Caving in the Heart of Northern Laos

Oudomxay Province / Lao PDR

Results of the Northern Lao – European Cave Project

January 23rd- February 5th 2010

Content:

Acknowledged as FSE EuroSpeleo Project 2010

1. Summary

The objective of the 2010 expedition was the further exploration of the new area in Oudomxay province. This province in the heart of Northern Laos has a rich cultural life due to its unique location. The roads from China, Vietnam and Thailand meet here. The provincial tourism office of Oudomxay reported in 2007 on the webpage of the National Tourist Authority a new large cave developed for ecotourism. The contact was made in 2008 and we were invited to survey the cave called Tham Chom Ong. This cave was a big surprise to us in dimension and length and surpassed all other caves know in the North of Laos. The cave stretched along a 4 km long mountain ridge with a parallel running river and fossil passage with passage dimensions of 20 m width and 25 height. The cave turned out to be a trough cave and the whole traverse takes 3.5 hours with 3 hours additional walking time to rear and front entrance. The system was surveyed in 2009 in only 5 days to a length of 11.3 km with several wide open side passages remaining.

The expedition was warmly welcomed by the staff of the provincial tourism office. The director arranged on the occasion of our return a gala dinner with participation of the governor of Oudomxay province.

Four areas were known for caves and the expedition team was splitting in two subgroups to explore these caves:

Tham Chom Ong: A jungle camp was established in front of the northern entrance of the Tham Chom Ong cave to avoid long hikes from the village. The team with Michael, Wolfgang, Thomas and David spent two nights here. The survey of the river area was finished and upper fossil caves connected to the known the system. The cave has now a length of 15.8 km with further potential. It needs ropes to continue.

Namor District : The 2nd group explored the area north of the Chom Ong system. Two caves were surveyed that are 8 km and 16 km north of the Chom Ong system. The impressive active river cave Tham Na Thong leads 4.4 km straight south into the mountain ridge without any side passages. Tham Mokfek is a three level system with interconnecting passages. A river is flowing through the mountain. It drops about 15 m with nice waterfalls and cascades. The system is a through cave with seven entrances and frequently visited by local groups due to its idyllic location.

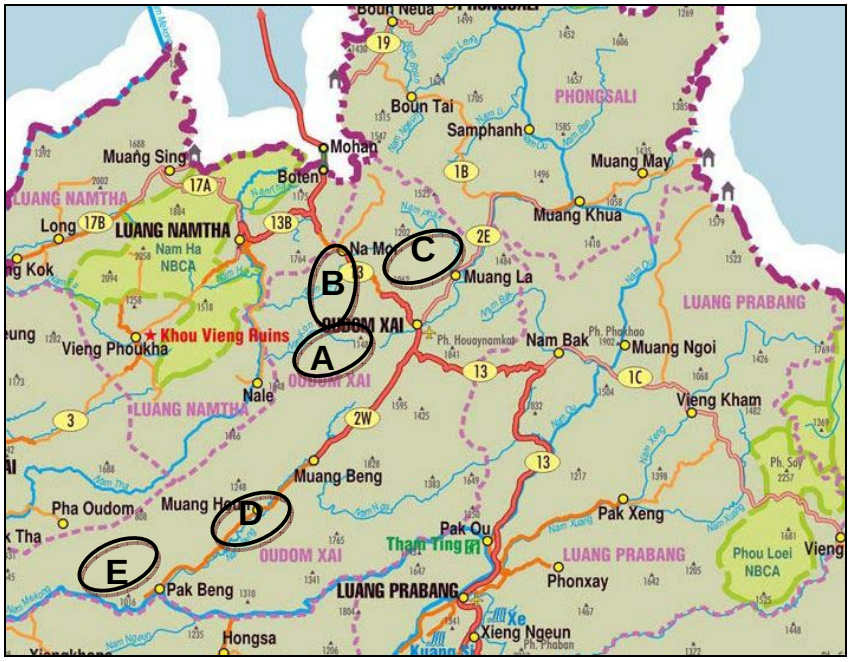
La District: Two caves were documented in the area used by the provincial tourism office for trekking. Tham Luang has a length of 400 m.

Houn / Pak Beng district: The area has several caves in the mountains north to the valley of the river Beng. Most of the them are small with a length of less than100 m. Remarkable is the altitude of 1,500 m for some of the entrances. These are the highest lying caves known in Laos.

A small pre-expedition team supported the paleoclimate studies from Oxford University prior the core expedition. Data loggers placed 2009 in Vieng Thong area were recovered and the research continued. Several small caves near Xop Nua close to the border of Vietnam were surveyed.

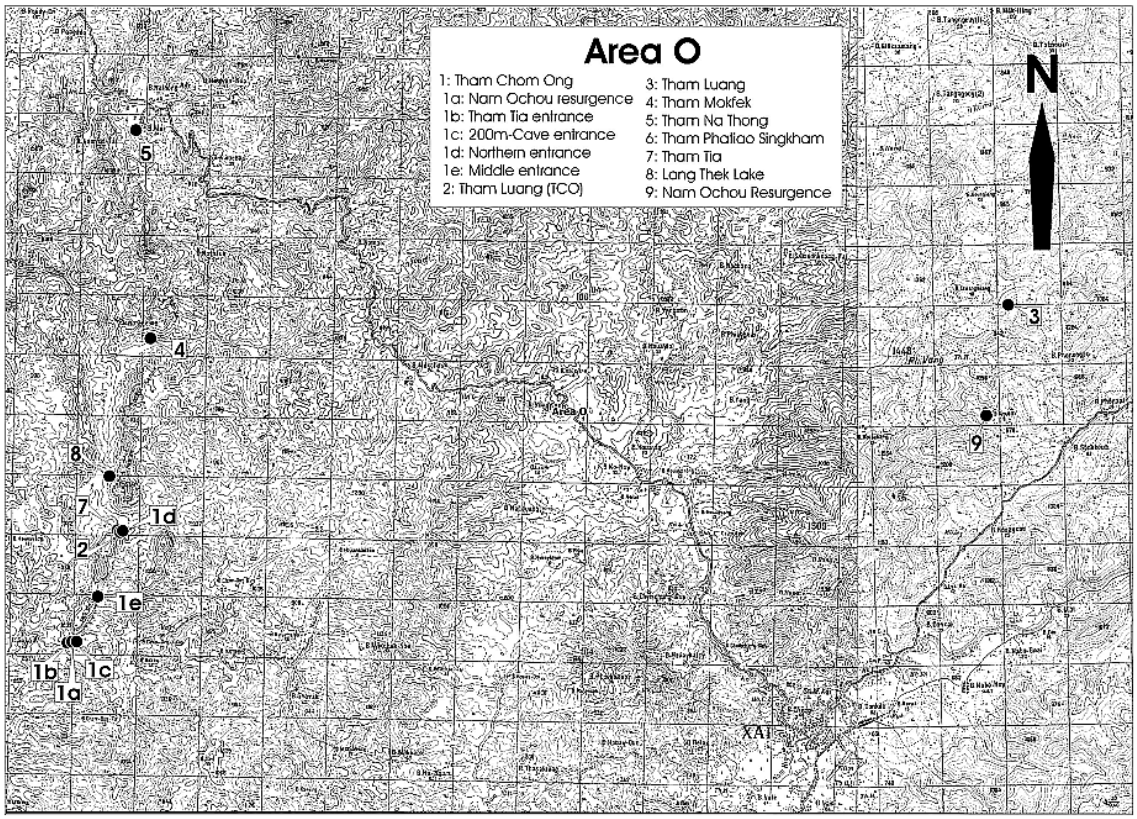
The project in 2010 surveyed in total 20 caves with 10.2 km documented passages. The work will provide the necessary basis for the Oudomxay Tourism Office to develop the Chom Ong Cave and Mokfek Cave as ecotourism site and to implement protection measures. The Chom Ong Cave can be visited within a tour offered by the tourism office. Please see for details at *www.oudomxay.info*.

Oudomxay Province Overview:



Picture 1: The black circles show caving areas visited during the 2010 exploration: Chom Ong (A), Namor (B), La (C), Houn (D), Pakbeng (E)

Area Map with cave entrances:



The table below summarizes the longest caves in Northern Laos:

No.	Cave name	District	Village	Length (m)	Explored
1	Tham Chom Ong System	Oudomxay	Ban Chom Ong	15,700	2009/2010
2	Tham Nam Long	Vieng Xai	Ban Napoung	4,981	2007/2008
3	Tham Na Thong	Namor	Ban Na Thong	4,400	2010
4	Tham Nam Eng (resurgence cave)	Vieng Poukha	Ban Nam Eng	3,460	2005
5	Tham Nam Eng (fossile cave)	Vieng Poukha	Ban Nam Eng	3,120	2005
6	Tham Nam	Vieng Xai	Ban Napoung	3,065	2007/2008
7	Tham Seua / Tham Nam Lot	Muang Phou Khoun	Muang Phou Khoun	2,650	2005
8	Tham Pasat	Vieng Poukha	Ban Tha Louang	2,600	2005/2006
9	Tham Loum	Xiang Ngeun	Ban Long Khoay	1,598	2003
10	Tham Ma Liong	Vieng Xai	Vieng Xai	1,565	2008
11	Tham Mokfek	Namor	Ban Na Thua	1,555	2010

The Tham Chom Ong System is now the 2nd longest cave in Laos and 9th longest cave in Southeast Asia.

It is planned to re-visit the karst of Oudomxay in January 2011 to continue the survey of the still going system and to visit other mentioned cave entrances in the ridges to the South.

The expedition results will be presented at:

1. Hidden Earth, Leek, England, September 2010
2. SGH Bern Hoeck, Bern, Switzerland, March 2010
3. other national congresses depending on the expedition members

The 3rd BHB volume (issue 38) on Laos is in progress and will contain the results of the years 2008-2010. The publication date is targeted for May 2010. The FSE logo will be displayed at the front cover (same as for 2nd BHB Laos volume, issue 32).

2. Ecotourism

Some of the explored caves are suitable for adventurous eco-tourists that want to experience the local environment and hospitality of the nearby villages. The caves can provide a few US$ extra as income for the village community. Tourism is still undeveloped and visitor numbers are expected to be a handful of tourists per month. A proper training of the village guides must be done before opening the caves for visitors. Chomg Ong Cave is developed since last year as ecotourism site by the Provincial Tourism office Oudomxay in cooperation with the German development service (DED). Just a few visitors were received yet due to the long access which requires an overnight stay and high expenses due to the need of 4x4 cars for the last 6km. It is planned to upgrade the road to the village.

Particularly interesting for ecotourism are:

1. Tham Chom Ong, Ban Chom Ong, Oudomxay

   Access: 1.5 h 4x4 drive from Oudomxay to Chom Ong village, 55 minutes moderate hike through fields and low hills with some stream crossings.

   To see: Impressive river and fossil passages of 25 m height and 15 m width, huge chambers of 60mx60 m dimension up t0 50 m high, through cave with front , middle and resurgence entrance, crossing takes 3.5 hours.

   Difficulties: Entrance area has a flat floor and is easy to visit, afterwards climbs over many boulders with difficult orientation in main chambers.

2. Tham Mokfek, Ban Na Thua, Oudomxay

   Access: 100 m from the road along an easy flat path.

   To see: The cave has a short entrance crawl until after 50 m the main passage of 1 km length is reached. The floor is covered over hundreds of meters with dry sinter basins containing sinter pearls of 3-5 cm diameter. The dimension of the passage is impressive with 15-20 m width and 15 m height. Special protection measures are needed to protect the dry pools.

   Difficulties: short entrance crawl of 50 m length with some mud on the floor.

3. Tham Nam Lot, Ban Boumfart, Vieng Thong

   Access: 15 minutes from road along fields into a dead end valley.

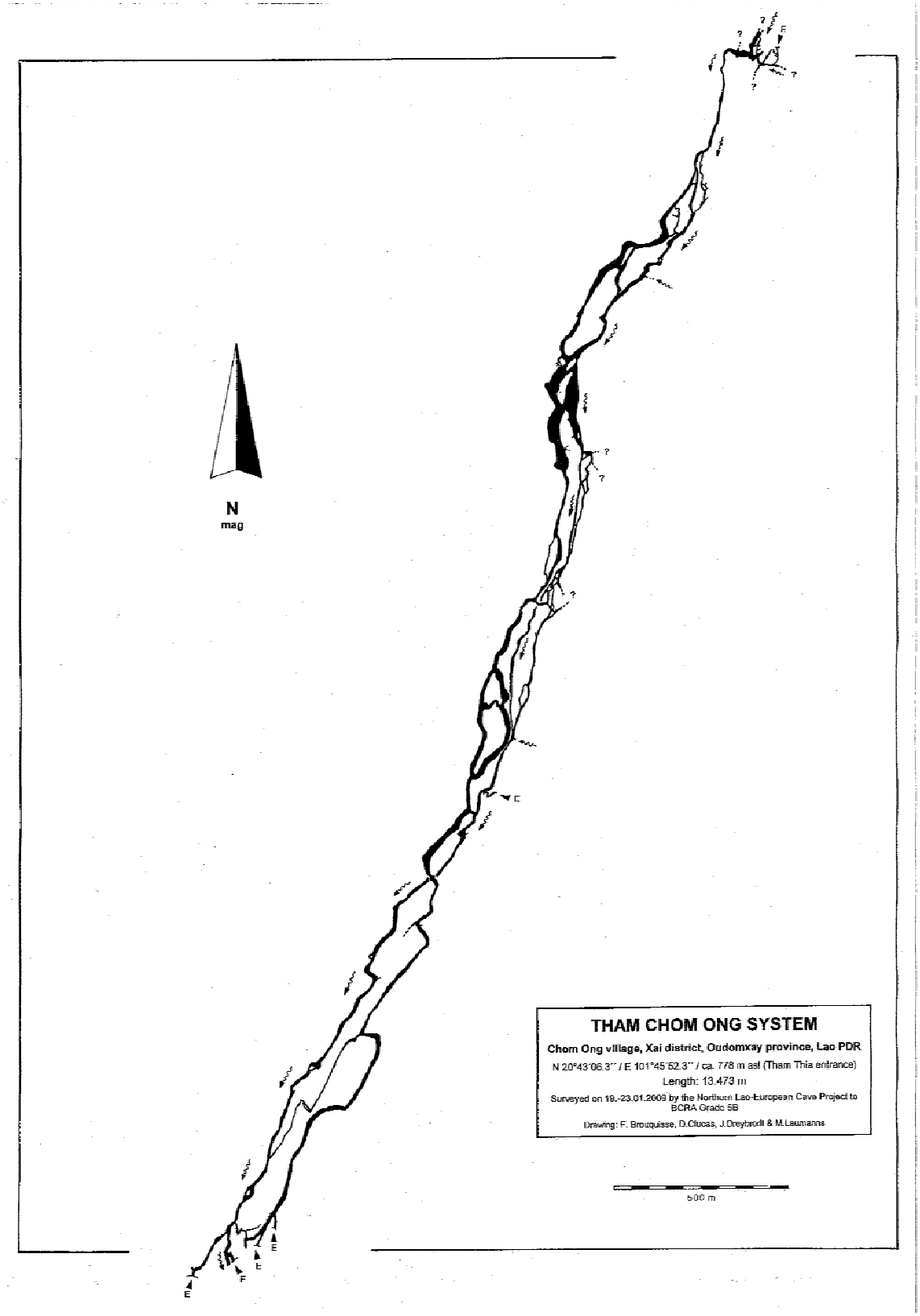
   To see: Big entrance portal with a disappearing river, some swimming is needed to cross the mountain ridge to the resurgence portal after 300m, an alternative is to squeeze through a narrow bypass. The view from the rear exit is stunning with huge trees in the river bed and untouched forest.

   Difficulties: swimming in 18C water

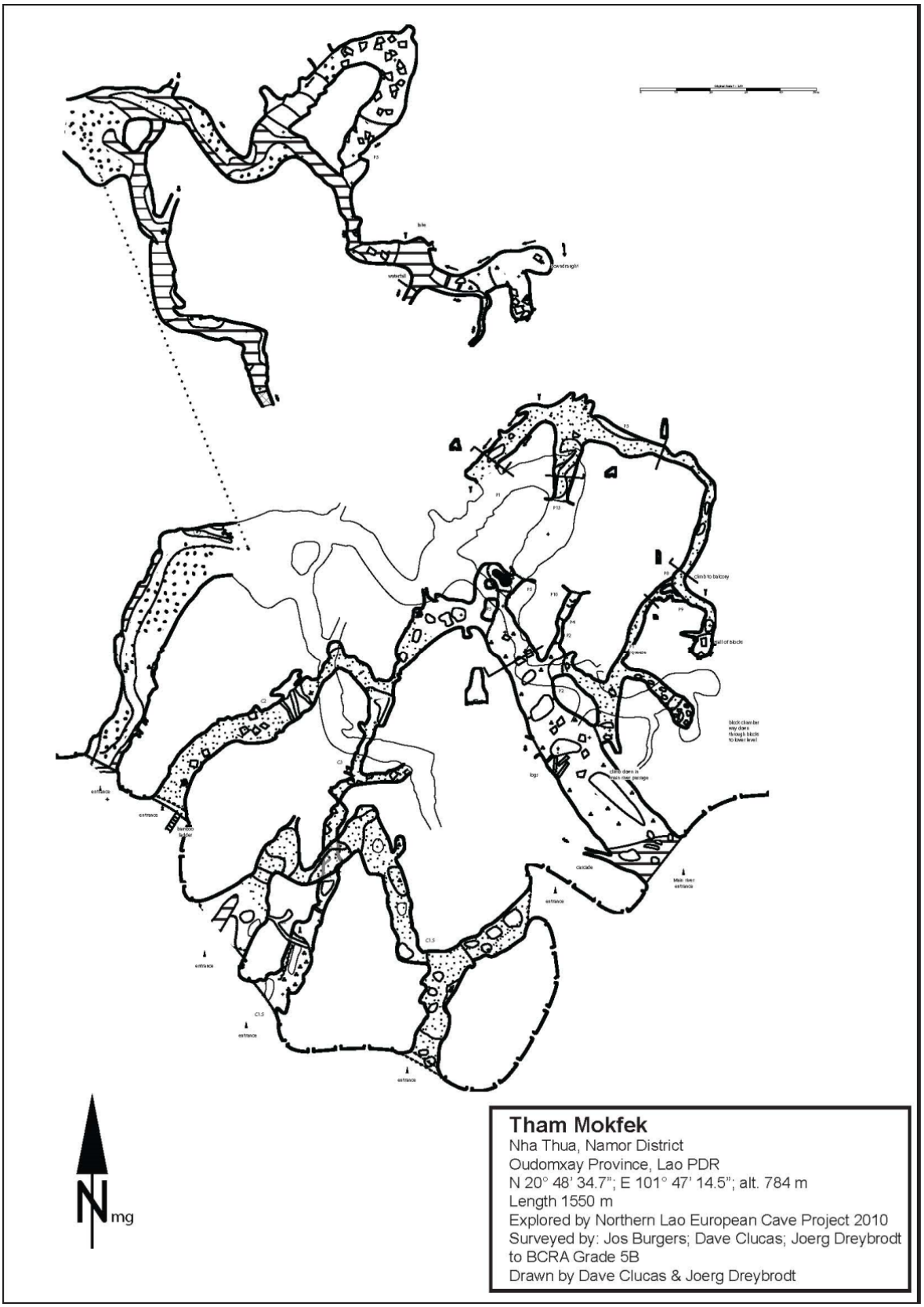
Remark: The caves were visited in the dry season. The water level inside the cave is higher during and after the rain season and parts of the cave might be flooded.

3. Cave Maps

Chom Ong System 2009



Mokfek Cave :

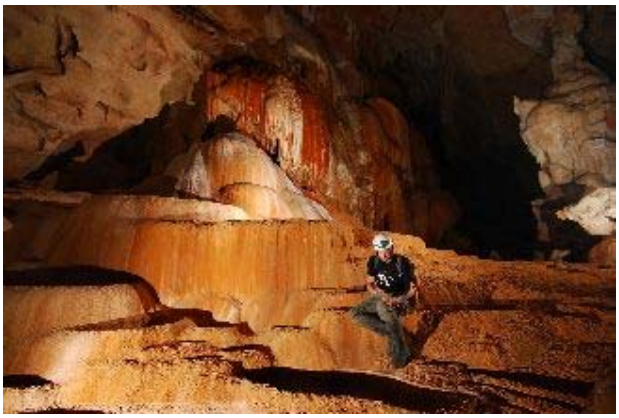

Tham Mokfek
Nha Thua, Namor District
Oudomxay Province, Lao PDR
N 20° 48' 34.7"; E 101° 47' 14.5"; alt. 784 m
Length 1550 m
Explored by Northern Lao European Cave Project 2010
Surveyed by: Jos Burgers; Dave Clucas; Joerg Dreybrodt
to BCRA Grade 5B
Drawn by Dave Clucas & Joerg Dreybrodt
mg

4. Pictures of caves:

Welcome dinner with the governor of the province. The Chom Ong Cave map is presented on the floor.

Jungle camp at the rear entrance of Tham Chom Ong System

Main fossil passage Chom Ong Cave



New upper rear passage Chom Ong Cave

Entrance of Mokfek Cave

Our accomodation at Ban Na Thua

Photos by J. Dreybrodt, W. Zillig, C.Grebe

5. Paleoclimate Studies

Reconstructing the Monsoon History in Southeast Asia using cave deposits from Lao PDR

by Dr. Lica Ersek, Earth Science Department, University of Oxford, UK
http://www.earth.ox.ac.uk/

Changes in Asian monsoon strength and timing can result in devastating droughts or floods, causing widespread crop failures and famine that may affect more than 50% of the world population. Because predictions of future change in Asian monsoon intensity are very uncertain there is an urgent need to improve our understanding of the response of this monsoon system to varying climate conditions. Studying past changes of Asian monsoon variability provides one effective strategy to improve understanding of its future behavior with attendant implications for resource planning and management. This proposed study will address past variability of the Asian monsoon in Southeast Asia by using high-resolution, absolutely-dated speleothems from northern Laos, thus advancing our understanding of tropical climatology in general, and of the Asian monsoon system in particular.

Project Objectives:

1. Reconstruct the long-term history of the Southeast Asian monsoon and comparison with other monsoon records.
2. Assess the influence of global warming on precipitation in Southeast Asia
3. Evaluate the roles of northern and southern hemisphere processes in influencing the past monsoon intensity
4. Obtain a quantitative measure of rainfall changes in Laos over the last 10000 years

Photos of stalagmites collected in 2009 from northern Laos; Left: Stalagmite from Chom Ong Cave, Oudomxay province, which grew from 185000 years before present to 52000 years before present. Right: Stalagmite from Thia Thong cave in Houaphan province, which grew during the last 2000 years.
Both stalagmites have high potential for reconstructing the monsoon history during their growth period.

6. Cave Protection

Caves are very sensitive systems and develop very slowly over hundred of thousands of years. Any damage done is not repairable and has a severe impact on the beauty of the cave. Therefore it is important when visiting the caves not to touch any of the dripstone formations and not to leave any rubbish in the cave. It is also important to stay on the main path to avoid any damage to pools and formations on the floor. If there is any cave fauna e.g. bats or insects, these should not be disturbed. All these measures help to preserve the beauty and ecosystem of the cave and to maintain its long term attraction as a tourist site.

We propose the following setup based on the experience of the community based ecotourism project from the European Union in Vieng Phouka:

a.) selection of limited number of village guides
b.) awareness training and education in nature and environment protection
c.) implementation of rules for cave visits
d.) briefing of tourists prior to any visit

Please keep in mind the three golden rules:

- Take nothing but pictures
- Kill nothing but time
- Leave nothing but footprints

Fragile eccentrics - Do not touch !

7. Team 2009 of "The Northern Lao – European Cave Project"

We are a group of European cavers from national caving societies in each country. The members are experienced cavers and have participated in several international expeditions in Europe, Asia and Africa. The project was initiated in 2002 after a visit to the limestone area of Muang Ngoi at Luang Prabang Province by German and Dutch cavers.

Our *Mission* is to visit and map all major caving areas in Northern Laos !

Team 2010

Team in front of Nam Thong Cave

Dr. Joerg Dreybrodt	**Germany (Project Coordinator)**
Michael Laumanns	**Germany**
Dr. Helmut Steiner	**Germany**
Wolfgang Zillig	**Germany**
Dr. Lica Ersek	**Romania**
Jos Burgers	**Netherlands**
David Eskes	**Netherlands**
Dave Clucas	**Great Britain**
Siegfried Moser	**Austria**
Christiane Grebe	**Germany**
Thomas Matthalm	**Germany**
Renato Serodio	**Portugal**
Emma Lundh	**Sweden**

www.laoscaveproject.de

Contact: joerg_dreybrodt@yahoo.

8. Financial Report

Participants: 13 people Time: 14 days

All currency in US$!

Travel:				
International:	Flights to Bangkok	1000	x12 person	12000
	Flight BKK-Laos-BKK	300	x9 persons	2700
	Flight BKK- Chiang Rai	80	x3 persons	240
	Flight Laos-BKK	150	x7 person	1050
Domestic:	Minibus hire	85	x5 days	680
	Truck Hire Namor	50	x4 days	200
	Mininus to Namor	70	x2 days	140
Guides:				
Main guide and translator		50	x5days	250
Accommodation:				
Guesthouse Luang Prabang		15	x10 pers.	150
Guesthouse Vieng Thong		5	x4 x3 days	60
Guesthouse Oudomxay		15	x7x4 days	420
Guesthouse Pak Beng		20	x5x3 days	300
Villages		3	x12x4days	144
Food:				
Guesthouse Breakfast and Dinner		10	x12 x10 days	1200
Food for guides and villages		5	x 10 days	50
Lunch / food for caves		5	x7 x10 days	350
Cost for local government:				100
Expedition T-Shirt		25	x20	500
Administration:				
Copies of expedition book 2008		15	x5pcs	75
Total Cost:			**20.609 US$**	

9. Caves explored during the 2010 speleological project to Northern Laos

No.	Map-sheet	Reg.No	Date	Name	Altitude	Village / Ban	District	Province	Length (m)
1	F 48-123	9	19/01/10	Tham Ho Neung	761	Xop Nua	Vieng Thong	Houaphan	114
2	F 48-123	10	19/01/10	Tham Ho Song	787	Xop Nua	Vieng Thong	Houaphan	103
3	F 48-123	11	19/01/10	Tham Ho Sam	768	Xop Nua	Vieng Thong	Houaphan	78
4	F 48-123	8	20/01/10	Tham Mak Sak	---	Na Chak	Vieng Thong	Houaphan	84
5	F 48-123	12	20/01/10	Mak Sak Resurgence	813	Na Chak	Vieng Thong	Houaphan	- - -
6	F 48-123	13	20/01/10	Tham Chao Houa Khao Khong	904	Na Chak	Vieng Thong	Houaphan	96
7	F 48-123	14	21/01/10	Tham Gern Lon	953	Na Chak	Vieng Thong	Houaphan	125
8	F 48-123	15	21/01/10	Tham Na Chak Neung	904	Na Chak	Vieng Thong	Houaphan	- - -
9	F 48-123	16	21/01/10	Tham Na Chak Song	904	Na Chak	Vieng Thong	Houaphan	- - -
10	F48-123	17	21/01/10	Tham Na Chak Sam	883	Na Chak	Vieng Thong	Houaphan	- - -
	F47-120	1	- - -	**Tham Chom Ong System**	- - -	Chom Ong Tai	Xai	Oudomxay	- - -
11	F47-120	1	25-29/01/10	- additions to 2009 survey	819	Chom Ong Tai	Xai	Oudomxay	1,499
12	F47-120	1	28/01/10	- Tham Luang (TCO)	852	Chom Ong Tai	Xai	Oudomxay	742
13	F 47-120	2	28/01/10	Tham Thia	932	Chom Ong Tai	Xai	Oudomxay	187
14	F 47-120	3	25+26/01/10	Tham Na Thong	644	Na Thong	Namor	Oudomxay	4,426
15	F 47-120	4	27+28/01/10	Tham Mokfek	784	Na Thua	Namor	Oudomxay	1,550
16	F 47-120	5	29/01/10	Lang Thek Lake	885	Na Thua	Namor	Oudomxay	- - -
17	F 48-109	4	02/02/10	Tham Luang	897	Tanongpo	La	Oudomxay	397
18	F 48-109	5	03/02/10	Tham Phatiao Singkam	764	Xa Makixay	La	Oudomxay	33
19	F 48-109	6	04/02/10	Nam Ochou Resurgence	~776	Xa Makixay	La	Oudomxay	- - -
20	F 47-144	1	01/02/10	Tham Nagneune Resurgence	540	Nagneune Houn	Houn	Oudomxay	210
21	F 47-143	1	01/02/10	Tham Ngeuy	589	Nam Lien	Houn	Oudomxay	70
22	F 47-143	2	02/02/10	Tham Hang	583	Nam Lien	Houn	Oudomxay	88
23	E 47-011	1	02/02/10	Tham Huay Nam Mang	- - -	Oudom	Pakbeng	Oudomxay	- - -
24	E 47-010	1	03/02/10	Tham Phou Njakha Neung	1,384	Thong	Pakbeng	Oudomxay	140
25	E 47-010	2	03/02/10	Tham Phou Njakha Song	1,562	Thong	Pakbeng	Oudomxay	27
26	E 47-010	3	04/02/10	Tham Pacheo Kam Thang	414	Pak Ngeuy	Pakbeng	Oudomxay	70
27	E 47-011	2	04/02/10	Tham Ong	1,138	Lang/ Long	Pakbeng	Oudomxay	- - -
28	E 47-011	3	04/02/10	Tham Phou Lang	488	Phou Lang	Pakbeng	Oudomxay	52
29	E 47-011	4	04/02/10	Tham Phou Lang Resurgence	414	Phou Lang	Pakbeng	Oudomxay	- - -