68	A sagittal section of <i>Pseudoschwagerina</i> sp. Sample no. TCM 94-4-8.	106
69	Axial sections of <i>Darvasites</i> sp. Location TCM 94-8.	107
70	<i>Pseudofusulina</i> sp. showing chomata, septa, tectum and keriotheca.	108
71	<i>Pseudofusulina</i> sp. showing phrenotheca.	108
72	An axial section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-9-13.	109
73	An axial section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-9-30.	109
74	An axial section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-9-30.	110
75	A parallel section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-9-30.	110
76	A parallel section of <i>Pseudofusulina</i> sp. from the upper part of Location TCM 94-10.	111
77	An axial section of <i>Pseudofusulina</i> sp. from the upper part of Location TCM 94-10.	111
78	Axial sections of <i>Pseudofusulina</i> sp. from the upper part of Location TCM 94-10.	112



Figure		Page
79	A sagittal section of <i>Pseudofusulina</i> sp. from the upper part of Location TCM 94-10.	113
80	An axial section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-11-15.	113
81	A sagittal section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-11-15.	114
82	An axial section of <i>Pseudofusulina</i> sp. Sample no. TCM 94-11-15.	114
83	Axial sections of <i>Parafusulina</i> sp. Sample no. TCM 94-9-16.	115
84	A tangential section of <i>Parafusulina</i> sp. Sample no. TCM 94-9-16.	116
85	An axial section of <i>Parafusulina</i> sp. Sample no. TCM 94-9-17.	117
86	An axial section of <i>Parafusulina</i> sp. Sample no. TCM 94-9-22.	117
87	A tangential section of <i>Parafusulina</i> sp. Sample no. TCM 94-9-30.	118
88	An axial section of <i>Parafusulina</i> sp. Sample no. TCM 94-9-30.	118
89	A parallel section of <i>Parafusulina</i> sp. from the upper part of Location TCM 94-10.	119
90	Parallel and sagittal sections of <i>Parafusulina</i> sp. from the upper part of Location TCM 94-10.	119
91	An axial section of <i>Parafusulina</i> sp. from the upper part of Location TCM 94-10.	120
92	<i>Parafusulina</i> sp. showing sections cutting through various directions. This specimen is in the upper part of Location TCM 94-10.	120
93	Sagittal sections of <i>Chalaroschwagerina</i> sp. from the upper part of Location TCM 94-10.	121
94	A parallel section of <i>Verbeekina</i> sp. Sample no. TCM 94-9-21.	122
95	<i>Verbeekina</i> sp. showing parachomata which is present on the wall.	122
96	An axial section of <i>Yangchienia</i> sp. showing clear chomata. Sample no. TCM 94-9-16.	123
97	An axial section of <i>Pamirina</i> sp. Sample no. TCM 94-11-1.	123
98	An axial section of <i>Pamirina</i> sp. Sample no. TCM 94-11-10.	124
99	<i>Sphaerulina</i> sp. Sample no. TCM 94-11-14.	124

Figure		Page
100	Fusulinid zonation in the study areas. —	130
101	The major environments of deposition for carbonate sediments. (Wilson, 1975)	135
102	The depositional environment of carbonate sediments in Late Carboniferous.	136
103	The depositional environment of carbonate sediments in Early Permian.	137
104	The depositional environment of carbonate sediments in Middle Permian.	138
105	The lithologic column and fusulinacean zonation of carbonate rocks in the study areas.	142



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