

CHAIYAPHUM

July 2016 – WGS84

Ban Khwao

†**Tham Pan Ta** CH0106
 : ๕๗ 796439 1758501 Alt.: 260m
 Wat Tham Pan Ta, Ban Nong Daeng, Chi
 Bon

The temple is at the foot of the hill, 350m south of the Ban Nong Daeng. The village is 2.4km west of the H3019

†**Tham Song Khaen** CH0086
 : ๕๗ ๗๙๕๙๕๖ ๑๗๕๓๓๒๖ Alt.: 235m
 Wat Pha Tham Song Khaen, Ban Hin Lat

The wat is 2km north-east of Ban Hin Lat, 10km north of Nong Bua Ra We on the H225.

Kaset Sombun

Tham Phra Phu Kratae CH0071
 : ๕๗ ๘๑๑๓๓๕ ๑๗๙๑๔๓๐ Alt.: 320m
 Phra Phu Kratae Monk's Campsite, Ban
 Non Nok, Nong Kha
 Other names: Tham Phra Pho Kra Dair

The campsite is signed as 2km west of the H2037 at the school in Ban Non Nok (47Q 813098 1791099). The campsite is at the top of the hill.

The site is a sandstone rock shelter with a Buddha statue.

Khon San

Cave CH0005 CH0005
 47Q 802044 1835884
 Ban Tham Ngoen, Pha Phueng Wildlife
 Sanctuary
 Length: 5m
 Other name: Grotte des Peintures

The cave is located beside the path from Wat Tham Ngoen to Tham Ngoen 1, overlooking the Ban Tham Ngoen valley. This rock shelter has a 2m diameter choked phreatic tube going 5m into the

hillside. There are also ancient red wall paintings.

The APS recorded the cave in 1987. Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001)

Cave CH0006 CH0006
 47Q 801968 1835791
 Ban Tham Ngoen, Pha Phueng Wildlife
 Sanctuary
 Length: 30m
 Other name: Grotte de la Suée

The cave is located beside the path from Wat Tham Ngoen to Tham Ngoen 1, overlooking the Ban Tham Ngoen valley. The cave is a 1.5m diameter phreatic passage that descends slightly. The APS recorded the cave in 1987. Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001)

Cave CH0008 CH0008
 47Q 802137 1835544 Alt.: 361m
 Wat Tham Ngoen, Ban Tham Ngoen
 Length: 5m

From the gate into the wat a concrete path leads east between the cliff and the stream. After about 100m there is a large temple building and some concrete steps leading up to the cave.

This is a 20m wide by 5m deep rock shelter used by monks.

The cave was first visited in 1987 by the APS.

Deharveng et al. (1988)

Cave CH0031 CH0031
 47Q 766058 1812611 Alt.: 700m
 Lam Chi, Phu Khieo Wildlife Sanctuary
 Length: 50m VR: 20m

This small cave is 200m beyond Tham Pha Khrop when travelling from the Lam Chi camp used by the 1989 expedition. It is 50m above the valley floor.

From the 3m wide collapsed entrance a descending passage ends after 50m.

The cave was explored by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Cave CH0046 CH0046
47Q 767807 1811387 Alt.: 650m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 50m VR: 20m
Other name: Grotte des Regrets

This cave is located on the eastern edge of a doline about 2km south-east of Tham Lam Chi, about halfway to Tham Put Son. It is at the foot of a large limestone cliff.

This vast descending cave, 30m wide and 2 to 3m high, has a noticeable air current and was explored for about 50m. The cave is significant because it is above the probable subterranean course of the Lam Chi.

The cave was explored by the APS in 1987. Deharveng et al. (1988); Dunkley (1995)

Cave CH0053 CH0053
47Q 801407 1834511 Alt.: 370m
Ban Tham Ngoen
Other name: Dig Site

The cave is at the western end of the Ban Tham Ngoen valley. A rough path leads from the track up the side of the hill between Tham Tec and Monk Big Chamber Cave to a small hole which has a slight draught. It is about 1km south-west of Ban Tham Ngoen.

The hole would need to be dug out to gain entry.

This site was recorded by the SMCC in 2000.

Ellis & Barrett (2001)

Cave CH0060 CH0060
47Q 806901 1834633 Alt.: 280m
Wat Tham Phra Than Dawan, Ban Nam Un
Length: 15m
Other name: Bat Roost Cave

Wat Tham Tan Da Wan is signposted to the west of the road from Khon San to Ban Pak Chong. From Wat Tham Tan Da Wan continue along the track round to the western end of the hill.

This is a short rift cave which descends to a chamber containing bats.

The cave was recorded by the SMCC in 2000.

Ellis & Barrett (2001)

Cave CH0061 CH0061

47Q 807039 1834604 Alt.: 280m
Wat Tham Phra Than Dawan, Ban Nam Un
Other name: Gated Cave

Wat Tham Tan Da Wan is signposted to the west of the road from Khon San to Ban Pak Chong. From Wat Tham Tan Da Wan the track continues around the hill, past Cave CH0060, to the northern side of the hill where a cave entrance was seen.

The cave had a locked gate which prevented exploration.

The cave was recorded by the SMCC in 2000.

Ellis & Barrett (2001)

Cave CH0068 CH0068
47Q 799371 1826009 Alt.: 520m
Ban Nong Ya Kong
Length: 20m
Other name: Sketch Cave

Just south of Ban Nong Ya Kong there is a turning to the north-west which soon reaches the gate into an orchard. This turning is between a track going north into a blind valley and the turning to the south (signposted in Thai) to Wat Tham Wiman Na Din. There are a couple of small caves in the cliffs at the back of the orchard about 200m back from the road.

The entrance to this cave opens into a small chamber. A short ladder leads up into a rift passage that soon closes down. The cave has not been thoroughly explored.

The cave was visited in 2000 by the SMCC. Ellis & Barrett (2001)

Cave CH0102 CH0102
47Q 802075 1835620 Alt.: 308m
Wat Tham Ngoen, Ban Tham Ngoen
Length: 40m

From the Tham Huang Po resurgence take the path east along the base of the cliff. Behind the first toilet block head up the hill for a few metres to the entrance.

The entrance has the remains of a monk's bed. At the back there are some old gourds that can be crawled over to a small second entrance.

This small cave was recorded by a SMCC team in April 2010.

Cave CH0107 CH0107
47Q 800706 1835023 Alt.: 501m
Ban Tham Ngoen
Length: 20m

From Wat Tham Ngoen walk up beside the seasonal stream bed and follow the path that ascends at the the head of the valley. It is a steep ascent to the col and the best route is to follow the stream bed on the left. There is a doline where the col flattens out and the sink is at the eastern end.

This is a seasonal stream sink. The cave goes in two directions: one passage passes under a skylight and ends after 5m, while the other is a vadose canyon that becomes too low after 15m.

The cave was found by a SMCC team in February 2012.

Cave CH0108 CH0108
47Q 804100 1836775 Alt.: 425m
Phu Som Phak Nam, Wat Tham Kham Welu Wan
Length: 3m

From Wat Tham Kham Welu Wan a good concrete path leads up the hill (400 steps) to the west as far as a wooden hut. From here take the path right that contours around the doline to reach the entrance to Tham Kham. This cave is the obvious entrance seen above the path about 50m before reaching Tham Kham.

This is a small pocket about 5m wide x 2m high x 3m deep that has been used by monks.

Another rock shelter was seen 50m to the east, but not visited.

The cave was recorded by a SMCC team in February 2012.

Caves CH0043 CH0043
Huai Khwai, Phu Khieo Wildlife Sanctuary

Old cave remnants were reported from high up in the cliffs near Tham Huai Khwai.

Checkley et al. (1989); Dunkley (1995)

Fossil Sink Cave CH0018
47Q 769958 1816511 Alt.: 780m
Lam Chi. Phu Khieo Wildlife Sanctuary
Length: 180m VR: 30m

The entrance to this cave is above Tham Kram Chang. A scramble up to the right of the sink leads to an entrance smelling strongly of bats. A further 30m above this is the upper entrance to the system.

The middle level is a complex of passages which may link to Tham Kram Chang via a pitch. This level ends where the way on becomes too low. The upper cave links to the middle level via a small phreatic passage.

This cave was explored and surveyed by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Hot Spring CH0091 CH0091
47Q 793415 1843505 Alt.: 270m
Ban Huai Sanam Sai

There is a hot spring behind the petrol station in Ban Huai Sanam Sai.

Water, estimated to be 40°C, emerges from the silt floor of the river bank. In June 1999 the river was in flood and the spring was not visible, but local informants said that usually clear water issues from here. This site is not in limestone.

Smart (1999)

†Huai Pong Tham CH0073
ห้วยโป่งถ้ำ
47Q 771658 1845311 Alt.: 840m
Ban Plaek

Huai Pong Tham is the name of a stream that flows from 47Q 169 1848 through the now abandoned Ban Sam Bon to join the Huai Phrom Nam Dan at 47Q 174 1842. No limestone is known in this area and it is very unlikely that there will be a cave.

Monk Big Chamber Cave CH0054
47Q 801366 1834344 Alt.: 337m
Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary
Length: 238m VR: 16m
Other name: Tham Sing Toh

The large entrance is located at the base of a distinctive rocky crag about 1km to the south-west of Ban Tham Ngoen, at the western end of the valley. Two paths lead up to the cave, one from the monk's house at Tham Nam Lei and the other from near

Tham Tec. There are the remains of a brick building just outside the entrance.

The wide entrance contains a 4m high stone embankment on which the monks have built a bamboo sleeping platform. A ladder helps the descent of the embankment. The initial passage is large, 20m by 20m, with some large stalagmites. Bearing left the roof lowers temporarily before a stoop below a formation into a large chamber with a boulder pile to the right. A low crawl through a mud filled phreatic section leads to a chamber about 1m high, and a further crawl on hands and knees leads into more large passage. This passage occasionally has bad air with a very high CO₂ concentration of over 5%. Climbing a mud bank allows the passage to be followed for another 80m to where the roof comes down to meet the floor. A small stream flows between large mud banks and a low crawl was visible at the end, but not accessed due to the dangerously bad air.

The cave was explored and surveyed by the SMCC in 2000. On a return in 2002 the SMCC were unable to extend the cave due to the high CO₂. On a visit in April 2010 there wasn't any bad air, but it was hot and stuffy. The mud chamber was reached, but the mud bank at the far side was not climbed as the bamboo stakes used as handholds were too rotten.

Barrett (2001); Ellis & Barrett (2001); Ellis et al. (2002); Vogt (2013)

Nam Phut Hin Lat CH0088

น้ำพุคหินลาด

47Q 808848 1839277 Alt.: 235m

Ban Nam Phu Hin Lat

Other name: Nam Phut Lat Wanarom

Nam Phut Hin Lat is 800m north of the H12 and 4km west of the H12/H2055 junction in Ban Nam Phu Hin Lat.

This is a small vauculian spring that was issuing about 0.2 cumecs of crystal clear water in June 1999 from a 10cm diameter hole in limestone.

The site was recorded by Dean Smart in 1999.

Smart (1999)

Nam Phut Na Lao CH0066

น้ำพุคนาเลา

47Q 809153 1836677 Alt.: 266m

Ban Na Lao

This is a vauculian spring about 1km south of the H12 on the road towards Ban Pak Chong. The spring is to the east of the road and has been developed into a small tourist attraction.

Cool, clear water bubbles up through gravel with no sign of a cave passage.

The spring was recorded by Dean Smart in 1999.

Ellis & Barrett (2001); Smart (1999)

Nam Phut Nam Un CH0090

น้ำพุคน้ำอุ่น

47Q 805975 1835442 Alt.: 275m

Ban Nam Un

A betel nut plantation to the north-west of Ban Nam Un contains many small, vauculian springs spread out over a wide area.

Crystal clear water mostly comes out of sand boils in pools and streambeds. One larger pool contains two holes in bedrock, but both are too small to enter. In June 1999 the total water rising was estimated at 0.5–1 cumecs.

The site was visited by Dean Smart in June 1999.

Smart (1999)

Nam Phut Na Wong Duan CH0009

น้ำพุคนาวงเดือน

47Q 809476 1834687 Alt.: 268m

Wat Nam Phut, Ban Na Wong Duan

The spring is south-west of Ban Na Wong Duan at Wat Nam Phut. From the H12/H2055 junction take the H2055 south towards the Chulaphon Dam. Just after 1km turn west (right) to Ban Na Wong Duan, drive through the village and continue for about 1.5km to the wat.

This is a series of small vauculian springs in a wooded area which is maintained by monks as a wat. In June 1999 Smart recorded a total of 0.3 cumecs of crystal clear water resurging, but that no bedrock was visible and the water emerges from sand boils on the bottom of pools. In March 2008 the main resurgence was seen to be from bedrock, but the hole would be too small for a diver. Another spring just

outside the temple grounds has been capped for use as a water supply. The local monks suggested to Dean Smart that the water flow increases in the dry season and decreases in the rainy season.

The resurgence was first recorded by the APS in 1987.

Deharveng, et al. (1988); Dunkley (1995); Ellis & Barrett (2001); Smart (1999)

Nam Phut Sai CH0089
47Q 809704 1833750 Alt.: 272m
Ban Non Phoem

Nam Phut Sai is located to the north of Ban Non Phoem. From Wat Nam Phut (Nam Phut Na Wong Duan) follow the road south for about 1km. The spring is beside the road.

This is a small vauculian spring where crystal clear water comes from a small hole in bedrock into a small pool next to a stream. Smart, in 1999, described it as coming up through gravel. It is used as a water supply by neighbouring farms.

The site was visited by Dean Smart in June 1999.

Smart (1999)

Nam Phut Thap Lao CH0044
น้ำพุตกที่พลาย
47Q 804406 1831256 Alt.: 359m
Ban Pha Biat, Pha Phueng Wildlife
Sanctuary
Length: 18m VR: 18m

This vauculian spring, which is well signposted, has been developed as a tourist attraction under the management of the Pha Phueng Wildlife Sanctuary. It is very popular with locals at holidays and on weekends. The spring can be reached either by turning south off the H12 along the road past Nam Put Na Lao, through Ban Pak Chong and then turning west in Ban Pha Biat, or by turning off the H12 along the H2055 (Chulaphon Dam road), keeping right at the Y junction in Ban Thai Thung before turning west (right) after a further 2.25km to Ban Pha Biat.

The spring has a large perennial flow and has been dived to 18 m depth where a small passage was seen to continue.

The site was dived in 1999 by Matt London to the small passage at a depth of 18m. London's findings were confirmed in

April 2012 by a team from Ban's Technical Diving who were also stopped by the restriction at -18m. The resurgence was first recorded by the APS in 1987.

Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001); Smart (1999); Werger (2012)

†Pha Sam Tham
CH0087

ผาสามถ้ำ
47Q 803900 1826865 Alt.: 345m
Wat Pha Sam Tham

This wat ('Three Cave Cliff Temple') is signposted to the south of the road to the Chulaphon Dam at 47Q 804590 1828150. From the turning follow the straight track west for 300m and then turn south and follow the straight track for 875m to a T junction. Turn west (right) and after 250m take a turning south (left) which leads to the temple at the foot of the hill.

Resurgence CH0065 CH0065
47Q 801739 1839532 Alt.: 305m
Ban Suan Pa O O Po 19

From Rock Shelter CH0062 and Spring CH0063 the track continues westwards along the base of the massif to this spring. A small stream was found coming out of boulders. No caves were found.

The spring was visited in 2002 by the SMCC.

Ellis et al. (2002)

Rock Shelter CH0051 CH0051
47Q 801618 1835401 Alt.: 340m
Wat Tham Ngoen, Ban Tham Ngoen
Length: 20m

This rock shelter is about 100m to the west of Wat Tham Ngoen at the base of a 40m high cliff.

The floor has been concreted over for use as a shrine, but there appears to be a couple of choked passages descending at the back of the shelter.

The shelter was recorded by the SMCC in 2000.

Ellis & Barrett (2001); Vogt (2013)

Rock Shelter CH0062 CH0062
47Q 802785 1839723 Alt.: 310m
Ban Suan Pa O O Po 19

From the H12 take a track south through the small village of Ban Suan Pa O O Po 19 to the limestone massif and then head west. Finding the correct track is tricky as there are several and there are no signs.

This small shelter was found in the cliffs at the base of the massif.

The rock shelter was visited by the SMCC in 2000.

Ellis & Barrett (2001)

Spring CH0063 CH0063
47Q 802490 1839820 Alt.: 300m
Ban Suan Pa O O Po 19

The track to Rock Shelter CH0062 continues heading west at the base of the massif to this spring.

This is a large spring, adjacent to a monk's dwelling.

This site was recorded by the SMCC in 2000.

Ellis & Barrett (2001)

Tham Bpra Gaai Phet CH0075
ถ้ำประกายเพชร
47Q 797317 1824558 Alt.: 570m
Wat Tham Bpra Gaai Phet, Ban Rong Wae
Length: 512m VR: 30m

This cave is in the grounds of a wat beside the road to the Chulaphon Dam. A few steps lead up to the gated entrance.

Inside the entrance there are steps up to the left which lead to a chamber with a well appointed monk's bedroom, some flowstone and an upper entrance. There is also a high level crawl that has not been pushed. Back at the entrance, going straight ahead is a walking height passage that has a tile floor and leads past some statues, through a gate, to a junction. Keeping left a short low section leads to more walking passage and a small chamber with a passage on the right. This passage heads south and links with the right hand passage mentioned above. A small passage descends steeply for about 40m to a blind pot.

Back in the chamber the way on is to the left that leads to a chamber with pools of water and the remains of an electric pump and some piping. Beyond the pools there are some holes in the floor that need to be traversed over and a large passage on the

left. The main passage continues for 50m and eventually reaches the top of a pitch into a large rift. The first part of the pitch is a 5m drop to a large ledge. The pitch continues down the slope which becomes vertical for the last 10m (estimated) to land in what sounds like deep water. Some rope and a homemade rope ladder has been left on this pitch and is assumed to be left over from the rescue in 2009. The news report stated this pitch was 45m deep, but it is probably nearer 30m deep. A handline up a difficult climb to an inlet passage can be seen from the ledge 5m down the pitch.

The large side passage on the left, just after the pools in the main passage, heads south-west for 40m with a couple of holes in the floor, before abruptly turning north and after 30m there is a pitch (estimated at 6m) into a rift that has not been descended.

The cave is a palaeontological site.

The cave was first visited in January 2006 by the SMCC. On 2 August 2009 a 30 year old man was rescued from the cave after falling down a pitch and being stuck for 3 days. The cave was then explored by the SMCC in four trips between 2014 and 2016.

Anon. (2009); Filoux et al. (2014), (2015); Goddard (2016); Louys (2007); Louys & Meijaard (2010); Tougaard (1998),(2001); Tseng & Chang (2007); Vogt (2013)

Tham Chedi Boraphot 1 CH0098
ถ้ำเจดีย์ศรีบรรพต๑
47Q 800131 1828354 Alt.: 512m
Wat Tham Chedi Boraphot, Ban Pa Nong
Chiang Rot, Pha Phueng Wildlife
Sanctuary
Length: 5m

From the back of Ban Pa Nong Chiang Rot a track leads to this new wat. The caves are round the back of the wat, just into the Pha Pheung Wildlife Sanctuary, near a kuti.

This small cave is at the base of the cliff and may be seasonally active.

A monk at the cave reported that there were three other caves in the hills, including a 'Tham Yai' (Big Cave) which was several hours walk away.

The cave was visited in March 2008 by the SMCC.

Tham Chedi Boraphot 2 CH0099

ถ้ำเจดีย์ศรีบรรพต๒

47Q 800148 1828341 Alt.: 517m
Wat Tham Chedi Boraphot, Ban Pa Nong
Chiang Rot, Pha Phueng Wildlife
Sanctuary
Length: 10m

This small cave is a bit further on from the kuti than Tham Chedi Boraphot 1. It is also at the base of the cliff and in the wet season water is collected from roof drips. The cave was visited in March 2008 by the SMCC.

Tham Din Pak Chong CH0103

Ban Pak Chong

This bat collection site is near Ban Pak Chong. This may be a duplicate of another recorded site.

Two species of bat were recorded:

Hipposideros armiger armiger (Hodgson, 1835)

Hipposideros larvatus (Horsfield, 1823
Kruthanut (1986)

Tham Glip CH0064

47Q 803771 1839044 Alt.: 520m
Ban Suan Pa O O Po 19, Phu Som Phak
Nam, Pha Phueng Wildlife Sanctuary
Length: 50m VR: 20m

Tham Glip is located in the hills north-west of the peak of Phu Sam Phak Nam. From the H12 take a road south to the small village of Ban Suan Pa O O Po 19. A path leads from near the small shop in the village, across the fields and on up the hill. A steep ascent for 40 minutes through mixed forest eventually opens out into a flatter area (near the saddle of the hill). An old bamboo hut is seen on the left amongst limestone outcrops. In the cliff face to the right is the entrance to Tham Glip.

The cave consists of a large chamber at the bottom of a 28m sloping rock descent (a handline is required). Crystal deposits are found in various places, including on the ledge at the start of the descent. The large chamber is 30m wide by 20m high with a steep debris slope and many calcite

formations of various sizes. In the eastern corner is a smaller chamber with a hole down into a boulder choke. No way on was found, though the locals did mention that a river flows at the bottom. However, no evidence of this river was seen.

Tham Glip is well known locally as villagers visit this cave to remove the crystal found in the wall of the entrance, selling polished examples on to tourists. Guides can be found to lead you to the entrance.

The first recorded visit by cavers was by the SMCC in February 2002.

Ellis et al. (2002)

Tham Huai CH0016

ถ้ำห้วย

47Q 768090 1817884 Alt.: 840m
Huai Khwai, Phu Khieo Wildlife
Sanctuary
Length: 60m VR: 36m

The entrance to this cave is located at the base of the cliffs behind Tham Huai Khwai. The inconspicuous entrance is behind a boulder at the base of the cliff.

A 20m entrance pitch leads to a 10m high rift which heads 50m south-east to a boulder pile. A 10m climb down a fluted shaft leads into a crawl which ends in a 6m blind shaft.

Tham Huai was explored by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Huai Chi Laeng CH0030

ถ้ำห้วยชีแห้ง

47Q 766200 1812832 Alt.: 700m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 1,602m VR: 60m
Other name: Cave of the Dry Stream

From the Lam Chi camp used by the 1989 expedition follow the main track east for 20 minutes to reach the first dry river bed. Then follow the left hand wall uphill northwards for 10 minutes to reach the obvious entrance.

The 8m high, wide entrance is at the base of a cliff and is well decorated with old speleothems. A small passage on the left hand side of the entrance bay leads into a complex section of old phreatic rift passages which at one point emerges in a

small entrance on the cliff front. The main way into the cave is at the back of the entrance bay, up a 2m climb over calcite into a well decorated and roomy passage. The passage splits, but rejoins at a 5m climb down a bank of boulder and sand infill. This drops into a large steeply descending passage. Right, up the slope, is a large boulder-filled collapse area with no way on. Left leads into a long meandering old stream passage with remnants of a false floor in the roof above. After approximately 1km the passage becomes impassably low.

Tham Huai Chi Laeng was explored and surveyed by the 1989 British expedition. Checkley et al. (1989); Dunkley (1995)

Tham Huai Khao CH0024
47Q 765657 1813586 Alt.: 795m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 581m VR: 20m

The two entrances are in the cliff 45m and 65m above Tham Huai Nam Lad.

The top entrance leads to a large passage, mainly filled with sand and boulders, as far as a low stoop with a strong draught. The same place can be reached from the lower entrance by climbing up a 10m alluvial bank. The low stoop leads into 400m of very big walking passage to a T junction. The passage closes down in both directions with the draught probably coming down big avens in the roof. Two side passages and a high level, off the main passage, all end rapidly.

The cave was explored and surveyed by the 1989 British expedition. Checkley et al. (1989); Dunkley (1995)

Tham Huai Khwai CH0014
ถ้ำห้วยไทว
47Q 768006 1818006 Alt.: 800m
Huai Khwai, Phu Khieo Wildlife Sanctuary
Length: 400m
Other name: Huai Khwai Stream Sink

The Huai Khwai stream runs down from the north before heading east into an alcove surrounded by cliffs in the eastern side of the valley, where the stream sinks. This sink cave is formed in huge boulders. The 3m by 1m entrance is amongst a large boulder pile. Inside the cave the river runs

north in massive blocks which can be followed easily for 300m until it turns west and descends steeply amongst smaller blocks. This was followed for a further 100m, but exploration was abandoned due to the complexity of the huge choke.

The cave was found in 1989 by a British expedition, but was not fully explored after one individual became lost for several hours in the complex of spray-lashed boulder chaos.

Checkley et al. (1989); Dunkley (1995)

Tham Huai Nam Lad CH0023
Tham Huai Nam Lad: 47Q 765757 1813611
Alt.: 750m
Tham Huai Khang Khao: 47Q 765757
1813611 Alt.: 775m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 674m VR: 125m
Other name: Small Waterfall Cave; Tham Huai Khang Khao

From the Lam Chi River camp used by the 1989 expedition follow the main track east for 20 minutes to reach the first dry river bed. Follow this river bed north (uphill) for 30 minutes to a shallow depression which is skirted on the left side. Then head north-north-west up the valley for 20 minutes and cross the col to a second deep and large depression. Go down slope and follow the stream at the bottom to its sink. 25m above Tham Huai Nam Lad, up a climb, is the 10m high entrance to Tham Huai Khang Khao.

Tham Huai Nam Lad has a spectacular high canyon entrance with the stream falling down a series of cascades into it. Climbing down these cascades leads to a 6m pitch which drops into 200m of high canyon ending at a sump. Near the entrance a small side passage leads off in the floor to about 400m of narrow, winding and steeply descending wet passage. After losing about 70m of height the water rejoins the main stream just before the sumps.

Tham Huai Khang Khao has 40m of wide, guano-filled passage leading to a pitch which drops down into Tham Huai Nam Lad.

The cave was explored in 1989 by a British expedition.

Checkley et al. (1989); Dunkley (1995); Ellis (2009)

Tham Huang Po CH0008

ถ้ำหวงโป

47Q 802038 1835663 Alt.: 289m
Wat Tham Ngoen, Ban Tham Ngoen
Length: 250m VR: 5m

Other names: Ban Tham Ngoen
Resurgence Cave; Ban Tham Ngoem
Spring; Source de Ban Tham Ngoem;
Tham Ban Ngoem; Grotte de la Source;
Tham Wam Bo

This resurgence cave is located in the temple grounds, to the north-west of Ban Tham Ngoen, at the foot of the karst massif. The perennial stream resurges from amongst boulders and has been used as a water supply. The way in is either via a small rift behind the huge boulder above the spring or by crawling in the stream below the boulder.

A low canal section, with roots penetrating the roof, opens out after 10m into a large and deep river passage. After 100m the cave turns north-east and continues very straight and narrow, eventually ending at a sump with a strong out-flowing current. The passage here is much higher and on a ledge 4m above a section of rapids there is a short, sandy side passage. Opposite this inlet there are chert nodules jutting out high up on the passage wall.

Monks from the wat have reported that in the dry season the sump opens and the cave can be explored for 500m.

The cave was surveyed by the SMCC in 2002.

Barrett (2002); Deharveng et al. (1988); Dunkley (1995); Ellis (2010); Ellis & Barrett (2001); Ellis et al. (2002); Smart (1999)

Tham Kham CH0056

ถ้ำขาม

47Q 804054 1836761 Alt.: 422m
Phu Som Phak Nam, Wat Tham Kham
Welu Wan, Pha Phueng Wildlife
Sanctuary
Length: 212m VR: 12m

Other name: Tham Kum

From Wat Tham Kham Welu Wan a good concrete path leads up the hill to the west

as far as a wooden hut. From here take the path right that contours around the doline to reach the entrance to the cave. There are several Buddha statues in the entrance as well as carved images in the rock wall outside and old rock paintings.

The doline has a high cliff wall and the cave is formed at the base of the cliff. The walk-in entrance opens out immediately into an 8m high by 10m wide main passage. This main route has a high level oxbow running over the top of it. After 80m the passage narrows to a slot beyond which is a chamber with a kuti. To the left is a short passage while a short climb to the right over flowstone enters smaller, but still walking sized, passage. One soon reaches another slot caused by flowstone before the passage gets larger again and there is a drop down of 8m on the right. This drop can be traversed on the left and it is possible to climb down a ladder a little further ahead. The chamber contained many bats and the air was foul with a very high CO₂ level so exploration was terminated at this point, although the cave continued as a low stooping passage. Tham Kham was explored and surveyed in February 2000 by the SMCC.

Ellis & Barrett (2001); Vogt (2013)

Tham Khrop CH0027

ถ้ำครอบ

47Q 765557 1813011 Alt.: 1,000m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 954m VR: 76m

Other names: Tham Khrob

This cave is very visible, high in the cliff face, and was well-known to the guides as Tham Khrop. (The cave which is named 'Tham Khrop' in the 1988 French report is not this cave, but is Tham Pha Khrop.) From the Lam Chi camp used by the 1989 expedition head east. Before coming to the cliff line go straight up the slope through bamboo for 400m of ascent. The 80m wide and 50m high entrance is visible from the valley floor below, from the unforested grassy area beside the Lam Chi river.

From the entrance ascend a huge collapse slope of boulders and guano to the highest point and face outwards. Immediately to the right a series of short pitches descend to a calcite choke. 50m down the slope, under the west wall, a 3m climb leads into

a passage. An ascent to the right leads up the boulders into a large chamber, while straight ahead leads to the same chamber via a lower route. In the north-west corner of the chamber is a descending series of short climbable pitches which eventually become too tight. Above this a route leads around the west side of the chamber back to its entrance. From the south-west corner a high level passage leads to a small entrance. 50m down the east side of the main archway a small passage leads off to two small entrances.

Although well known locally and a bat collection site, the first visit by cavers was the 1989 British expedition.

The bat *Chaerephon plicata* (Buchanan, 1800) has been recorded from the cave.

Checkley et al. (1989); Dunkley (1995); Yenbutra & Felton (1986)

Tham Kram Chang CH0017

ถ้ำครามช้าง

47Q 769985 1816480 Alt.: 770m

Huai Khwai, Phu Khieo Wildlife Sanctuary

Length: 468m VR: 10m

Other name: Elephant Tooth Cave

North-north-east of the Tham Nok Nang An camp used by the 1989 expedition there is a Y-shaped doline. This can be reached by following the gully upstream from the camp and after 1km taking the north-westerly fork for approximately 500m and then climbing the west ridge. The ridge top should be followed until a subsidiary ridge runs westerly towards an obvious peak. Follow this until it begins to ascend and then drop steeply down the north side to the base of the doline and follow the stream down the gully to the entrance to Tham Kram Chang.

This sink cave consists of fine vadose passage dropping down a series of short climbs to a 300m horizontal section which lowers to a sump. It seems likely that the water resurges in or flows beneath a large doline a kilometre to the south-west, before flowing towards the Lam Chi River area.

The cave was explored and surveyed by the British expedition in 1989.

Checkley et al. (1989); Dunkley (1995)

Tham Nam CH0058

CHAIYAPHUM

ถ้ำน้ำ

47Q 803658 1837156 Alt.: 440m

Phu Som Phak Nam, Wat Tham Kham Welu Wan, Pha Phueng Wildlife Sanctuary

Length: 15m

This is a seasonal stream sink located in the next large doline to the north-west of the Tham Kham doline. The floor of this doline has a lot of vegetation making access awkward.

The entrance is a 3m high rift at the end of a dry stream bed. The cave has been followed for about 15m to where it descended a tight vertical rift which was not pushed.

The cave was visited in February 2000 by the SMCC.

Ellis & Barrett (2001)

Tham Nam Lei CH0055

ถ้ำน้ำไหล

47Q 801068 1834509 Alt.: 314m

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Length: 230m VR: 9m

This resurgence is about 1km to the south-west of Ban Tham Ngoen, at the western end of the valley. From the monk's house at the head of the valley a path leads for about 100m to the resurgence which is boulder choked. The cave is also signposted in Ban Pha Biat, on the road to Nam Phut Thap Lao, as being 3km away.

A hole at the back of the boulders leads down into the boulder floored passage where the stream flows along the right hand wall. After a few metres a skylight is passed and then you reach a 'landing' where the 75m long swim begins. After 20m the lake pinches down to a low section which obviously sumps in the rainy season, before the swim opens up again into larger passage. A passage was also noted high up on the left just beyond the low section of the entrance, but the climb will require aid. The lake ends at a gravel beach where there are several large formations. It is possible to walk from here to the upstream sump pool, crossing a sand bar and using large water worn holes in the wall to bypass sections of deeper water. The fine, but short, streamway is

followed up several cascades and boulder falls, passing a bamboo hut which is used by monks for meditation. The end of the cave is a 20m swim to a low passage which then sumps. In February 2002 the water levels were lower than on the first trip in 2000, enabling a further 10m of progress at the upstream sump. A calcite slope above the sump may be a potential route over the top. The upstream sump was dived in November 2010 by Alex Fletcher to a depth of -8m. He had difficulty finding the way on due to sloping ledges and silt, but an archway was located.

Local monks suggested to Dean Smart that in the dry season this sump can be passed and the cave "continues for over 1km with no end in sight".

A reticulated python *Python reticulatus* (Schneider, 1801) was seen in the cave in November 2010.

The cave was first visited by Dean Smart in 1999 and surveyed in February 2000 by the SMCC.

Ellis & Barrett (2001); Ellis et al. (2002); Fletcher (2011); Smart (1999)

Tham Ngoen 1 CH0001

ถ้ำเงิน๑

47Q 801907 1836711 Alt.: 400m

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Length: 281m VR: 20m

Other name: Tham Ngoem 1

A path behind Wat Tham Ngoen leads steeply up the side of the massif with some bamboo and wood ladders to aid the ascent. The path has fine views back over the valley and the karst on the other side. At the top of the ascent a path winds its way through the limestone before descending into a doline. Part way down the doline there is a large wooden building.

The large entrance is a few metres behind the building. In 2000 it appeared to be a major meditation or pilgrimage site. From the entrance chamber the roof lowers before ascending again, giving access to about 200m of large fossil passage. The cave still has a couple of leads - a bamboo ladder up to an inlet passage was not ascended and the tight passage at end of

the cave was not pushed. The inner cave has an extensive fauna.

The cave was surveyed by the APS in 1987.

Deharveng (1987); Deharveng & Leclerc (1989); Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001); Vogt (2013)

Tham Ngoen 2 CH0002

ถ้ำเงิน๒

47Q 801857 1836686 Alt.: 400m

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Length: 100m VR: 15m

Other name: Tham Ngoem 2

A path behind Wat Tham Ngoen leads steeply up the side of the massif with some bamboo and wood ladders to aid the ascent. The path has fine views back over the valley and the karst on the other side. At the top of the ascent a path winds its way through the limestone before descending into a doline. Part way down the doline there is a large wooden building near the entrance to Tham Ngoen 1. From Tham Ngoen 1 continue through the doline towards the west for a few metres to find this cave.

Tham Ngoen 2 is a single chamber occupied by a few fruit bats. A side passage near the entrance leads to a 10m pitch which was not descended either by the APS in 1987 or the SMCC in 2000.

The cave was first visited in 1987 by the APS.

Tham Ngoen 2 is the type and only known locality for the millipede *Plusioglyphiulus saksit* Golovatch, Geoffroy, Mauries & van den Spiegel, 2011

Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001); Golovatch et al. (2011)

Tham Ngoen 3 CH0003

ถ้ำเงิน๓

47Q 801857 1836911

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Other names: Tham Ngoem 3

Local guides mentioned to the French team that there was another cave in the Tham Ngoen doline, 200m to the north of Tham Ngoen.

The cave has not been found or explored. Deharveng et al. (1988); Dunkley (1995)

Tham Ngoen 4 CH0004

ถ้ำเงิน๔

47Q 801858 1837011

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Other names: Tham Ngoem 4

Local guides mentioned a fourth cave in the Tham Ngoen doline. This cave was said to be 300 m north of Tham Ngoen.

The cave has not been found or explored. Deharveng et al. (1988); Dunkley (1995)

Tham Ngoen 5 CH0050

ถ้ำเงิน๕

47Q 801457 1836411 Alt.: 400m

Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

Length: 40m VR: 10m

Other name: Tham Ngoem 3

Tham Ngoen 5 is located about 200m to the west of Tham Ngoen 2 at the western edge of the depression.

A shrine is located in the entrance and a 15m wide passage ascends steeply up into the hill over boulders and stal to end at a choke. One of the avens in the cave has a slight draught.

The cave was found by the SMCC in 2000. Ellis & Barrett (2001); Vogt (2013)

Tham Nimit CH0057

ถ้ำนิมิต

47Q 803877 1836811 Alt.: 470m

Phu Som Phak Nam, Wat Tham Kham Welu Wan, Pha Phueng Wildlife Sanctuary

Length: 79m VR: 16m

Follow the path to Tham Kham, but at the bamboo hut at the top of the steps take the left fork. The path contours around the hill, with views out over the Ban Tham Ngoen valley, and goes over a fence. The path then heads back into the massif towards the same doline that contains Tham Kham. A high point is reached where the path starts the descent into this doline; the path heads left towards the doline containing Tham Nam whilst the

entrance to Tham Nimit is located 5m to the right amongst some rocks.

A short bamboo ladder in the 0.5m by 0.5m entrance drops into a large chamber with a stal boss. The main part of the cave has a smooth, flat floor and there are a couple of short side passages. The main way on is to climb down beside large boulders on the right to enter a short crawl which leads to a couple of small chambers. At the bottom of the climb down there are many snail shells.

The cave was explored by the SMCC in 2000.

Ellis & Barrett (2001)

Tham Nu CH0029

ถ้ำหนู

47Q 766136 1812873 Alt.: 750m

Lam Chi, Phu Khieo Wildlife Sanctuary

Length: 52m VR: 32m

Other names: Tham Noo; Huai Tham Nue; Rat Cave

Tham Nu is situated at the base of the cliff about 80m up valley from Tham Huai Chi Laeng.

This is a narrow rift cave which rapidly descends to a pitch with no way on.

The cave was explored by a British expedition in 1989.

Checkley et al. (1989); Dunkley (1995)

Tham Pha Khrop CH0026

ถ้ำผาครอป

47Q 765857 1812611 Alt.: 700m

Lam Chi, Phu Khieo Wildlife Sanctuary

Length: 97m VR: 35m

Other names: Tham Pha Khrob; Tham Khrob; Cave in the Roof of the Mountain

From the Lam Chi camp used by the 1989 expedition head east to the base of the cliff line and follow the cliffs for 200m. 50m above the valley floor, at the base of a high cliff, are two small entrances, with three others above, all leading into the same place.

Tham Phra Khrop has a 12m diameter entrance chamber which drops rapidly to a 35m pitch. Below the pitch the passage ends in a choke in both directions after 25m.

The cave was first explored by the APS in 1987 (called Tham Khrop in their report).

The pitch was descended by the 1989 British expedition.
Checkley et al. (1989); Deharveng et al. (1988); Dunkley (1995)

Tham Pha Ngep 1 CH0096
ถ้ำผาเงิบ๑
47Q 802358 1836011
Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

The cave is near the path to Tham Ngoen 1 with the entrance in a small west facing cliff.
There are paintings with red writing outside the rock shelter. This may be the same as Cave CH0005 or Cave CH0006.
Charoenwong (1989)

Tham Pha Ngep 2 CH0097
ถ้ำผาเงิบ๒
47Q 802308 1836011
Ban Tham Ngoen, Pha Phueng Wildlife Sanctuary

The cave is approximately 50m to the west of Tham Pha Ngep 1.
It has similar characteristics to other rock shelter caves. The paintings, drawn with red mud, are on the cliff and two are on the ceiling to the west and east. This may be the same as Cave CH0005 or Cave CH0006.
Charoenwong (1989)

Tham Pha Ya Chang Puek CH0010
ถ้ำผญาช้างเผือก
47Q 805292 1833311 Alt.: 340m
Wat Tham Pha Ya Chang Puek, Ban Pha Biat
Length: 50m
Other name: Tham Phra Ya

The wat is signposted from the surfaced road in Ban Nam Un along a track to the west. Alternatively the cave can be reached by driving through the Nam Phut Thap Lao resort and turning right in the hamlet. Tham Pha Ya Chang Puek is about 10m above the wat in the cliff face.
This is a particularly fine shrine, being tiled throughout, and with a glass wall enclosing the inner part of the cave. The decoration is on a wildlife theme.

The temple has changed considerably since the APS visit in 1987.
Deharveng et al. (1988); Dunkley (1995); Ellis & Barrett (2001); Vogt (2013)

Tham Phra Than Dawan CH0059
ถ้ำพระทานตะอัน
47Q 806930 1834504 Alt.: 280m
Wat Tham Phra Than Dawan, Ban Nam Un
Length: 20m
Other name: Temple Cave

Wat Tham Phra Than Dawan is signposted from the road at 47Q 807304 1834327. It is at the base of a small isolated limestone hill at the wide mouth to the Ban Tham Ngoen valley.
The wat is on the southern edge of the hill. There is a large entrance which contains a shrine with a passage leading off for about 20m.
The cave was recorded by the SMCC in 2000.
Ellis & Barrett (2001); Latinne et al. (2013); Vogt (2013)

Tham Phrom Nimit CH0076
ถ้ำพรหมนิมิต
47Q 792495 1827455 Alt.: 585m
Wat Tham Prom Mit, Ban Non Sila
Length: 20m

The cave is in a small wat to the north of the road to the Chulaphon Dam.
It consists of a single 20m long phreatic tube in small outcrop with a wooden platform and a dry dusty floor.
The cave was recorded in July 2005 by the SMCC.
Vogt (2013)

Tham Phua CH0080
ถ้ำฝื่อ
47Q 805935 1833800
Phu Tham Phua, Ban Pha Biat

The cave is on Phu Tham Pua, 900m along the road to Wat Tham Pha Ya Chang Puek from Ban Pak Chong.
The rat *Leopoldamys neilli* (Marshall, 1976) has been recorded in the cave.
Latinne et al. (2013)

Tham Sai Chai Patgui Tip 1 CH0069

47Q 794337 1829482 Alt.: 610m
 Wat Tham Sai Chai Patgui Tip, Ban Non Sila
 Length: 70m

Near Ban Non Sila a track heads north round the western end of the limestone massif. The track reaches a small wat at the foot of the hills.

Tham Sai Chai Patgui Tip 1 has been developed into a shrine and living quarters for monks. The earth floor has been excavated to form walking height paths and may be of archaeological interest.

This cave was surveyed by the 2000 SMCC expedition.

Ellis & Barrett (2001); Vogt (2013)

Tham Sai Chai Patgui Tip 2 CH0070
 47Q 794458 1829111 Alt.: 660m
 Wat Tham Sai Chai Patgui Tip, Ban Non Sila
 Length: 168m VR: 24m

From Wat Tham Sai Chai Patgui Tip walk south for about 400m along the base of the hills. The path ascends to the entrances to this cave.

There are two entrances which give walking access into a large earth-floored chamber and a high level skylight. To the north a 9m pitch goes down to about 100m of large passage. From the base of the ladder there is only one main route, along which there are a number of impressive stal columns and gours. Two piles of bones were found, with some of the bones which had been calcified into the floor.

Tham Sai Chai Patgui Tip 2 was first explored and surveyed in February 2000 by the SMCC.

Ellis & Barrett (2001); Vogt (2013)

Tham Sihanat Decha CH0067
 ถ้ำสีหนาทเดชา
 47Q 804196 1831917 Alt.: 380m
 Tham Sihanat Decha Monk's Camp Site, Ban Pha Biat
 Length: 10m
 Other name: Dragon Shrine Cave

Follow the track through the Nam Phut Thap Lao resort and head towards the gap in the hills that leads into the Ban Tham Ngoen valley until a spur of limestone is

seen on the left (west). There is a small wat at the base of the limestone hills.

A rock shelter has been converted into a temple. Blue water supply pipes were seen coming down the hill to the temple so there may be a spring higher up.

The cave was visited in 2000 by the SMCC. Ellis & Barrett (2001); Vogt (2013)

Tham Sing Toh CH0077
 ถ้ำสิงโต

47Q 803211 1831624 Alt.: 595m
 Khao Dat Fa, Pha Phueng Wildlife Sanctuary
 Length: 651m VR: 64m

From the Nam Phut Thap Lao resurgence drive through the resort and follow the sealed road past Tham Sihanat Decha Monk's Camp Site. The cave is signed along a track on the left (west) which leads to some wildlife sanctuary buildings and information signs. The cave is also signposted in Ban Pha Biat, on the road to Nam Phut Thap Lao, as being 2km away. As this cave is within the wildlife sanctuary permission to visit has to be obtained from Bangkok and park rangers will then guide you to the cave (the SMCC were reminded about this after being caught pirating the cave in February 2014). From the car park the path follows the dry river bed for about 1km before ascending steeply up the hill on the right to the entrance.

From the entrance the comfortably sized passage heads north and has steel ladders to aid the ascent and descent of pitches of up to 4m. After a short squeeze under the right hand wall at the end of the entrance passage (follow the draft) one enters the main chamber which has large deposits of bat guano and a couple of skylights in the high roof. Heading left the chamber closes down after 100m and the cave descends steeply in a small, boulder floored passage. On the first visit in 2005 the air in this part of the cave was poor, but it had improved in 2006 to allow further exploration which was stopped at the top of a drop requiring tackle.

From the point where entrance passage enters the main chamber going right leads up over the guano to a 10m wide passage that descends steeply over boulders. This has been explored to where the passage

was seen to level off, but has not been pushed to a conclusion. Park rangers report that the cave extends for another 500m beyond this point. The following fauna has been seen in the cave:

The centipede *Thereuopoda longicornis* (Fabricius, 1793) and cave racer snake *Orthriophis taeniurus helfenbergeri* Schulz, 2010 are found in the cave.

The cave is a well known attraction in the wildlife sanctuary and has been visited by the Head of the Royal Forest Department and the Governor of Chaiyaphum. The cave has been partly surveyed and explored by the SMCC in January 2005, January 2006, November 2009 and February 2014.

Ellis (2010); Schulz (2010)

Tham Song Chin CH0109

47Q 804303 1833359 Alt.: 445m

Tham Song Chinb Monk's Campsite, Ban Pha Biat

Length: 100m VR: 20m

The campsite is signposted from the surfaced road a few hundred metres south of Wat Tham Pha Ya Chang Puek. An unsurfaced track leads to a building and then concrete steps lead up to the entrance which is at the top of the hill.

From the upper entrance concrete steps lead down to a chamber with a large skylight. To the left is a dark chamber, used by a monk, whilst straight ahead concrete steps continue down to the lower entrance. The cave is about 100m long, 10-15m wide and 5m high.

The cave was visited by the SMCC in 2015.

Tham Tec CH0052

47Q 801773 1834196 Alt.: 330m

Ban Tham Ngoen

Length: 185m VR: 17m

The cave is formed in an isolated hill of limestone surrounded by the alluvial plain of the Ban Tham Ngoen valley. The hill is 1km to the south-south-west of the village. A 10m wide by 7m high entrance is found in the cliff face on the south-west side of the hill, just off the track. This relict cave is used as a shrine and meditation retreat by monks. The entrance opens on to a chamber which is blocked with boulders at the back. A 3m bamboo ladder to the

right leads up into a higher level continuation of the chamber. This reduces in size to a steeply inclined bedding cave which ends in a complex of crawls. A crawling route back under the boulders leads to the back of the entrance chamber. There is another passage that heads north from the entrance chamber for a few metres before ending at a small aven.

Tham Tec was explored and surveyed in February 2000 by the SMCC.

Ellis & Barrett (2001); Vogt (2013)

Tham Wiman Na Din CH0084

47Q 799099 1824996 Alt.: 509m

Wat Tham Wiman Na Din, Ban Nong Ya Kong

Length: 75m VR: 10m

Other names: Tham Wiman Nikan; Tham Ngu; Snake Cave

The wat is signposted to the south of the road to the Chulaphon Dam, 2km west of Ban Nong Ya Kong. The wat is to the east of the side road, about 250m from the junction. From the wat a path leads around the south side of the hill for about 100m to the entrance.

There are several interconnected chambers, three of which (Main Chamber, Main Layer and Upper Layer) have provided faunal remains. On a quick visit in April 2009 about 50m of passage was seen, but a couple of possible ways on were not pushed, not least because of the large *Thereuopoda longicornis* (Fabricius, 1793) centipede on the roof of a crawl.

This is an internationally renowned paleontological cave in Middle Permian dolomitic limestone. It is filled with Quaternary red clay deposits which are overlaid with a succession of stalagmitic floors. The calcite immediately overlying the fossil deposits has been U-series dated to an age of at least 160,000 years. Fossils of at least 31 large mammal species and 30 small mammal species have been found in the cave, including Giant Panda and a tooth possibly from *Homo erectus*. The assemblage is typical of the late Middle Pleistocene. Before the paleontological excavations, carried out over several seasons by the Thai-French Paleontological Project, local villagers had extracted about 1m of guano deposits for fertiliser. Despite its importance the site

has no official protection and after a visit in 2009 the author was shown many fossils from the cave by a monk who offered to let us take some of them away.

The first known visit by cavers was in April 2009 by Terry Bolger and Martin Ellis.

Chaimanee (1997); Chaimanee et al. (2001); Chaimanee & Jaeger (2000),(2001); Esposito et al. (1998); Esposito et al. (2002); Filoux et al. (2014), (2015); Ginsburg et al. (1982); Louys (2007); Louys & Meijaard (2010); Marwick (2009); Pearch et al. (2013); Pushkina et al. (2010); Tougaard (2001); Tougaard et al. (1996); Tougaard et al. (1998); Trakullertsathien (2000); Tseng & Chang (2007)

Tham Yai Ban Yen

CH0085

47Q 784368 1820751 Alt.: 640m

Nam Phrom, Phu Khieo Wildlife Sanctuary

The co-ordinates in the reference place this bat collection site in the Nam Phrom valley to the south of the Chulaphon Dam road, close to the access road to the Phu Khieo Wildlife Sanctuary headquarters. Limestone has not been reported in this area.

The bat *Hipposideros lylei* Thomas, 1913 was recorded in the cave.

Yenbutra & Felton (1986)

Muang Chaiyaphum

†Tham Hia

CH0094

ถ้ำหิยา

48P 189481 1764858

Nam Tok Tat Fa, Tat Ton National Park, Na Siao

Other names: Tham Tia

Nam Tok Tham Hia is an alternative name for the Tat Fa waterfall. The waterfall is 3km north of Na Siao and 5km north-west of the H201 on the southern flanks of the Khao Phu E Thao mountain. It is a 4km walk north from Ban Na Sieow.

There is reported to be a small cave as well as a steep waterfall.

†Tham Sing

CH0081

ถ้ำสิงห์

48P 180448 1763727 Alt.: 210m

Wat Pa Tham Sing, Ban Nong Yaplong

The wat is south of the minor road to Ban Nong Yaplong, 1km west of the crossroads with the H2051.

Tham Wat Sila At

CH0048

ถ้ำวัดศิลาอาสน์

48P 185266 1761859 Alt.: 230m

Wat Sila At, Ban Nong Na Wang

Length: 90m VR: 5m

Other name: Tham Phu Phra; ถ้ำภูพระ

From the centre of Muang Chaiyaphum, take the H201 (Chaiyaphum–Kaeng Khro road) for approximately 15km. Turn left (west) along the Na Siao–Huai Chan road for 5 km before turning left again (south-west) for 1 km to the temple.

Within the monastery grounds there is a cave whose entrance has been developed into the mouth of a Naga. The cave is formed in sandstone and consists of a single, straight passage. This passage has an average width of 3m at ceiling height and 1.2m at ground level. The average height is 3.5m. The cave ends at a lake with variable water levels. The passage continues, but Mouret's team stopped in the lake, immersed to the neck. There was a lot of gas being released from the bottom of the lake so they retreated. Mouret recommended a return late in the dry season and on a visit in February 2011 John Dunkley found that the cave ended soon after the point reached by Mouret.

The cave was visited by the Mourets on 30 October 1992. They returned, with Louis Deharveng, to survey the cave on 1 November 1993. John Dunkley visited the cave in February 2011.

The temple is famous for a couple of bas relief Buddha images dated to the 13th or 14th Century.

Dunkley (1997); Mouret (1997); Mouret & Mouret (1994); Munier (1998); Vogt (2013)

Nong Bua Daeng

Cave CH0041

CH0041

Lam Chi, Phu Khieo Wildlife Sanctuary

CHAIYAPHUM

A very deep and big cave was reported by guides to be 4km west of Tham Pha Tewada in the same area as Tham Put Son. Checkley et al. (1989); Dunkley (1995)

Cave CH0047 CH0047
Khao Thewada, Phu Khieo Wildlife Sanctuary

A cave was reported by guides as being about 500m north-east of Tham Pha Thewada.
Dunkley (1995)

Chi Dan Resurgence CH0038
47Q 768152 1809679 Alt.: 590m
Lam Chi, Phu Khieo Wildlife Sanctuary

This resurgence is located 500m upstream from Tham Put Son.
The river resurges from between boulders, but penetrable passage could not be found.
Checkley et al. (1989); Deharveng et al. (1988); Dunkley (1995)

Lam Chi Resurgence CH0040
47Q 768218 1809259 Alt.: 550m
Phu Khieo Wildlife Sanctuary

This is the main resurgence for the Lam Chi River and is thought to be the main regional resurgence. It is located about 300m south of Tham Put Son.
A brief investigation by the 1989 British expedition did not locate any cave, but a more thorough exploration is warranted.
Checkley et al. (1989); Deharveng et al. (1988); Dunkley (1995)

Lam Chi Yai Sink CH0032
47Q 766229 1812367 Alt.: 600m
Lam Chi, Phu Khieo Wildlife Sanctuary

From the Lam Chi camp used by the 1989 expedition follow the river downstream. In the dry season the river sinks at the base of a 30m high cliff in several impassably low entrances.
The sink was recorded by the British expedition in 1989.
Checkley et al. (1989); Deharveng et al. (1988); Dunkley (1995)

Put Son Sink CH0095
47Q 768236 1809416 Alt.: 550m

Lam Chi, Phu Khieo Wildlife Sanctuary

This is the sink for the Chi Dan river. It is about 500m downstream from the Chi Dan Resurgence.

No cave was found when the sink was visited by the APS in 1987.
Deharveng et al. (1988)

Tham Kon Dtai CH0020
ถ้ำคนตาย
47Q 770405 1813482 Alt.: 800m
Pha Thewada, Phu Khieo Wildlife Sanctuary
Length: 60m VR: 15m
Other name: Dead Man Cave

Tham Kon Dtai is above and slightly north of Tham Phu Khieo.
The 10m wide rift entrance descends for 15m down a steep slope to a choked rift. Human bones were found on the entrance slope.
The cave was visited by the 1989 British expedition.
Checkley et al. (1989); Dunkley (1995)

Tham Lam Chi CH0033
ถ้ำลำชี
47Q 766570 1812287 Alt.: 600m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 300m VR: 10m

From the Lam Chi camp used by the 1989 British expedition follow the river downstream. In the dry season the river sinks at the base of a 30m high cliff in several impassably low entrances (Lam Chi Yai Sink). From the sink continue along the river bed for several hundred metres, climbing over large bamboo log jams or taking detours on the banks, until the river bed disappears at the bottom of a high cliff.

The river bed ends in three entrances behind a pile of house-sized boulders and tree trunk blockages. These three entrances lead into passages that quickly join up. Climbing down through the boulders leads into a canyon with unusual black limestone walls speckled with white calcite. The canyon breaks down into a network of low crawls, apparently in a massive boulder choke. No major way on was found by the British in 1989, although

many low crawls were followed for some distance.

Tham Lam Chi is the type, and only known, locality for the beetle *Trechiamiotos siamensis* (Deuve, 1988).

The cave was explored and surveyed in 1987 by the French who were halted by high water levels. The cave was extended by about 50m by the British in 1989.

Checkley et al. (1989); Deharveng et al. (1988); Deuve (1988a),(1988b); Dunkley (1995)

Tham Men CH0035

ถ้ำเม่น

47Q 766057 1811811 Alt.: 750m

Lam Chi, Phu Khieo Wildlife Sanctuary

Length: 150m VR: 40m

Other name: Porcupine Cave

From the Lam Chi Yai Sink follow the cliff line up behind the massive block in which the Tham Lam Chi entrance lies. In the main cliff behind, there is a small hole very close to the top of the slope.

Set at the back of an alcove is the small entrance which is 1m wide by 1m high. From the entrance the passage is highly polished and descends steeply, leading to the top of a big chamber. The cave is inhabited by porcupines, which accounted for the polished rock and the intimidating 'mooing' noise that echoed round the chamber. A scramble down the loose-earth slope and a rope climb down leads to the floor of the chamber. The chamber has 50m high 'organ pipe' stal on one side from which a big lump of stal has dropped on to the floor. Several side passages quickly became impassably low and no obvious way on was found.

Tham Men was explored by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Nok Nang An CH0019

ถ้ำนกนางแอ่น

47Q 770358 1814811 Alt.: 770m

Pha Thewada, Phu Khieo Wildlife Sanctuary

Length: 907m VR: 71m

Other name: Swallow Cave

Downstream from the Tham Nok Nang An camp used by the 1989 British

expedition the shale gives way to limestone and the stream sinks into the lower entrance of Tham Nok Nang An. Above it, in the cliff face, a terrace at the upper entrance has the remains of an old gun placement.

The lower entrance is behind a large rock where the stream sinks and it opens out immediately into a roomy chamber. The upper entrance is 30m high and 25m wide, but closes down to a passage within 40m. From the upper entrance the passage leads into the hill, but rapidly chokes. This can be bypassed into a continuation of the main passage in which a large roost of bats has provided a layer of guano which is crossed to gain the rear entrance of the cave. An awkward climb down overhanging boulders at the rear entrance gives access to the roomy passages of the lower series, which can be followed back upstream to the main sink entrance. The passage downstream from the sink grows smaller in size and eventually sumps after two short climbs. Several small side passages lead off, one ending in a choke, but there appears to be little possibility of any extension to the surveyed length of 907m. It seems likely that the water sinking in Tham Nok Nang An may flow south-westerly to join the main drain in Tham Phu Khieo.

Tham Nok Nang An was explored and surveyed by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Pha Daeng CH0034

ถ้ำผาแดง

47Q 765957 1812111 Alt.: 700m

Lam Chi, Phu Khieo Wildlife Sanctuary

Length: 80m VR: 40m

mes: Red Rock Cave

This cave lies just beyond Tham Lam Chi, amongst the large boulders at the base of the cliff.

Tham Pha Daeng is a large fossil passage which starts with a 10m pitch, but ends after 80m.

The cave was explored by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Pha Khao CH0036

ถ้ำผาขาว

47Q 767551 1811009 Alt.: 620m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 444m VR: 50m
Other name: Cave of the White Mountain

Travelling south-east from the Lam Chi Yai Sink a wide valley is entered. The trail at the start winds all over the place, but once in the valley it gets better. A kilometre further, on the right hand side, there is a narrow section with a climb up over limestone boulders and down the other side. A spire of rock is soon passed on the right hand side, then a huge white cliff. The cave is 200m past the cliff.

The spectacular entrance, at the foot of a huge cliff, is 75m wide and 10m high. The entrance leads into a 40m wide mud floored passage that splits in two after 70m, to either side of a large boulder pile. The right hand passage, still about 45m wide, narrows behind large stalactites and ends in a chamber. The left hand passage slopes down to an 8m climb and two 15m pitches before becoming impassably low.

The cave has been used by monks on pilgrimage for meditation.

The first visit by speleologists was the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Pha Sod CH0037
47Q 767875 1810328 Alt.: 600m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 115m VR: 35m
Other name: Broken Rock Cave

From the Lam Chi camp used by the 1989 expedition follow the valley south. Go through the narrow part of the valley, up and over the limestone and down into the closed depression. Walk south past the spectacular cliffs on the right hand side.

The low wide entrance is beneath a cliff and is 20m wide and 2m high. The entrance leads to a steeply descending boulder slope that narrows after 50m to a passage with large formations, curtains and dry gour pools. On the right there is a 4m pitch descent which can be avoided by a climb down through stal on the left. A wide passage with a flat dry mud floor ends in a large boulder pile where no way on was found.

This cave was explored by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995)

Tham Pha Thewada CH0022
ถ้ำผาทเวดดา

47Q 771557 1808211 Alt.: 683m
Khao Thewada, Phu Khieo Wildlife Sanctuary
Length: 800m
Other name: White Fish Cave

The cave is well known and best reached directly from the Wildlife Sanctuary headquarters at Tung Kamang via an established waymarked trail. Just around the corner of Khao Thewada, where the main valley begins to head west-south-west, a small permanently flowing stream drops into a huge doline and enters Tham Pha Thewada.

The stream sinks at the base of the cliff into the 30m wide entrance which descends steeply over rubble. A wide, generally low, passage meanders south-west then south to a constriction where the stream enters a low draughting duck inhabited by the blind cave fish *Poropuntius speleops* (Tyson, 1991). The only other known locality for this fish is in Tham Phu Khieo. The duck can be avoided by a climb up and crawl over the top of the canal section to reach the lip of a 4m deep vadose canyon. This can be followed along a series of twists and turns for about 350m towards the south-west. The draught comes from a roof tube which has not been explored.

The cave was explored and surveyed by the British expedition in 1989. In 1999 live specimens of *Poropuntius speleops*, collected by Borowsky and Vidthayanon, survived to make their way to a laboratory to be studied.

Baechler (2000); Checkley et al. (1989); Dunkley (1995); Trajano & Borowsky (2003); Roberts (1991)

Tham Pha Tip CH0100
Tham Wua Daeng

The cave is in a small conservation area. Note: tambon Tham Wua Daeng is about 10km north of Wat Tham Wua Daeng which is in amphoe Phakdi Chumphon. This well decorated cave has an attractive steep rock at the entrance.

Tham Phu Khieo CH0021

ถ้ำภูเขี้ยว

47Q 770457 1813411 Alt.: 800m
Pha Thewada, Phu Khieo Wildlife
Sanctuary
Length: 2,866m VR: 130m

This cave is in the depths of the Phu Khieo Wildlife Sanctuary and, as with all the caves in the sanctuary, permission needs to be obtained from the Royal Forest Department in Bangkok. This is unlikely to be granted for a purely sporting trip. From Tham Nok Nang An follow the track back towards the Tung Kamang sanctuary headquarters to an obvious junction branching off on the left hand side. Follow this track south-south-west through secondary forest to the foot of a col at the second break in the cliff line. An obvious stream (or dry stream bed) leads to the entrance at the base of the cliff.

The entrance is a wide, steamy, draughting hole with a steeply descending pile of greasy boulders leading down into the cave. This entrance passage is clean washed, suggesting that the cave functions as a major flood-sink during the wet season. The obvious route steepens to the head of a 38m pitch. A short scramble below the foot of the pitch leads down into the main river passage.

Half way between the entrance and the pitch an obvious passage to the west leads via a couple of awkward and greasy climbs (handline helpful) to a large chamber with a long echo and an 80m overhanging cliff down to the river passage below. The cliff can be avoided by climbing around and down a boulder slope at its southern end, to reach an unavoidable free-hanging 15m pitch into a wide, muddy chamber. From here the cave river is best reached by following the southern wall in a south-easterly direction. Back at the start of the 'long echo' an intricate upward route over and between boulders along the southern wall leads into a very big chamber with an 'endless' echo and a lot of boulders. The ceiling of this chamber is very high.

The river passage, at the bottom of the 38m pitch, begins impressively, 30m wide and 20m high, but narrows after about 150m and swings eastwards for a further 150m, before shooting off south into a

miserable sump. The obvious eastwards 'overflow' passage (the original course of the river) ends at an outward draughting, boulder choked rift beneath a large aven filled with many noisy bats. These must use a nearby (presently unknown) entrance, which may lie in the hillside just 500m south-south-west of the Tham Phu Khieo sink entrance. A small outward draughting passage loops round to the north of the 'bat aven' and ends in a similar (possibly the same) outwards draughting choke, about 70 m past the 'bat aven'.

Tham Phu Khieo is the type locality for the blind cave fish *Poropuntius speleops* (Roberts, 1991).

The cave was explored and surveyed by the 1989 British expedition.

Checkley et al. (1989); Dunkley (1995); Ellis (2009); Kottelat & Brehier (1999); Roberts (1991)

Tham Put Son CH0039

47Q 768157 1809511 Alt.: 575m
Lam Chi, Phu Khieo Wildlife Sanctuary
Length: 10m VR: 5m

Tham Put Son is about 500m downstream from the Chi Dan Resurgence.

The cave consists of a short descending passage above the sink, but was not thoroughly looked at by the original explorers due to a lack of time.

The cave was visited in 1987 by the APS expedition.

Checkley et al. (1989); Deharveng et al. (1988); Dunkley (1995)

Nong Bua Rawe**Tham Din Phiang** CH0049

Sai Thong National Park

The only reference to this cave is in Dunkley (1997) who states that there is no further information on this cave! Tham Din Phiang is not mentioned in the tourist literature for the national park.

Dunkley (1997)

†**Tham Wang Thong Khunaram** CH0083

ถ้ำวังทองคุณาราม

47P 790473 1736699 Alt.: 240m

Wat Tham Wang Thong Khunaram, Ban Tha Chang

The wat is just north of the H2354, around 1km to the west of the Ban Tha Chang reservoir.

Phakdi Chumphon

Cave CH0078 CH0078
47Q 759628 1778861 Alt.: 600m
Wat Thep Prathan Phon, Khao Khi Thao,
Tapo-Huai Yai Wildlife Sanctuary
Length: 75m VR: 10m

A good surfaced road leads to Wat Thep Prathan Phon and the start of the 1,100 steps up to Tham Wua Daeng.

Around the corner from Tham Wua Daeng a small entrance leads to some concrete steps which descend for about 20m to a chamber with a couple of shrines. The concrete ends at a lake which was said to be over 3m deep. This lake passage could continue. The cave is of interest as it is an active cave at the top of a 200m high limestone gorge.

The first known visit by a caver was in 1993 by Dean Smart.

Cave CH0110 CH0110
Ban Chiang
47Q 762100 1777860

The co-ordinates place the cave 1.5km south-east of Wat Tham Wua Daeng and 1.2km from the base of the limestone hills. The rat *Rattus tanezumi* Temminck, 1844 has been recorded from the cave. Latinne et al. (2013)

Tham Chan Daeng CH0101
Ban Sap Prasit, Chao Thong

The cave is in moo 7 Ban Sap Prasit. The cave is decorated and covers an area of around 800 sq m.

Tham Chi Yai CH0072
ถ้ำชีใหญ่

Some tourist maps show a Tham Chi Yai to be a few kilometres to the north of Tham Prathun. This cave is possibly near to the Lam Chi Resurgence.

Dunkley (1995)

Tham Keao CH0012
ถ้ำแก้ว
47P 757970 1767571 Alt.: 355m
Wat Tham Keao, Khao Khi Thao, Ban Tham Keao
Length: 405m VR: 23m
Other name: Tham Keaw

Tham Keao is signposted with small blue signs off the H225 on to the H2559. The turning to the west in Ban Tham Keao (Ban Nong Yai) is also signposted and there is a good surfaced road to the wat which is at the foot of the mountains.

The large entrance opens into a descending chamber with a large calcite boss which has a Buddha in front of it. Around the back of the boss is a small chamber with a tiled floor and another shrine. From here a side passage leads to a seasonal waterfall and some calcite crystals. Back in the calcite boss chamber a passage to the left leads to a chamber with about 5,000 bats, while another passage to the right goes to a lake and a stream passage. The stream is used as a water supply.

The following fauna has been recorded in the cave:

Annelida:

Haplotaxis glandularis (Yamaguchi, 1953)

Amphipoda:

Aequigidiella aquilifera Botosaneanu & Stock, 1989

Isopoda:

This is the type locality for *Stenasellus rigali* Magniez, 1991

Millipedes:

This is the type and only known locality for *Plusioglyphiulus tham* Golovatch, Geoffroy, Mauries & van den Spiegel, 2011. The cave was explored and surveyed by the APS in 1987.

Botosaneanu & Stock (1989); Deharveng & Leclerc (1989); Deharveng et al. (1988); Dunkley (1995); Golovatch et al. (2011); Magniez (2003); Vogt (2013)

Tham Phra CH0011
ถ้ำพระ

47P 758455 1768044 Alt.: 341m
Wat Tham Phra, Laem Thong, Ban Tham Keao

Length: 450m

VR: 21m

Tham Phra is 5km west of the H2359 from Ban Tham Kaeo (Ban Nong Yai). It is signed north along a track from the road, just before Wat Tham Kaeo. Walk past the sala and follow the path to the right around the hill and ascend a few metres to the upper cave. The lower cave is reached by following the rocky path down from the upper cave for about 50m.

From the upper cave main entrance there is a medium size passage that loops around to a second entrance that has Buddhas and an elevated board floor. Just inside the main entrance the link to the lower cave is on the left, through the low bedding plane and down a pitch of about 5m. The upper cave ends at a crawl that was not explored and there are a couple of narrow, twisting oxbow passages that add to the cave length. The lower cave consists of a single, medium sized passage that ends after 150m. Back near the entrance a passage to the east leads to a small, vertical entrance.

Internet references report that this is an archaeological site and on the cave ceiling just inside the entrance of the lower cave there are still the remains of marks that need to be studied (these were pointed out by the guide). There are reports of another eight caves in the area, but they are not popular caves. People still believe that the area has a vein of gold.

The cave was explored and surveyed by the SMCC in February 2014.

Deharveng et al. (1988); Dunkley (1995); Vogt (2013)

Tham Prathun

CH0045

Khao Khi Thao

Some tourist maps show Tham Prathun to be a few kilometres to the north of Tham Wua Daeng.

It is a medium sized cave on top of a range of hills. Historically the cave is said to have been a resting place for army generals hundreds of years ago and the cave is reputed to have had some gold, evidence of which are the sifting pools in front of the cave.

Dunkley (1995)

Tham Saeng Tien

CH0079

ถ้ำแสงเทียน

47Q 760058 1776611 Alt.: 400m

Wat Tham Saeng Tien, Khao Phraya Fo

This cave is signposted in Thai to the west of the H2559, both along a dirt track across the fields and from in the nearby village. The track leads to the foot of a valley coming out of the mountains and what appears to be a farming community and wat. The cave has not been visited.

Tham Wua Daeng

CH0013

ถ้ำวัวแดง

47Q 760385 1779095 Alt.: 565m

Wat Thep Prathan Phon, Khao Khi Thao, Tapo-Huai Yai Wildlife Sanctuary

Length: 50m

Other name: Bantang Cave; Wua Dang Cave

The cave is signposted, in Thai, to the west of the H2559. A good surfaced road leads to Wat Thep Prathan Phon and the start of the 1,100 steps up to the cave. Several cave entrances in the cliffs and gorge are passed on the ascent. At the top of the gorge the path levels off and ends at another wat.

Tham Wua Daeng is a small shrine cave, with a lot of statues.

The first known visit by a caver was in 1993 by Dean Smart.

Dunkley (1995); Fontaine et al. (2003); Vogt (2013)

Thep Sathit

†Tham Chai Mongkhon

CH0074

ถ้ำชัยมงคล

47P 775096 1732038 Alt.: 290m

Tham Chai Mongkhon Monk's Camp Site, Ban Wang Ta Thao

The campsite is 500m south of the H2354 near Ban Wang Ta Thao.

†Tham Khao Chom

CH0104

47P 769200 1715000 Alt.: 280m

Wat Tham Khao Chom, Huai Yai Chio

The wat is on top of a low hill, 700m east of the road. There is a small signpost at the turning at 47P 768525 1714630.

CHAIYAPHUM

<p>†Tham Mo CH0105 47P 771850 1736510 Alt.: 360m Wat Pha Khao Tham Mo, Na Yang Klak</p> <p>The temple is located on top of a hill. The turning to the temple is 4.5km north-east of the H2354 in Ban Yang Klak.</p>	<p>Tham Kluea CH0092 ถ้ำเกลือ Phu Laen Kha National Park</p> <p>Tham Kluea is formed in white sandstone. It has been created by water erosion forming large holes which can be walked into.</p>
<p>†Tham Thamma Nimit CH0082 ถ้ำธรรมมานิมิต 47P 774132 1730535 Alt.: 315m Tham Thamma Nimit Monk's Camp Site, Ban Wang Ta Thao</p> <p>This temple is located 2km south of the H2354, to the west of Ban Wang Ta Thao.</p>	<p>Tham Phra CH0093 ถ้ำพระ Phu Laen Kha National Park</p> <p>The cave is similar to Tham Kluea, being formed in white sandstone, and is large enough to walk into. Inside the cave antique Buddha images and valuables were found. There is also an extensive fauna.</p>

Unknown Amphoe

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Cave Data (Listed by code number)

July 2016 WGS84

Number	Name	Co-ordinates	Altitude	Length	VR
CH0001	Tham Ngoen 1	47Q 801907 1836711	400	281	20
CH0002	Tham Ngoen 2	47Q 801857 1836686	400	100	15
CH0003	Tham Ngoen 3	47Q 801857 1836911			
CH0004	Tham Ngoen 4	47Q 801858 1837011			
CH0005	Cave CH0005	47Q 802044 1835884		5	
CH0006	Cave CH0006	47Q 801968 1835761		30	
CH0007	Tham Huang Po	47Q 802038 1835663	289	250	5
CH0008	Cave CH0008	47Q 802137 1835544	361	5	
CH0009	Nam Phut Na Wong Duan	47Q 809476 1834687	268		
CH0010	Tham Pha Ya Chang Peuk	47Q 805292 1833311	340	50	
CH0011	Tham Phra	47P 758455 1768044	341	450	21
CH0012	Tham Keao	47P 757970 1767571	355	405	23
CH0013	Tham Wua Daeng	47Q 760385 1779095	565	50	
CH0014	Tham Huai Khwai	47Q 768006 1818006	800	400	
CH0015	<i>Duplication of CH0014</i>				
CH0016	Tham Huai	47Q 768090 1817884	840	60	36
CH0017	Tham Kram Chang	47Q 769985 1816480	770	468	10
CH0018	Fossil Sink Cave	47Q 769958 1816511	780	180	30
CH0019	Tham Nok Nang An	47Q 770358 1814811	770	907	71
CH0020	Tham Kon Dtai	47Q 770405 1813482	800	60	15
CH0021	Tham Phu Khieo	47Q 770457 1813411	800	2,866	130
CH0022	Tham Pha Thewada	47Q 771557 1808211	683	800	
CH0023	Tham Huai Nam Lad	47Q 765757 1813611	750	674	125
CH0024	Tham Huai Khao	47Q 765657 1813586	795	581	20
CH0025	<i>Part of CH0023</i>				
CH0026	Tham Pha Khrop	47Q 765857 1812611	700	97	35
CH0027	Tham Khrop	47Q 765557 1813011	1,000	954	76
CH0029	Tham Nu	47Q 766136 1812873	750	52	32
CH0030	Tham Huai Chi Laeng	47Q 766200 1812832	700	1,602	60
CH0031	Cave CH0031	47Q 766058 1812611	700	50	20
CH0032	Lam Chi Yai Sink	47Q 766229 1812367	600		
CH0033	Tham Lam Chi	47Q 766570 1812287	600	300	10

CHAIYAPHUM

Number	Name	Co-ordinates	Altitude	Length	VR
CH0034	Tham Pha Daeng	47Q 765957 1812111	700	80	40
CH0035	Tham Men	47Q 766057 1811811	750	150	40
CH0036	Tham Pha Khao	47Q 767551 1811009	620	444	50
CH0037	Tham Pha Sod	47Q 767875 1810328	600	115	35
CH0038	Chi Dan Resurgence	47Q 768152 1809679	590		
CH0039	Tham Put Son	47Q 768157 1809511	575	10	5
CH0040	Lam Chi Resurgence	47Q 768218 1809259	550		
CH0041	Cave CH0041				
CH0042	<i>Not a cave</i>				
CH0043	Caves CH0043				
CH0044	Nam Phut Thap Lao	47Q 804406 1831256	359	18	18
CH0045	Tham Prathun				
CH0046	Cave CH0046	47Q 767807 1811387	650	50	20
CH0047	Cave CH0047				
CH0048	Tham Wat Sila At	48P 185266 1761859	230	90	5
CH0049	Tham Din Phiang				
CH0050	Tham Ngoen 5	47Q 801457 1836411	400	40	10
CH0051	Rock Shelter CH0051	47Q 801618 1835401	340	20	
CH0052	Tham Tec	47Q 801773 1834196	330	185	17
CH0053	Cave CH0053	47Q 801407 1834511	370		
CH0054	Monk Big Chamber Cave	47Q 801366 1834344	337	238	16
CH0055	Tham Nam Lai	47Q 801068 1834509	314	230	9
CH0056	Tham Kham	47Q 804054 1836761	422	212	12
CH0057	Tham Nimit	47Q 803877 1836811	470	79	16
CH0058	Tham Nam	47Q 803658 1837156	440	15	
CH0059	Tham Phra Than Dawan	47Q 806930 1834504	280	20	
CH0060	Cave CH0060	47Q 806901 1834633	280	15	
CH0061	Cave CH0061	47Q 807039 1834604	280		
CH0062	Rock Shelter CH0062	47Q 802785 1839723	310		
CH0063	Spring CH0063	47Q 802490 1839820	300		
CH0064	Tham Glip	47Q 803771 1839044	520	50	20
CH0065	Resurgence CH0065	47Q 801739 1839532	305		
CH0066	Nam Phut Na Lao	47Q 809153 1836677	266		
CH0067	Tham Sihanat Decha	47Q 804196 1831917	380	10	
CH0068	Cave CH0068	47Q 799371 1826009	520	20	
CH0069	Tham Sai Chai Patgui Tip 1	47Q 794337 1829482	610	70	
CH0070	Tham Sai Chai Patgui Tip 2	47Q 794458 1829111	660	168	20
CH0071	Tham Phra Phu Kratae	47Q 811335 1791430	320		
CH0072	Tham Chi Yai				
CH0073	Huai Pong Tham	47Q 771658 1845311	840		
CH0074	Tham Chai Mongkhon	47P 775096 1732038	290		
CH0075	Tham Bpra Gaai Phet	47Q 797317 1824558	570	512	30
CH0076	Tham Phrom Nimit	47Q 792495 1827455	585	20	
CH0077	Tham Sing Toh	47Q 803211 1831624	565	651	64
CH0078	Cave CH0078	47Q 760300 1779125	565	75	
CH0079	Tham Saeng Tien	47Q 760058 1776611	400		
CH0080	Tham Phua	47Q 805935 1833800			
CH0081	Tham Sing	48P 180448 1763727	210		
CH0082	Tham Thamma Nimit	47P 774132 1730535	315		
CH0083	Tham Wang Thong Khunaram	47P 790473 1736699	240		
CH0084	Tham Wiman Na Din	47Q 799099 1824996	510	75	10
CH0085	Tham Yai Ban Yen	47Q 784368 1820751	640		
CH0086	Tham Song Khaen	47P 795956 1753326	235		

Number	Name	Co-ordinates	Altitude	Length	VR
CH0087	Pha Sam Tham	47Q 803900 1826865	345		
CH0088	Nam Phut Hin Lat	47Q 808848 1839277	235		
CH0089	Nam Phut Sai	47Q 809704 1833750	272		
CH0090	Nam Phut Nam Un	47Q 805975 1835442	275		
CH0091	Hot Spring CH0091	47Q 793415 1843505	270		
CH0092	Tham Kluea				
CH0093	Tham Phra				
CH0094	Tham Hia	48P 189481 1764858			
CH0095	Put Son Sink	47Q 768236 1809416	550		
CH0096	Tham Pha Ngep 1	47Q 802358 1836011			
CH0097	Tham Pha Ngep 2	47Q 802308 1836011			
CH0098	Tham Chedi Boraphot 1	47Q 800131 1828354	512	5	
CH0099	Tham Chedi Boraphot 2	47Q 800148 1828341	517	10	
CH0100	Tham Pha Tip				
CH0101	Tham Chan Daeng				
CH0102	Cave CH0102	47Q 802075 1835620	308	40	
CH0103	Tham Din Pak Chong				
CH0104	Tham Khao Chom	47P 769200 1715000	280		
CH0105	Tham Mo	47P 771850 1736510	360		
CH0106	Tham Pan Ta	47P 796439 1758501	260		
CH0107	Cave CH0107	47P 800706 1835023	501	20	
CH0108	Cave CH0108	47P 804100 1836775	425	3	
CH0109	Tham Song Chin	47Q 804303 1833359	445	100	20
CH0110	Cave CH0110	47Q 762100 177860			

Surveys