

Shepton Mallet Caving Club

Ban Mani Phruk Expedition

2014

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Introduction

In March 2013 a small group of four cavers spent three days in Ban Mani Phruk. They discovered and surveyed 500m of passage in the Entrance Series of Tham Pha Phueng, began the exploration of Cave NA0122 and were shown Tham Bpaet Sip.

After a break of two years the Shepton Mallet Caving Club returned to the mountains of northern Nan province in February 2014 for their fourth expedition to the caves around Ban Mani Phruk.

There were sixteen cavers on the expedition with eleven members from the Shepton Mallet Caving Club, two members from the Bristol Exploration Club, one member from the Wessex Cave Club, one member from the Craven Pothole Club and an American based in the Lao PDR. As on the previous expeditions we were assisted by a five person Thai 'camp staff'.

During the nine days spent in the field 4.6km was surveyed in 10 caves and 15 other sites were briefly investigated and recorded. In Tham Pha Phueng the lower stream passage was explored from the pitch reached in 2012 to a terminal sump. Further extensions were surveyed in the Waterfall Inlet Series and Entrance Series. This took the length of Tham Pha Phueng to 4,750m and the vertical range to 476m. The two major new finds were Tham Rai Phin (explored to a depth of 164m) and the nearby Tham Pha Thong (explored to a depth 64m), both of which were left with ongoing, large passage. The other main caves explored were Cave NA0122/NA0135 (1.9km long and 100m deep), Cave NA0121 (672m long and 101m deep), Tham Bpaet Sip (explored to a length of 493m and depth of 95m) and Cave NA0134 (290m long and 87m deep).

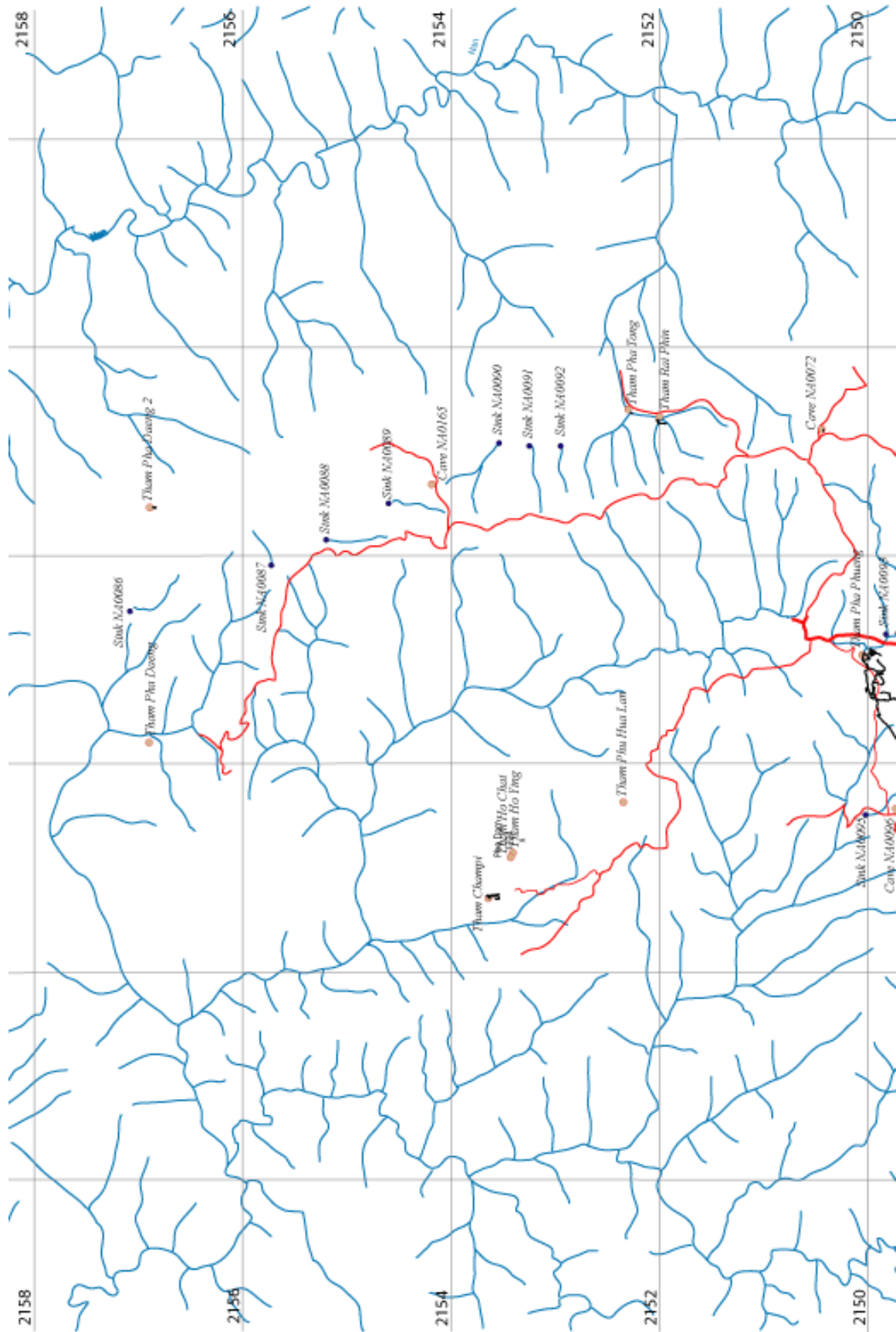
With such promising leads waiting to be explored planning has already begun for the next SMCC expedition in 2016.

Location

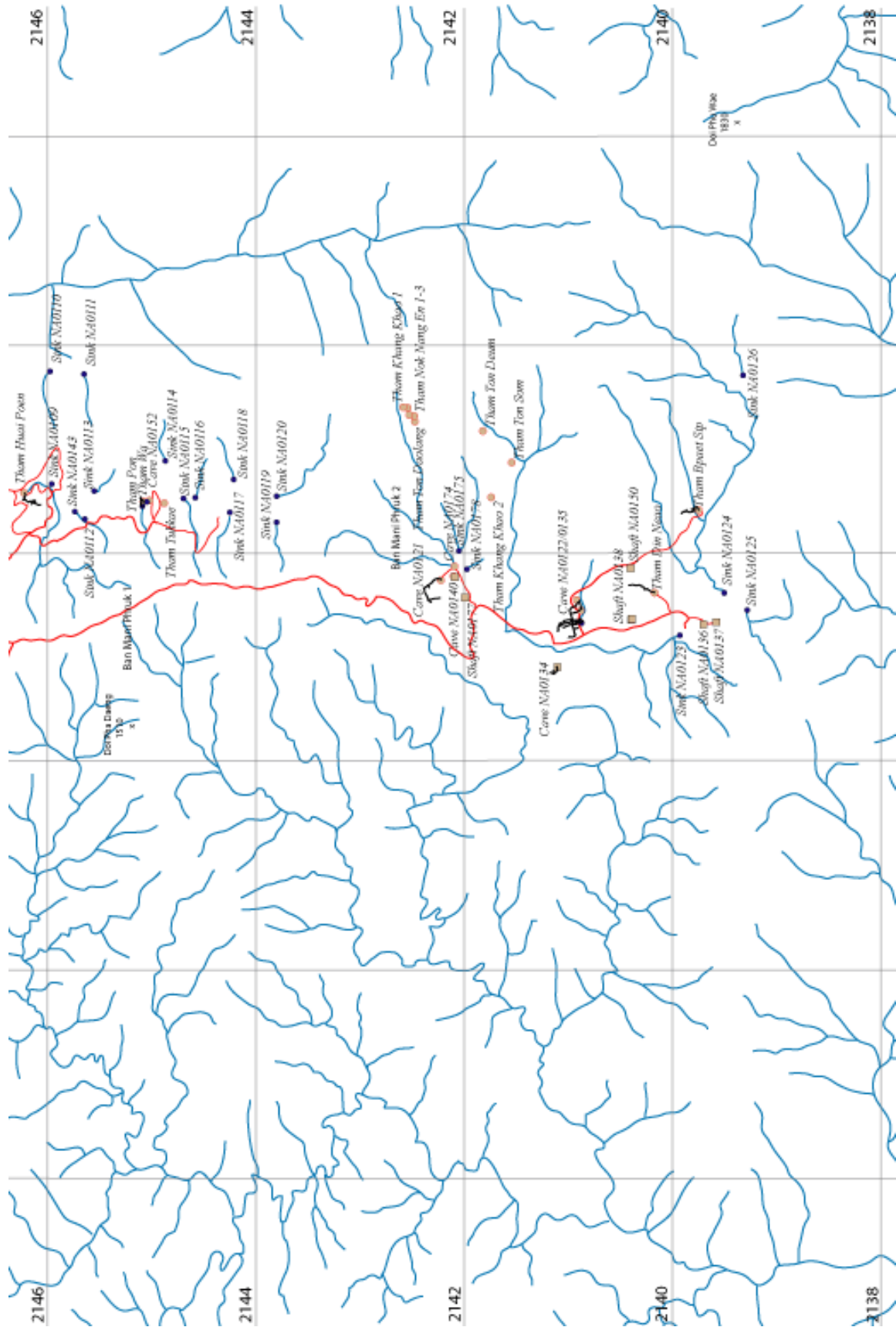
The expedition was based in the village of Ban Mani Phruk 1 (19° 26'N, 101° 04'E) at an altitude of 1,400 m in the north part of Nan province. Ban Mani Phruk 1 is a Hmong village while the nearby village of Ban Mani Phruk 2 is a Lua village. These villages are in amphoe Thung Chang and are easily accessed by the H1291 road. This 40km long sealed road turns off the H1080 at Chiang Klang. The highest point in the area is the 1,657m Phu Pha Phueng. The expedition area is at the northern end of the mountain range that is protected by the Doi Phuka National Park, though the villages and surrounding cultivated areas are excluded from the park. The plateau which is being explored covers around 100 square kilometres.

Accommodation for all the expeditions has been kindly provided by the Ban Mani Phruk Security Development Project.

The original forest cover has been cleared from most of the hillsides around the village and is now used for the cultivation of crops, such as ginger, maize and cabbage. The bottom of the many large dolines is particularly prized for agricultural use due to better soil, water



Map 1: Expedition area - north



Map 3: Expedition area - south

supply and flatter ground. Due to this there are 4WD dirt tracks and paths leading into nearly all the dolines investigated.

Up until the early 1980s there was a very active Communist insurgency in the area with the Thai state only being in control of the roads and Ban Mani Phruk.

NB: There are still minefields on Phu Hua Lan – stick to the paths and take a local guide.

Previous Exploration

Although caves had been reported in the tourist literature the first known visit by cavers to Ban Mani Phruk was in April 2005. A four man team of Canberra Speleological Society and Shepton Mallet Caving Club members explored Tham Pha Phueng to the head of Fitch Pitch over two days. In February 2009 the first SMCC expedition to Ban Mani Phruk, with a team of eight cavers, continued the exploration of Tham Pha Phueng including the descent of the 127m deep Fitch Pitch. This established Tham Pha Phueng as the deepest known cave in Thailand at -306m. Other work included the location of two promising leads: Tham Huai Poen and Tham Nam Tok Nam Poen. The following year the SMCC returned in February 2010 with a larger team of 10 cavers. In Tham Pha Phueng the passages below Fitch Pitch were explored. The shaft at the end of the Fossil Series sumped at -367m while the active stream passage was left ongoing at -344m. Elsewhere in the cave a traverse at the head of Fitch Pitch lead into the fine Gour Passage. The two caves found in 2009, Tham Huai Poen and Tham Nam Tok Nam Poen, were explored to sumps at depths of -175m and -138m respectively. In the far south of the expedition area Tham Din Neao was surveyed to a length of over 300m. Surface prospecting located Tham Champi, Tham Ho Chai, Tham Ho Ying and Tham Pha Daeng to the north of Ban Mani Phruk while Tham Pon and Tham Wa were found to the south of the village.

The third SMCC expedition was in February 2012 with an even larger team of 12 cavers. During seven days spent in the field work in Tham Pha Phueng was concentrated on continuing the exploration and survey of passages found in 2010 with the active stream passage being explored to the top of a pitch estimated to be 20m deep. This took the length of Tham Pha Phueng to 3,596m and the depth to 388m. Towards the end of the expedition a Lua guide was introduced to the team who over the course of a couple of days showed us the entrances to Tham Men, Shaft NA0133, Cave NA0141 and Cave NA0100. On a drive to the far south of the expedition area the guide pointed out the location of over 20 other caves and shafts.



Photograph 1: The walk to Cave NA0096 (Sean Howe)

Cave Descriptions

Only caves, sites and passages found, explored and surveyed in March 2013 and February 2014 are listed. For the caves found on previous expeditions see the reports of the 2009/2010 Expeditions and 2012 Expedition.

- All co-ordinates are UTM on the WGS 1984 datum.
- The anchors that have been installed are 8 mm 'Spit', 8mm Hilti stainless steel bolts, 8mm through bolts or 10 mm through bolts.
- Tham Pha Phueng, Tham Huai Poen, Tham Nam Tok Nam Poen, Tham Rai Phin and Tham Pha Thong are active stream caves. Judging from the size of the tree trunks that have been washed in these caves flood violently during the wet season.
- There have been no reports of high carbon dioxide in the caves of the Ban Mani Phruk.

North West Area

Tham Champi

ถ้ำจัมปี

47Q 714695 2153651 Altitude: 943m
Length: 393m Vertical range: 32m

From Ban Mani Phruk take the track that heads towards the north-east. This goes around the south of Phu Hua Lan and then along the limestone boundary on the western side of the hill before following a sandstone ridge. This track has good views of the limestone ridge with Tham Champi, Tham Ho Chai and Tham Ho Ying. At 47Q 714668 2152747 a path leads off the track down to a shack and from here a path leads downhill to a field where the path ends. By crossing the fields one reaches the dry stream bed, but there is no sign of a path on the other side of the water course. Tham Champi is approximately 500m to the north and is recommended that guides be hired as the cave is hard to find and a path will need to be cut.

In 2014 a team visited and surveyed the cave, but no extensions were found.

North East Area

Cave NA0165

47Q 718713 2154185 Altitude: 1,427m

From the main north track from Ban Mani Phruk 1 turn right approximately 4km from the junction with the track to Ban Mani Phruk 2. The shaft entrance is beside the track, approximately 500m from the junction.

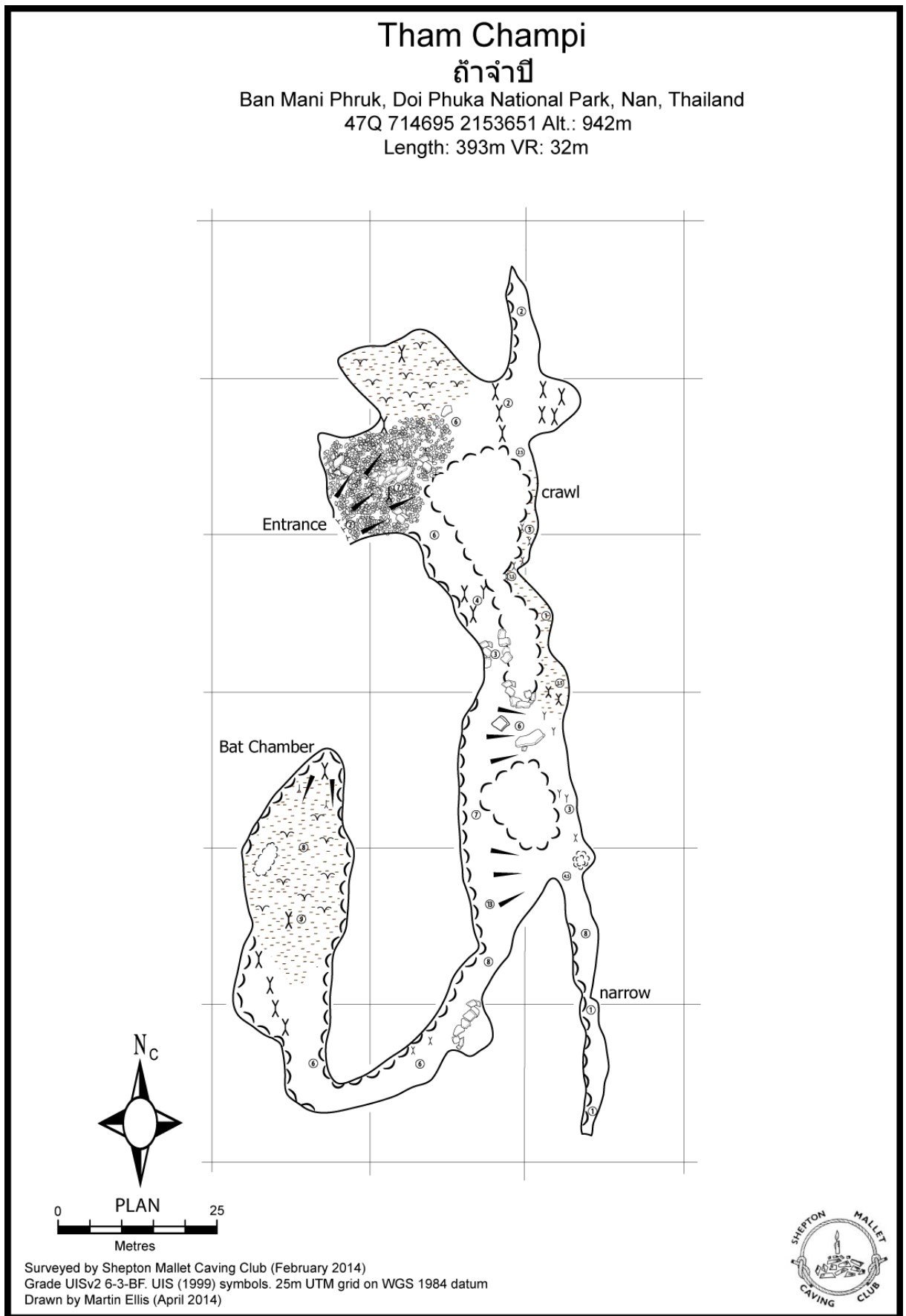
The entrance shaft was free climbed by the guide, using a root. The shaft leads to a 1m x 1m crawling passage that has not been explored.



Photograph 2: James Begley in Tham Champi (Estelle Sandford)



Photograph 3: Sarah Payne & James Begley in the Bat Chamber, Tham Champi (Estelle Sandford)



Survey 1: Tham Champi

Sink NA0090

47Q 719074 2153600 Altitude: 1,382m

Although the sink is marked on the 1:50,000 topographic map a local guide informed us that it is choked with soil and impenetrable.

Sink NA0091

47Q 719050 2153250 Altitude: 1,396m

Although the sink is marked on the 1:50,000 topographic map a local guide informed us that it is choked with soil and impenetrable.

Sink NA0092

47Q 719049 2152950 Altitude: 1,409m

Although the sink is marked on the 1:50,000 topographic map a local guide informed us that it is choked with soil and impenetrable.

Tham Pha Thong

ถ้ำผาทอง

47Q 719366 2152294 Altitude: 1,363m

Length: 76+m Vertical range: 64+m

From the main track north of Ban Mani Phruk 1 turn right approximately 1.5km north of the junction with the track to Ban Mani Phruk 2. Follow this track for approximately 1km, past Tham Rai Phin to a small plantation on the left where the track trends round to the right. Park in the plantation and walk a few metres north to the stream which can be followed to the cave entrance.

The 3m entrance drop is easily rigged with a ladder. After a few metres there is a 3m climb and then the first pitch is soon reached. This 11m pitch has been descended to a ledge above another, undescended, pitch estimated to be 30m deep. No bolts have been installed in the cave.

Tham Rai Phin

ถ้ำไร่พิน

47Q 719298 2152044 Altitude: 1,392m

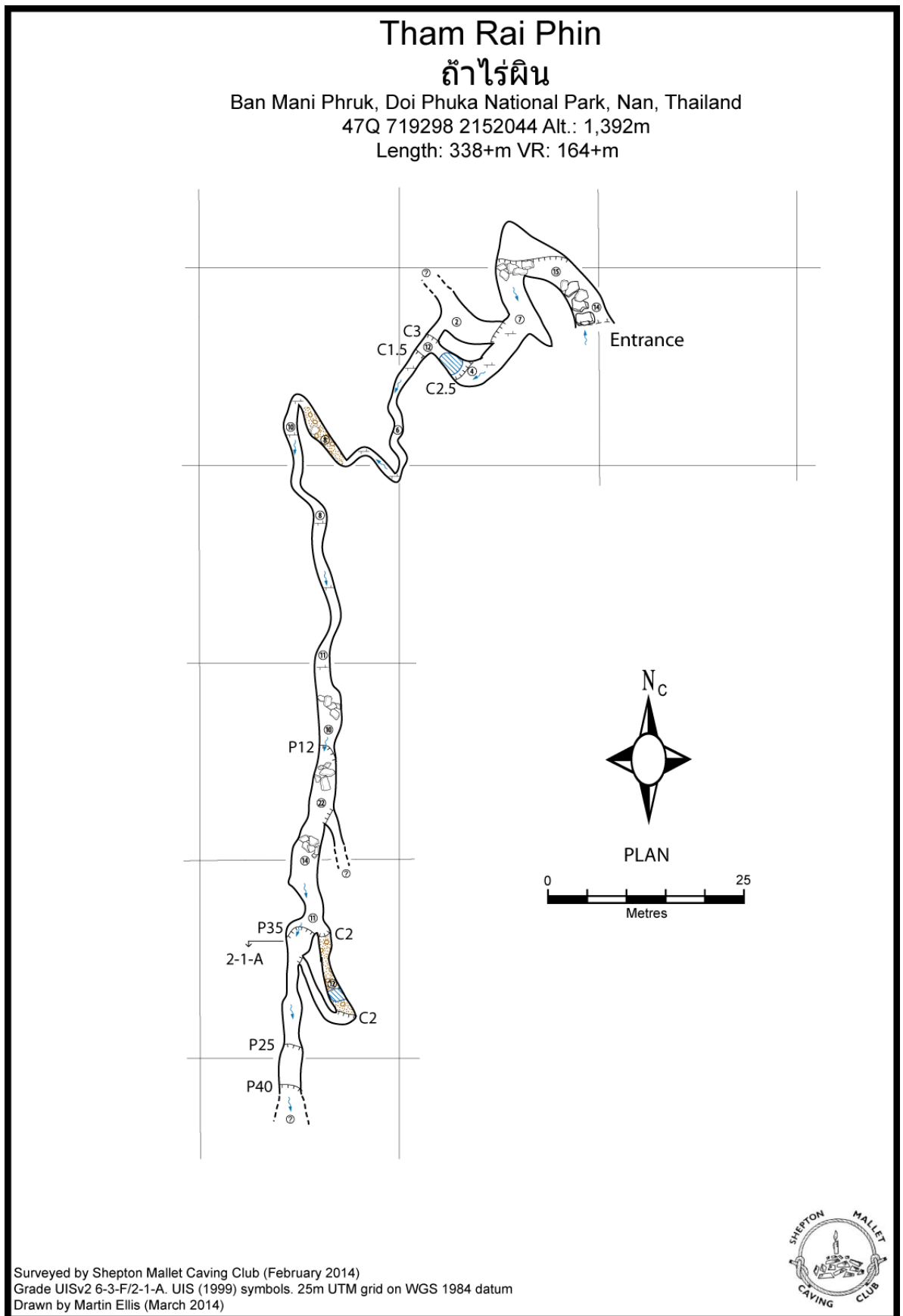
Length: 338+m Vertical range: 164+m

From the main track north of Ban Mani Phruk 1 turn right approximately 1.5km north of the junction with the track to Ban Mani Phruk 2. Follow this track for approximately 750m to a parking place for one car on the left hand side of the track. Walk back up the hill, past the cave's GPS location and find a path downhill into the valley. This is marked by some cut small trees and bamboo supporting the side of the track. The path leads down to the stream and the cave entrance.

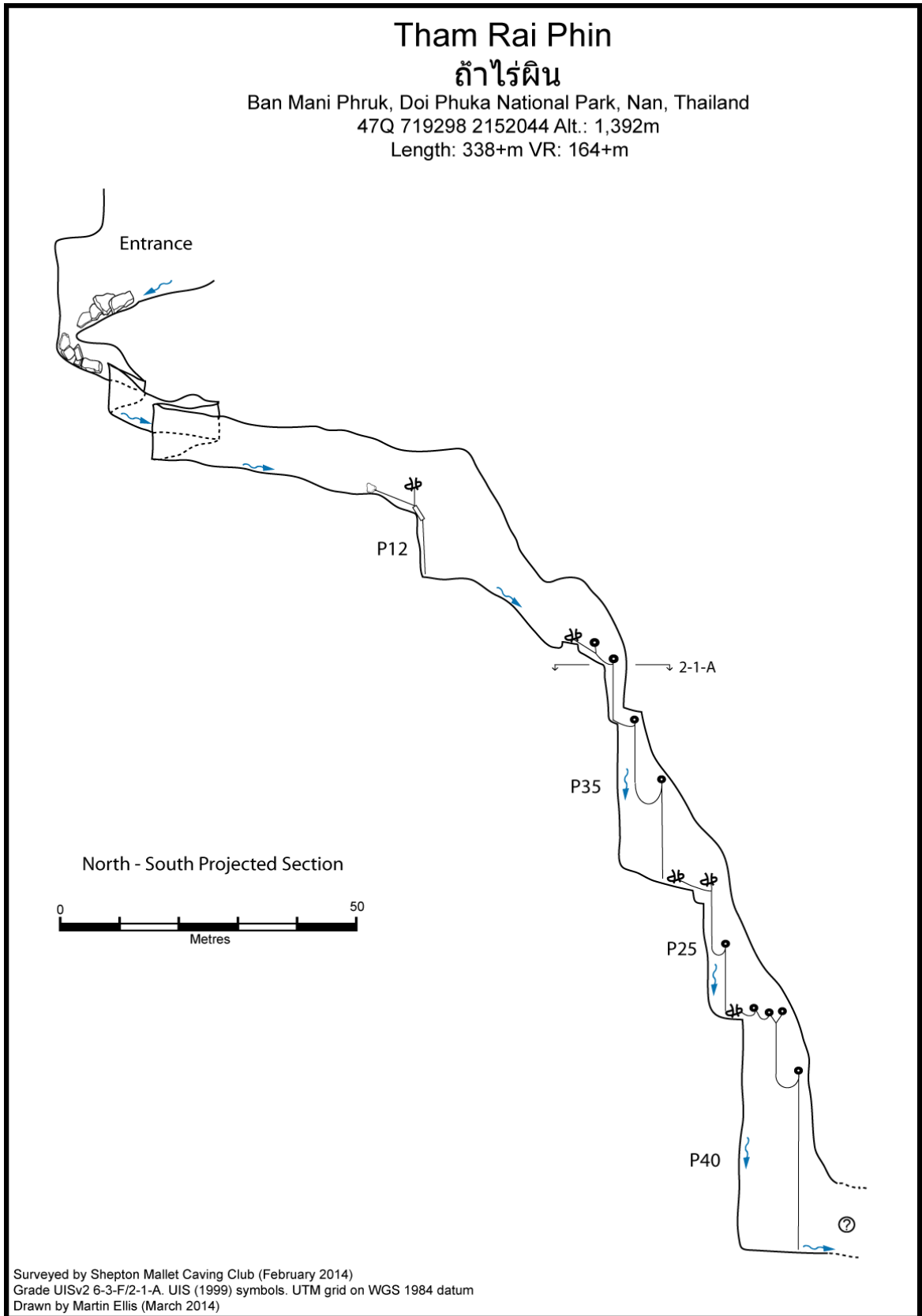
The large entrance soon decreases in size to a meandering vadose canyon that heads south for 150m to the first pitch. A series of wet pitches (P12, P35, P25, P40) have been descended with the way on still open and the cave getting larger.

All the pitches have been rigged with 8mm through bolts, apart from one 8mm spit on the P40.

P12 - boulder for the main belay to a natural above the pitch. Rope protector needed.



Survey 2: Tham Rai Phin



Survey 3: Tham Rai Phin (section)

P35 - natural and bolt for main belay Y hang. One bolt rebelay above the drop then two more bolt rebelays, the first in an alcove, to take the rope away from the water.

P25 - natural at the top of the approach slope then another natural above the drop. One bolt rebelay on main drop to take rope away from water.

P40 - Natural and one bolt on traverse to Y hang from two bolts above the drop. One rebelay bolt 10m down the pitch.

Central West Area

Cave NA0096

47Q 715556 2149736 Altitude: 1,162m
Length: 64m Vertical Range: 27m

From the road back down the mountain from Ban Mani Phruk there is a good track leading north. Take this track to about 1km to a farm building and then walk down into the doline.

From the entrance a scramble down some boulders for a few metres brings one to a 7m drop. This can be bypassed and the next obstacle is a 9m pitch into a small chamber with no way on.

P7 - can be bypassed on the right hand side.

P9 - main belay is a boulder then two bolts for a Y hang over the main drop.

There is a stream sink in the same doline.

Cave NA0100

47Q 717333 2148702 Altitude: 1,397m
Length: 326m Vertical range: 14m

The swallet is in a steep sided doline on the eastern side of a hill near the Security Development Project headquarters. The entrance can be accessed by either walking up the cabbage fields opposite the Security Development Project or by walking down from the sealed road which goes to Ban Mani Phruk 2.

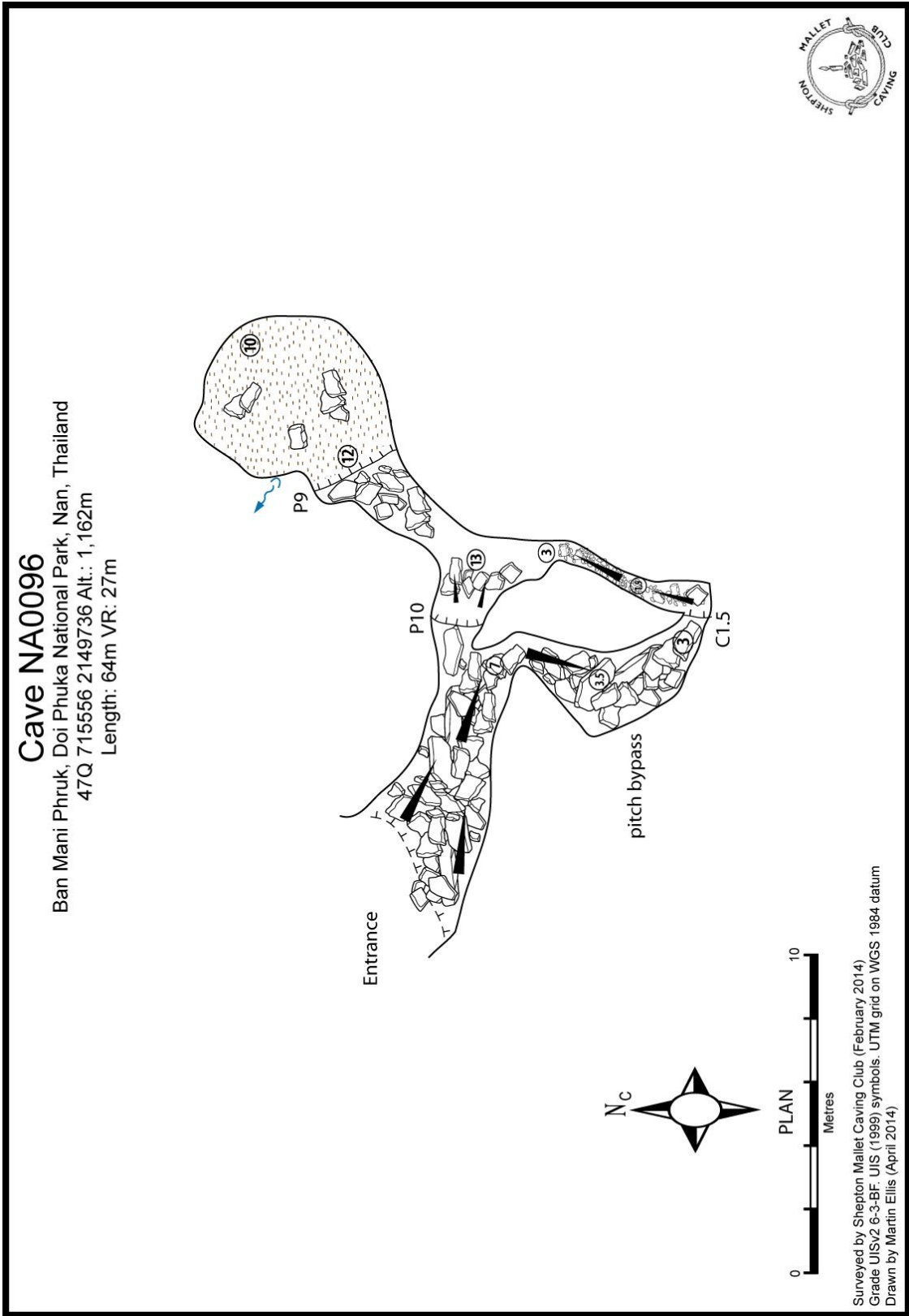
The cave consists of a streamway and a series of oxbow passages, with many links between these two parts to the cave. The streamway ends at a very low section that hasn't been pushed to a conclusion, but is the upstream end of the low duck seen in Cave NA0141. Some of the inlet passages in the oxbows have also not been pushed to a conclusion.

Cave NA0103

47Q 715053 2147155 Altitude: 1,200m
Length: ~30m

Cave NA0103 is in the north-east corner of a large doline 3km south-west of the Security Development project and can be accessed by a good track. Sink NA0104, Sink NA0105 and Cave NA0106 are in the same doline. The sink is marked on the 1:50,000 topographic map. Cave NA0103 is amongst a series of sinks at the base of a steep rocky slope at the edge of a large cultivated area.

Thirty metres of passage has so far been explored, with the clean washed crawl continuing.



Survey 4: Cave NA0096



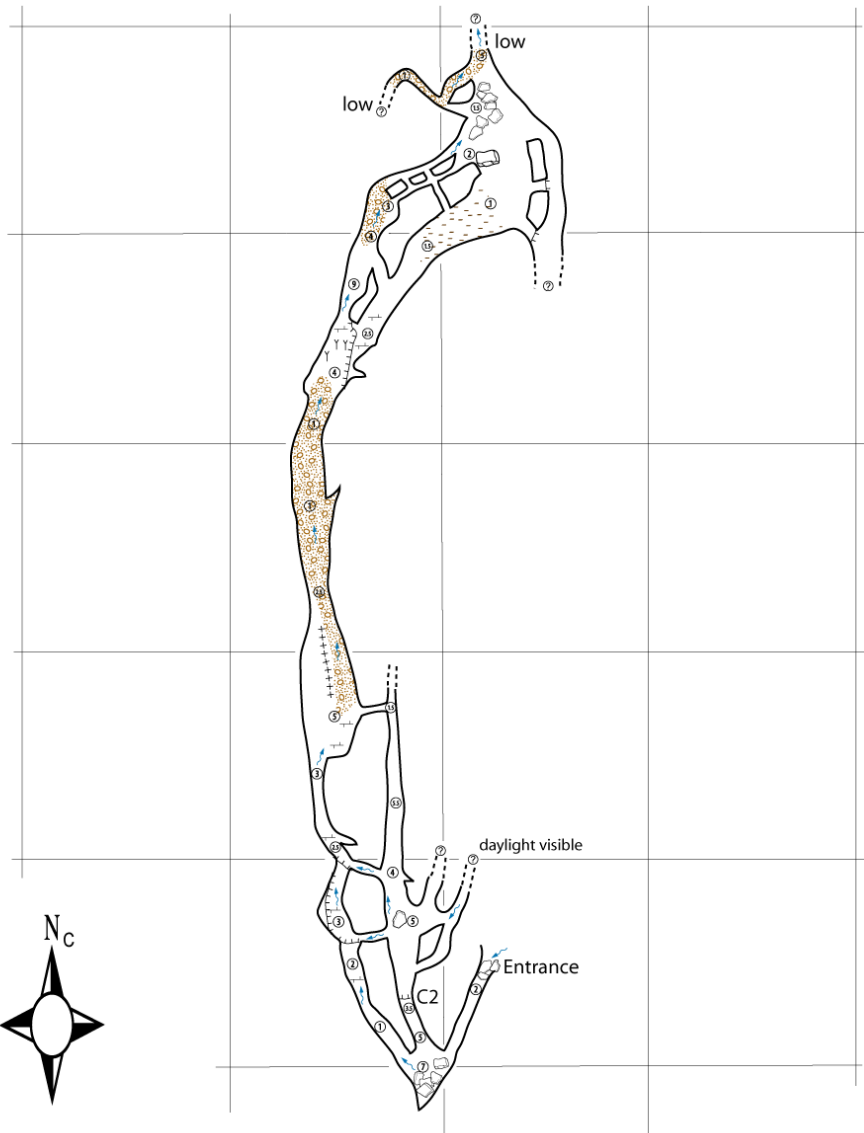
Photograph 4: Phil Collett at the entrance to Cave NA0096 (Sean Howe)



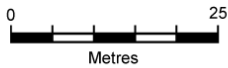
Photograph 5: Entrance to the unexplored Cave NA00152 (Martin Ellis)

Cave NA0100

Ban Mani Phruk, Doi Phuka National Park, Nan, Thailand
47Q 717331 2148687 Alt.: 1,405m
Length: 326m VR: 14m



PLAN



Surveyed by Shepton Mallet Caving Club (February 2014)
Grade UISv2 6-3-BF. UIS (1999) symbols. 25m UTM grid on WGS 1984 datum
Drawn by Martin Ellis (April 2014)



Survey 5: Cave NA0100

Cave NA0106

47Q 714593 2146918 Altitude: 1,184m
 Length: ≈70m

Cave NA0106 is at the western end of a large doline 3km south-west of the Security Development project and can be accessed by a good track. Cave NA0103, Sink NA0104 and Sink NA0105 are in the same doline. The sink is marked on the 1:50,000 topographic map. This is a small stream sink with a 4m wide by 1m high entrance.

From the entrance there is 70m of narrow, fissure type passage before the floor drops away with the cave continuing.

Shaft NA0097

47Q 715719 2149232 Altitude: 1,287m
 Length: 9m Vertical range 9m

From the road back down the mountain from Ban Mani Phruk there is a good track leading north. Take this track to the doline which is about 500m from the road.

This blind, elongated shaft is between 5m and 9m deep. The shaft is blocked with rocks at the deepest point.

Tham Pha Phueng

ถ้ำผาผึ้ง

47Q 717062 2150051 Altitude: 1,387m
 Length: 4,750m Vertical range: 476m

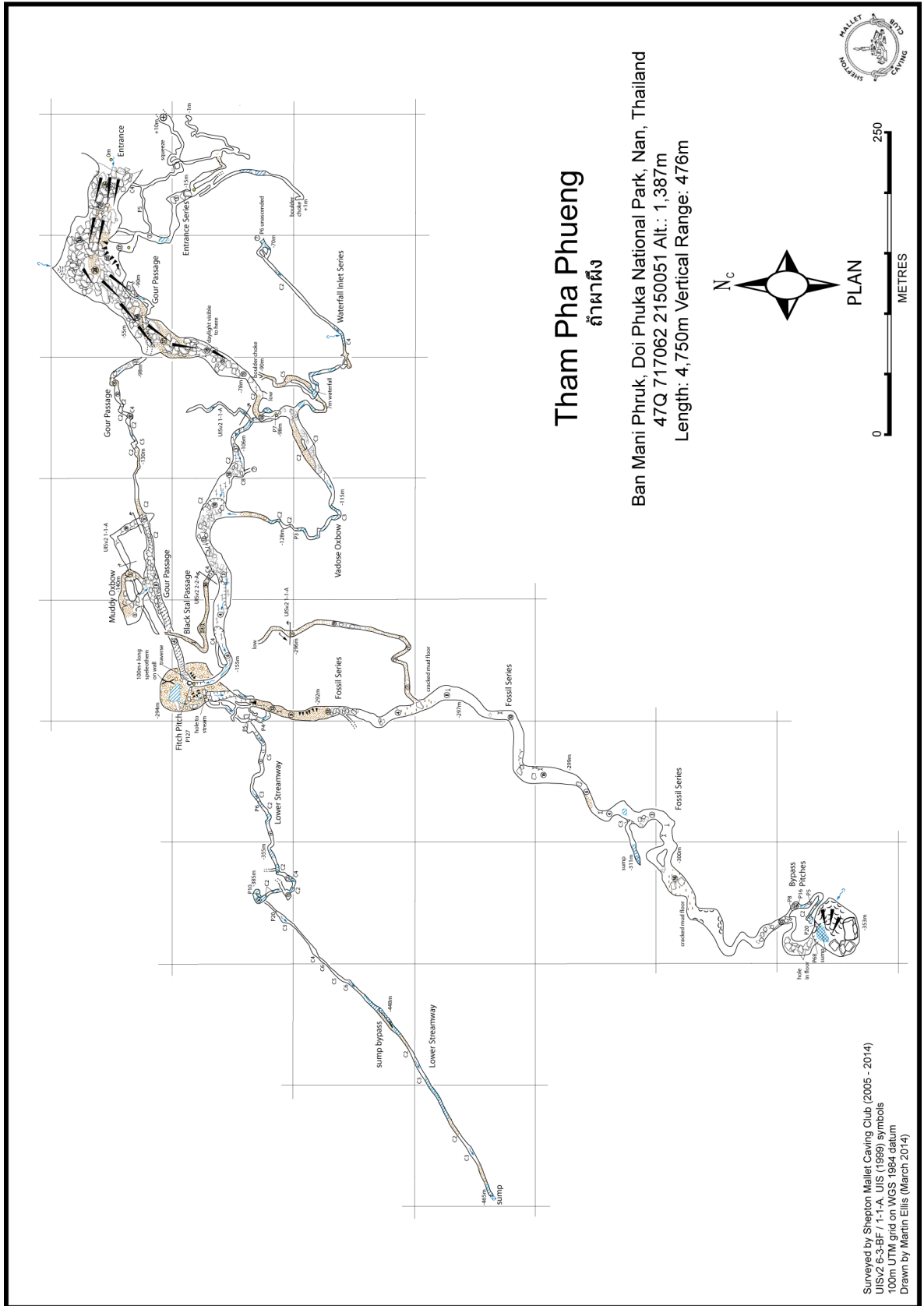
The cave is at the bottom of the doline between Ban Mani Phruk (500 m from the village) and the Security Development Project headquarters (1 km away). Just where the road starts to climb up to the village some concrete steps lead down the slope towards the cliff that can be seen to the west. A good path leads to the cave entrance which is a one minute walk from the road.

See the 2009/2010 Expedition Report and 2012 Expedition Report for details of the passage explored to February 2012.

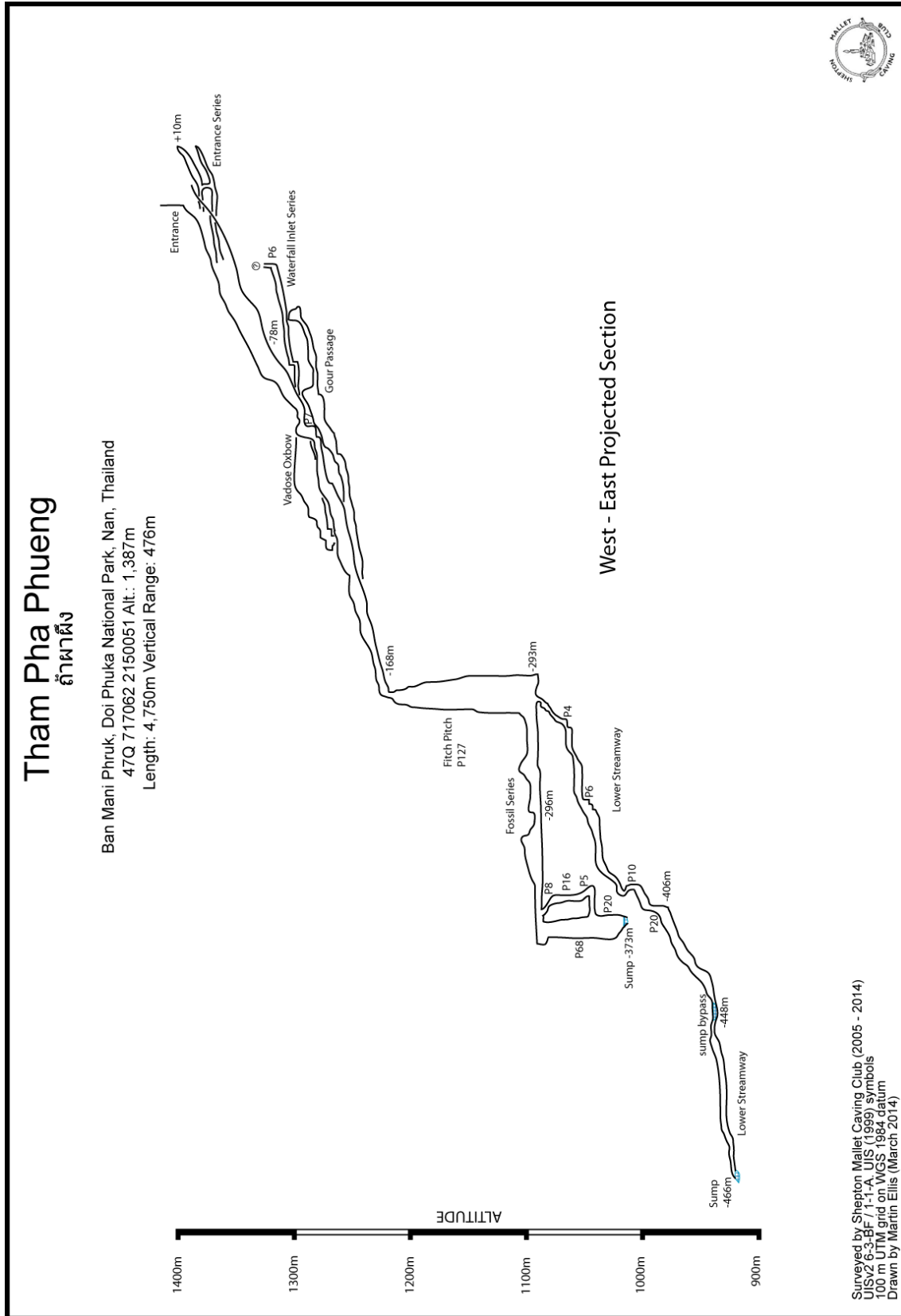
Much to the embarrassment of the veterans of the 2009, 2010 and 2012 expeditions the Entrance Series was found in March 2013 by two cavers on their first trip into Tham Pha Phueng. Seventy metres from the entrance (the bottom of the steps) ascending the slope on the left hand wall reaches the start of the Entrance Series. This is a passage averaging 2 to 3m wide and 5m high that reaches a boulder floored chamber after 100m. Straight ahead the passage chokes, but there is a way on low down on the right that ascends for 100m to a choke. Taking the left hand branch at the end of the boulder chamber leads into the main part of the series. This consists of narrow rifts which loop back to the start of the Entrance Series (via a 5m pitch), to an alcove overlooking the Main Entrance and a high, ascending rift that is higher than the Main Entrance.

Below the 7m pitch the Waterfall Inlet Series is reached by dropping down the short climbs into the Vadose Oxbow and following the stream back upstream to the inlet passage. This can be followed for 100m, passing below a 7m waterfall pitch, to a boulder choke. 20m back from the boulder choke it is possible to climb up and then traverse into the passage at the top of the waterfall. This passage heads south for 50m before heading north-east along a straight rift. A 4m pitch can be free-climbed up to eventually reach the bottom of a pitch estimated at 6m that has not been ascended.

In the Lower Streamway exploration continued beyond the point reached in 2012. Below the P10 that stopped exploration in 2012 a P20 is soon reached. From here the streamway



Survey 6: Tham Pha Phueng



Survey 7: Tham Pha Phueng (section)

continued as a straight vadose passage heading south-west down a series of climbs (C3, C4, C6, C5 and C6), many of which were rigged with ropes, to a sump at 447m below the entrance. This sump can be bypassed by a passage on the right to a continuation of the rift passage. After a few more short climbs (C2, C3, C2 and C3) the cave eventually sumps at a depth of 466m below the entrance.

Two teams visited the end of the Fossil Series and confirmed the observations made in 2010. The passage ends at a mud and boulder balcony overlooking a very large chamber, similar in size to that below Fitch Pitch, with the roof soaring up out of reach of lights and a large stream entering down a large and steep bank of gours. The water appears to sump in the floor of the chamber. A mud slope at the right hand end of the balcony ascends for 2.5m to a mud ridge beyond which it slopes down to end at the pitch into the chamber.

By the end of the February 2014 expedition Tham Pha Phueng had a vertical range of 476m deep (the deepest known cave in Thailand) and was 4,750m long (10th longest known cave in Thailand)

Central East Area

Cave NA0152

47Q 718509 2145020 Altitude: 1,414m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the left hand track, turning right at another Y junction, and drive down the rough track to where it levels out and there is a path heading downhill on the right. Park at the level area and then follow the path on the right as far as an abandoned farm at 47Q 718242 2145049. A small stream flows past the farm, but to find the path to the cave continue along the track up the slope to the other side of the stream and then head left into the trees. The stream sinking at Tham Pon has cut a valley about 10m deep; keep up on the top of the bank and go past Tham Pon and then past Tham Wa which is another 50m along the path. Where the path has gone past the end of the doline (the location of Cave NA0153) and starts to ascend to the ridge a small entrance can be in a low limestone outcrop on the left.

The cave has not been explored. However, is reported to be narrow and about 200m long.

Cave NA0153

47Q 718495 2145045 Altitude: 1,400m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the left hand track, turning right at another Y junction, and drive down the rough track to where it levels out and there is a path heading downhill on the right. Park at the level area and then follow the path on the right as far as an abandoned farm at 47Q 718242 2145049. A small stream flows past the farm, but to find the path to the cave continue along the track up the slope to the other side of the stream and then head left into the trees. The stream sinking at Tham Pon has cut a valley about 10m deep; keep up on the top of the bank and go past Tham Pon and then past Tham Wa which is another 50m along the path. Below Tham Wa the stream in the bottom of the very overgrown doline is said to sink into a cave.

The cave has not been investigated, but is said to be narrow and long.

Tham Tukkae

ถ้ำตุ๊กแก

47Q 718483 2144879 Altitude: 1,427m

Length: ≈50m Vertical range: ≈15m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the left hand track, turning right at another Y junction, and drive down the rough track to where it levels out and there is a path heading downhill on the right. Park at the level area and then follow the path on the right as far as an abandoned farm at 47Q 718242 2145049. A small stream flows past the farm, but to find the path to the cave continue along the track up the slope to the other side of the stream. Take a path that heads into the trees on the righthand side of the doline with the Cave NA0153 cave stream sink. After about 100m a path ascends on the right towards the ridge. A few metres below the ridge traverse right (south) over rough ground for 50m to the large entrance.

From the entrance a 25m slope descends into a tall bit of relict passage which is choked/blocked. There are some speleothems, one of which is thought to resemble a tokay gecko and gives the cave its name.

South Area

Cave NA0121

47Q 717742 2142229 Altitude: 1,283m

Length: 672m Vertical Range: 101m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that head left (north) and uphill to reach the entrance. The entrance is a rocky gully that leads to the first drop.

This first drop of 3m was rigged using a ladder. The short section of unroofed cave ends at a P6 at the top of a high vadose rift. At the bottom of this pitch another short section of canyon passage reaches the top of the P27. From the bottom of the P27 a stream passage can be followed for 200m northwards before it turns sharply westward and ends at a sump after another 175m. 30m before the sump an ascending inlet passage was followed southwards for 115m before it became a crawl.

P3 - ladder rigged to natural.

P6 - backup to natural then 2 bolts for Y hang.

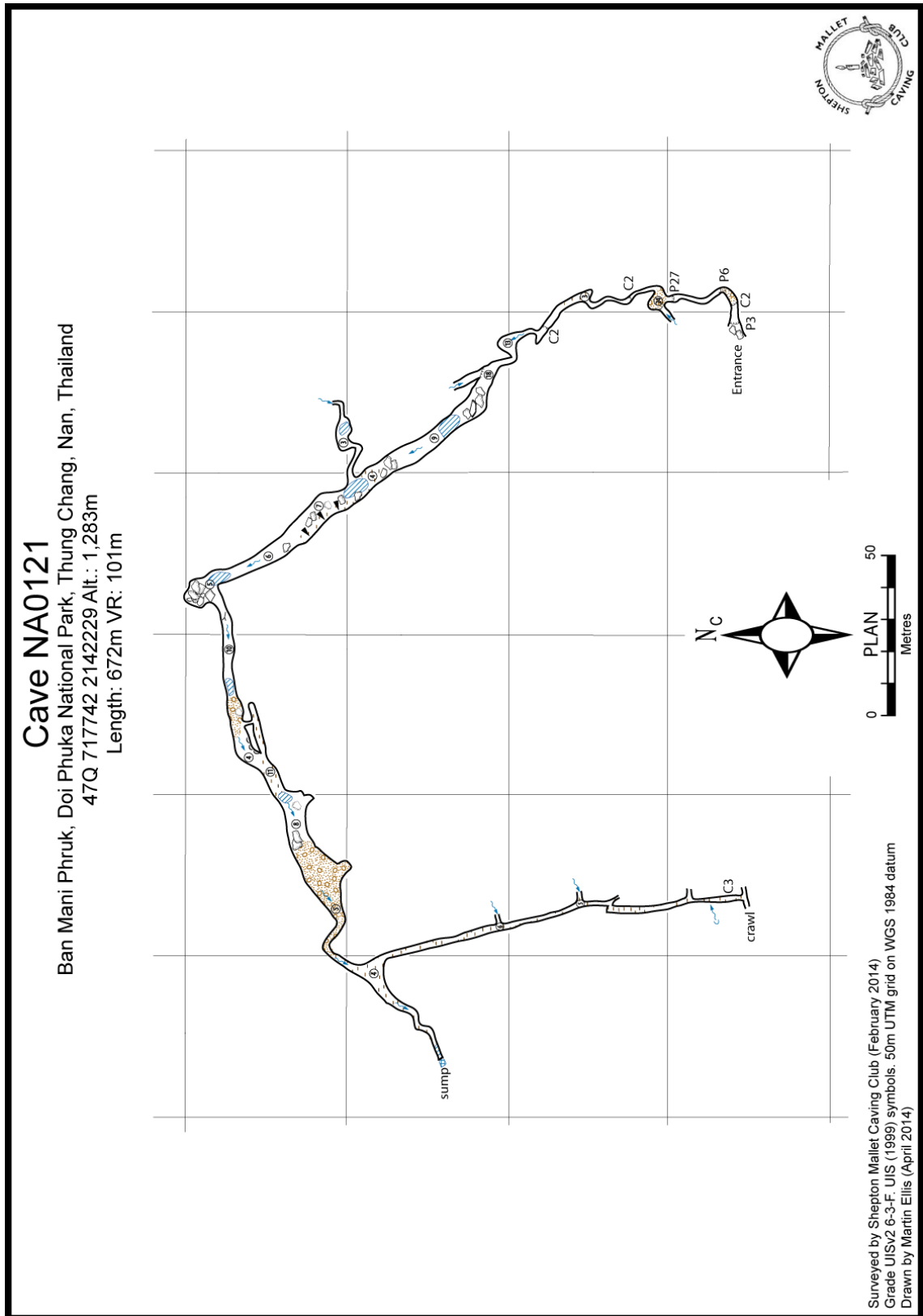
P27 - run rope from P6 to bolt at pitch head. Rebelay to a 2 bolt Y hang for 14m descent to ledge with another 2 bolts for Y hang on the final 12m descent.



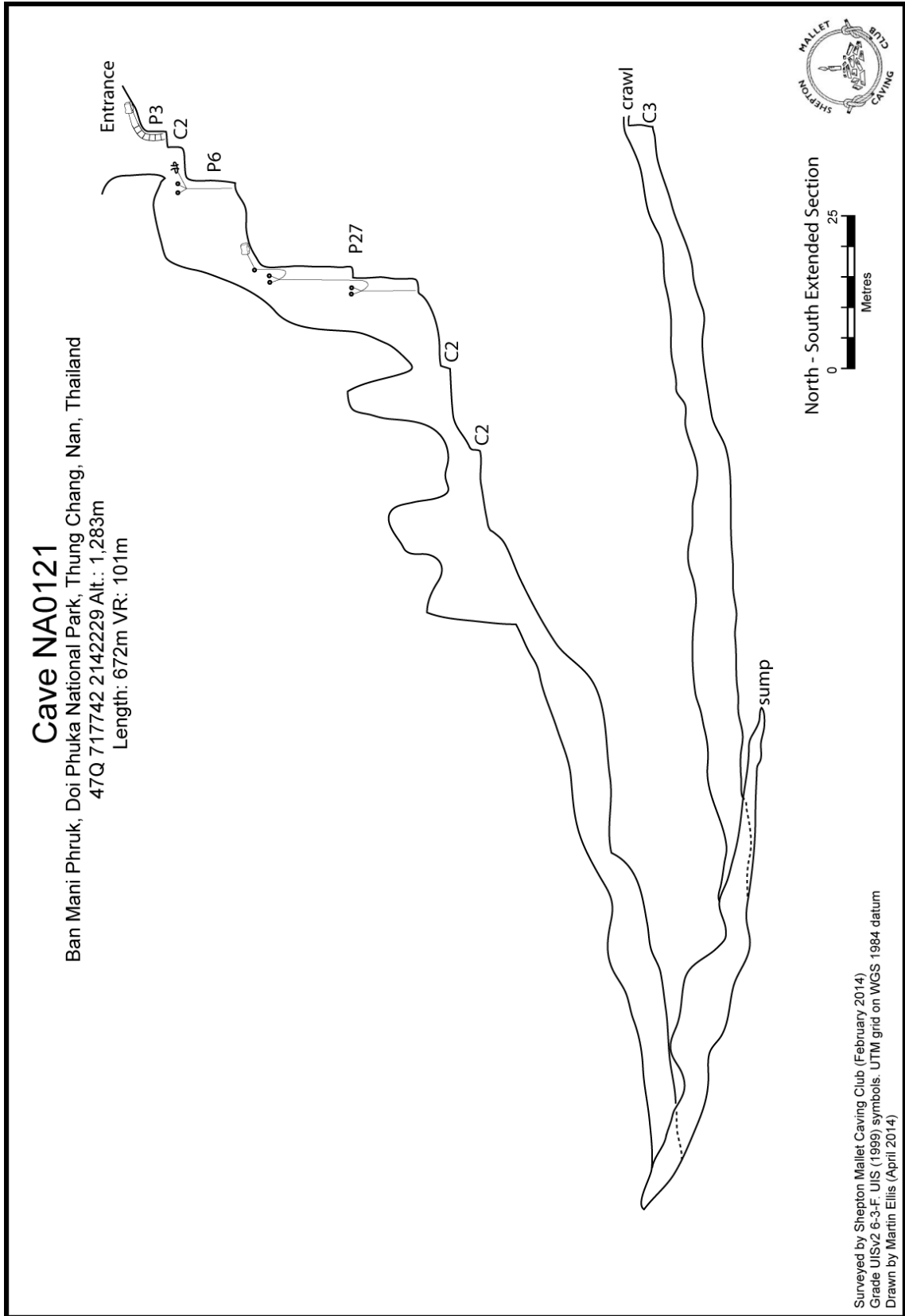
Photograph 6: Tomek Wyderka in Tham Tukkae (Martin Ellis)



Photograph 7: Emma Porter at the entrance to Cave NA0121 (Sean Howe)



Survey 8: Cave NA0121



Survey 9: Cave NA0121 (section)

Cave NA0122/NA0135

NA0122 entrance: 47Q 717330 2140874	Altitude: 1,210m
NA0135 Lower entrance: 47Q 717463 2140877	Altitude: 1,218m
NA0135 Upper entrance: 47Q 717541 2140897	Altitude: 1,236m
Length: 1,929m	Vertical range: 100m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 7.5km, through a farm, to a parking area on the left (east) at 47Q 717230 2140830 where the track to Tham Bpaet Sip turns off. The active swallet entrance of NA0122 is about 100m from the main track. The lower entrance to NA0135 is 135m to the west of NA0122 and is accessed by following the track that head towards Tham Bpaet Sip then taking the first turning on the right. The upper entrance to NA0135 is another 100m along this track.

The cave consists of seven passages running from south to north which descend along the dip, one major east-west strike passage that links up these down dip passages and another, shorter, strike passage linking the two entrances of Cave NA0135

The stream sinks into the entrance of NA0122 at the foot of a small cliff. The vadose passage descends down the 20° dip for 250m to where it gets very low, passing a couple of ascending inlets on the east side. 100m from the entrance a passage to the left reaches a boulder chamber after 50m. From the boulder chamber a large passage ascends for a short distance to a choke. In the other, downhill, direction the narrow Muddy Passage heads west along the strike for 100m to a 3m climb (handline required) where the passages turns north. The passage ends at a muddy boulder chamber which would require rigging to descend into the continuing small streamway. This is the end point of exploration in this section of the cave.

From the lower entrance to NA0135 a large passage descends, heading north, for 125m to where it turns west for another 75m to a junction with another large streamway (Station 21 Junction). Turning right (north, downstream) there is 100m of large passage to a crossroads (Station 30). Straight on the main stream route descends for 50m to a flat out, choked, draughting dig. Back at the Station 30 crossroads turning right enters a low, sandy passage that soon opens another large passage with muddy gour. A handline is required to descend to the downstream passage that heads west for 75m of large, boulder floored passage to where there is a boulder choke in the floor with a near vertical slope of mud and pebbles above. Water can be heard flowing underneath, but exploration was stopped at this point. At the point where the handline is required in the upstream direction the passage ascends steeply, but has only been explored for 30m.

Turning left at the Station 30 crossroads ascends a gour floored relict passage to a junction (Station 66). At this junction turning right (west) ends after 40m at a 7m pitch down into Cave NA0122. Turning left at Station 66 follows a series of gour pools to a flowstone blockage with a very low passage beyond. Climbing above Station 66 and heading east reaches a passage that links with Station 21 in the downstream direction and ascends for 125m in the other direction to end very close to the surface (daylight can be seen between boulders) near the entrance to NA0122.

In the other direction (east) from the lower entrance to NA0135 a large passage leads to a boulder slope which can be ascended to the upper entrance. Heading north from the boulder slope the large passage continues in a down dip direction for 125m to where it turns west and becomes a low sandy dig. This dig is less than 10m from an inlet passage to the main passage north from the NA0135 lower entrance.

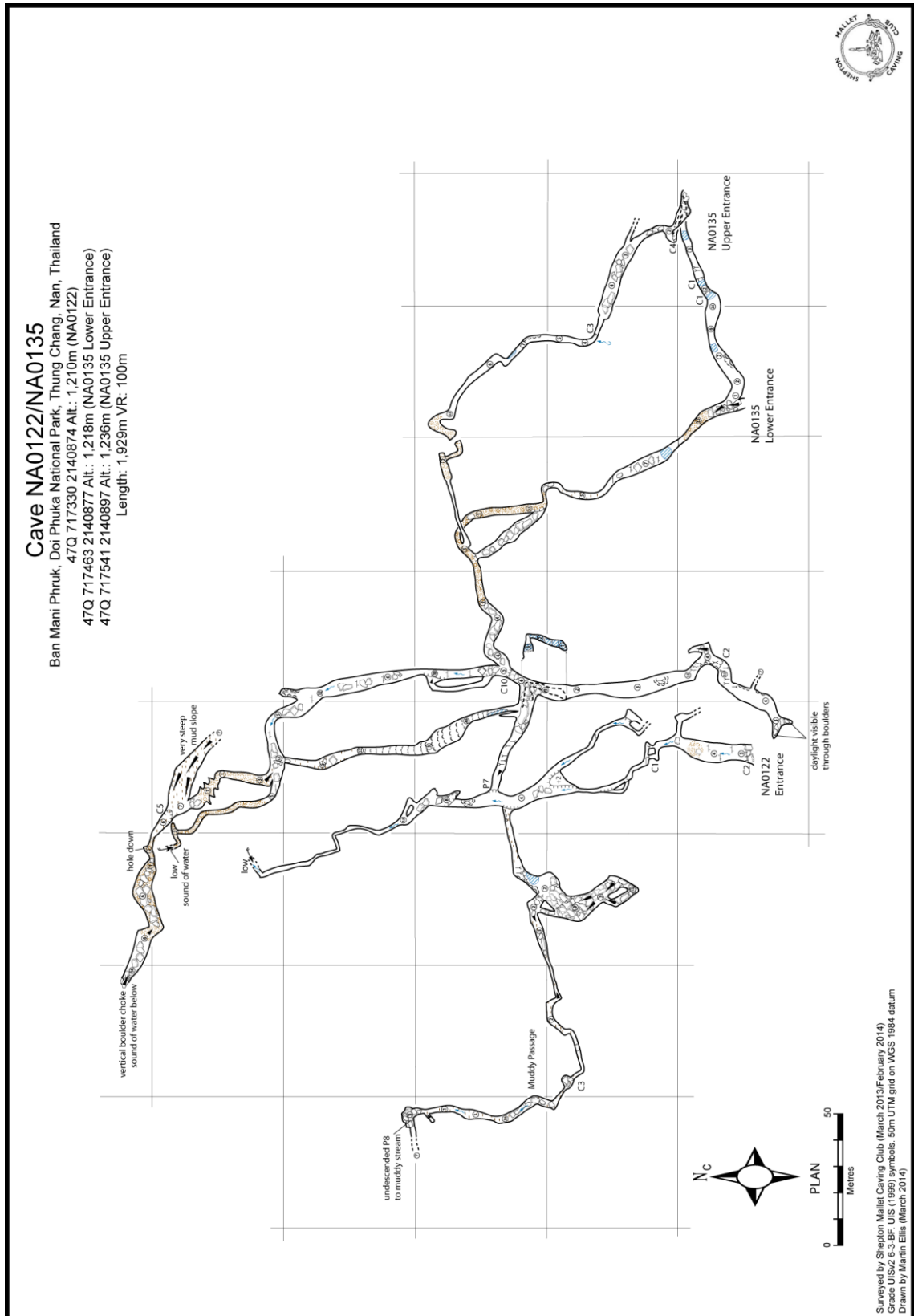
P7 - between NA0135 and NA0122 rigged off naturals



Photograph 8: Sarah Payne on the entrance pitches to Cave NA0121 (Sean Howe)



Photograph 9: James Begley in Cave NA0122/NA0135 (Estelle Sandford)



Survey 10: Cave NA0122/NA0135

Cave NA0134

47Q 716908 2141105 Altitude: 1,245m
 Length: 290m Vertical range: 87m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 7km, through a farm, to a parking area on the right at 47Q 717150 2141100. Walk down across the overgrown meadow and cross the large, seasonal stream and follow a path up the other side. After 100m head right and down into the large doline.

The 24m entrance shaft lands on a descending boulder floor with a 4m drop then a 25m pitch. Below the P25 the large boulder floor passage descends, with a 6m and a 7m pitch, for 100m to a sloping mud filled small passage, with a tube above through which a stream could be heard. 30m back from this mud filled passage a high level rift filled with unstable boulders has been investigated, but not pushed to a conclusion.

A guide reported that there are three more caves along the main path to the left (100-150m away) and another cave about 100m along the path to the rift, past Cave NA0134.

P24 - bolt backup to another bolt at lip of pitch (needs rope protector). One deviation from bolt.

P4 - natural backup to 1 bolt over pitch (one 50m rope for P24 & P4)

P25 -

P6 - natural backup to 1 bolt over pitch

P7 - 2 bolts for Y hang

Cave NA0174

47Q 717843 2142092 Altitude: 1,253m
 Length: 17+m Vertical range: 10m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. The large, fenced, collapse entrance of Cave NA0174 is at the edge of the field at the foot of the hill.

A rope is required to descend the 10m to the entrance, rigged from trees above the limestone cliff. After 7m the cave is nearly choked with mud leaving a 15cm high gap that would have to be dug out to reach the cave that can be seen to continue.

Shaft NA0150

47Q 717860 2140402 Altitude: 1,274m

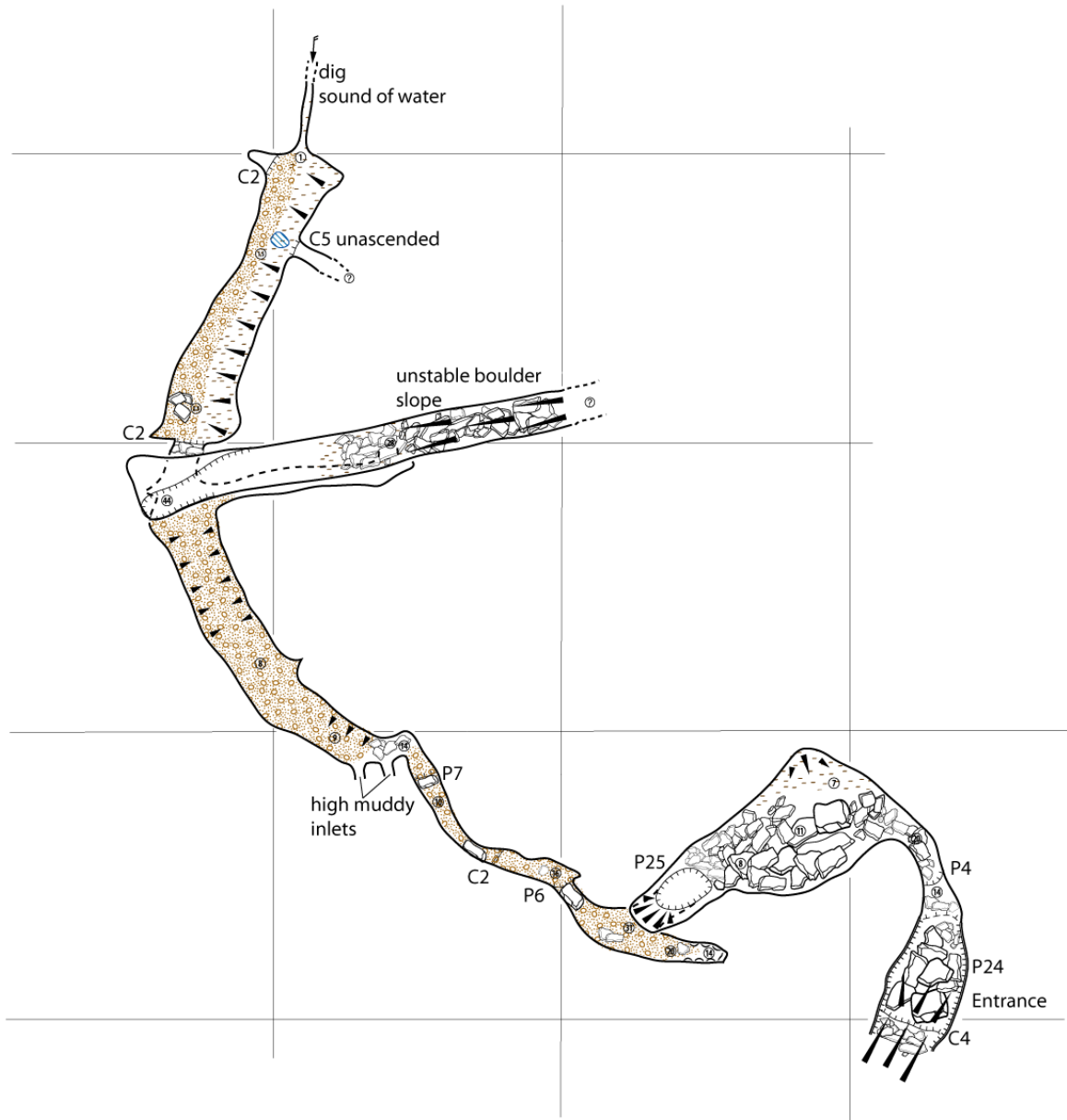
From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 7.5km, through a farm, to a parking area on the left (east) at 47Q 717230 2140830 where the track to Tham Bpaet Sip turns off. Follow this track up the hill (it had been improved in 2014) for 1km to where it ends at a large clearing. From

Cave NA0134

Ban Mani Phruk, Doi Phuka National Park, Nan, Thailand

47Q 716908 2141105 Alt.: 1,245m

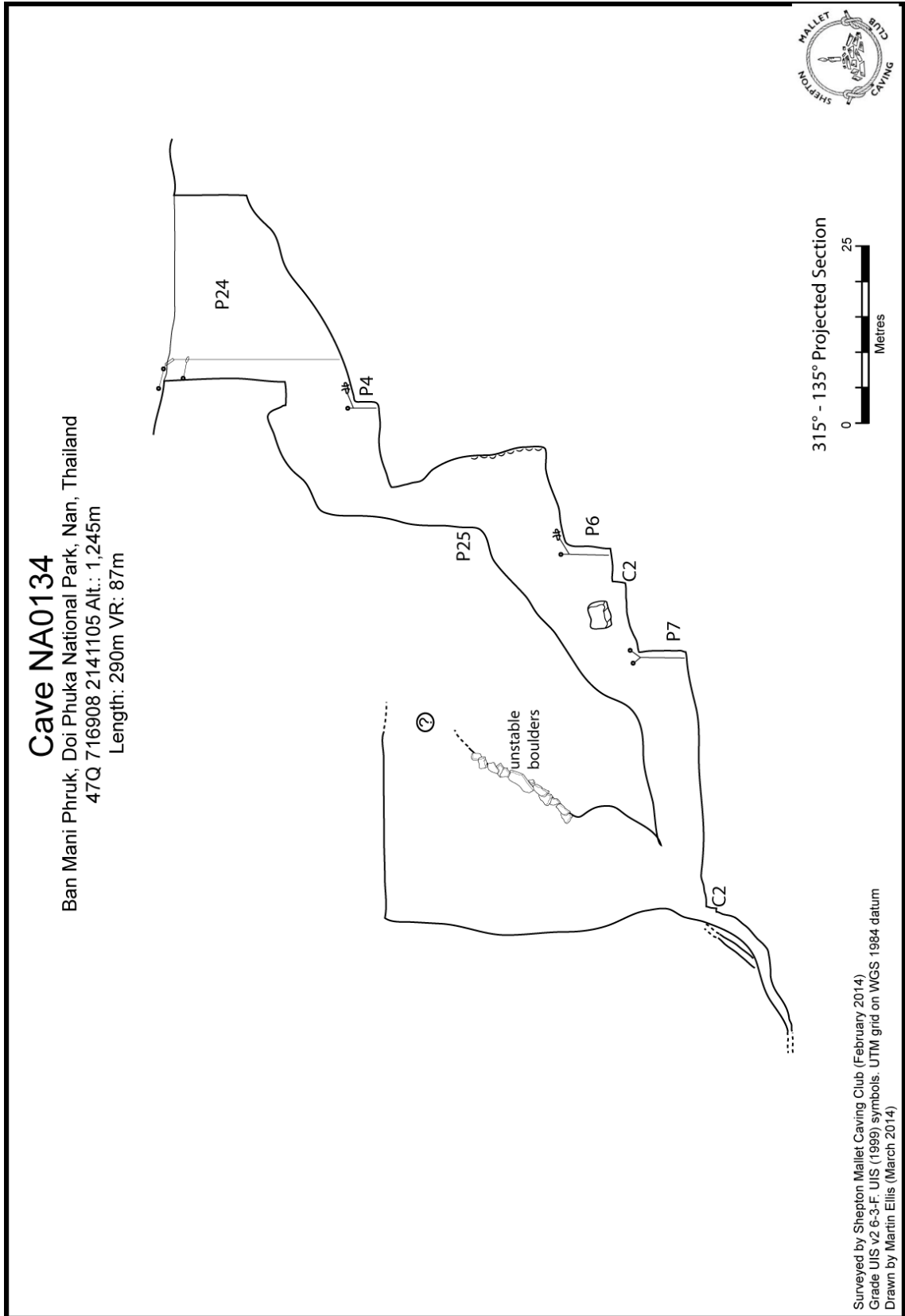
Length: 290m VR: 87m



Surveyed by Shepton Mallet Caving Club (February 2014)
Grade UIS v2 6-3-F. UIS (1999) symbols. 25m UTM grid on WGS 1984 datum
Drawn by Martin Ellis (March 2014)



Survey 11: Cave NA0134



Survey 12: Cave NA0134 (section)



Photograph 10: John Biffin rigging in Cave NA0134 (Sean Howe)



Photograph 11: Entrance to Cave NA0174 (Sean Howe)

the clearing follow the path to Tham Bpaet Sip for about 100m and the obscure shaft is just to the right of the path.

Stones fall for about 10m to land on what sounds like mud, but the shaft has not been descended.

Shaft NA0176

47Q 717774 2142089 Altitude: 1,267m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. A well worn path (2014) runs up the side of the hill to the north of the field towards this shaft, which is a short distance downhill from the main entrance to Cave NA0140. The shaft can also be reached by following the path uphill from Cave NA0121.

The shaft has not been investigated.

Shaft NA0177

47Q 717577 2141991 Altitude: 1,253m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. From the field follow the blue water supply pipes back along the bottom of the hill (heading west) and an overgrown shaft is soon reached.

The shaft has not been investigated.

Sink NA0175

47Q 718008 2142034 Altitude: 1,250m
Length: ≈10m Vertical range: ≈5m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go straight ahead (east) and soon the path follows a low ridge. The sink is in the valley to the right (south) of the path.

The main sink, at the base of a small cliff and with large clumps of bamboo, is choked with soil. A few metres further west an overflow sink can be entered. However, progress through the boulder choke is soon stopped.

Sink NA0178

47Q 717835 2141980 Altitude: 1,253m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. At the southern edge of the field is a shallow, but steep sided, blind valley.

The stream sink has not been investigated.

Tham Bpaet Sip

ถ้ำแปดสิบ

47Q 718416 2139751 Altitude: 1,277m

Length: 493m+ Vertical range: 95m

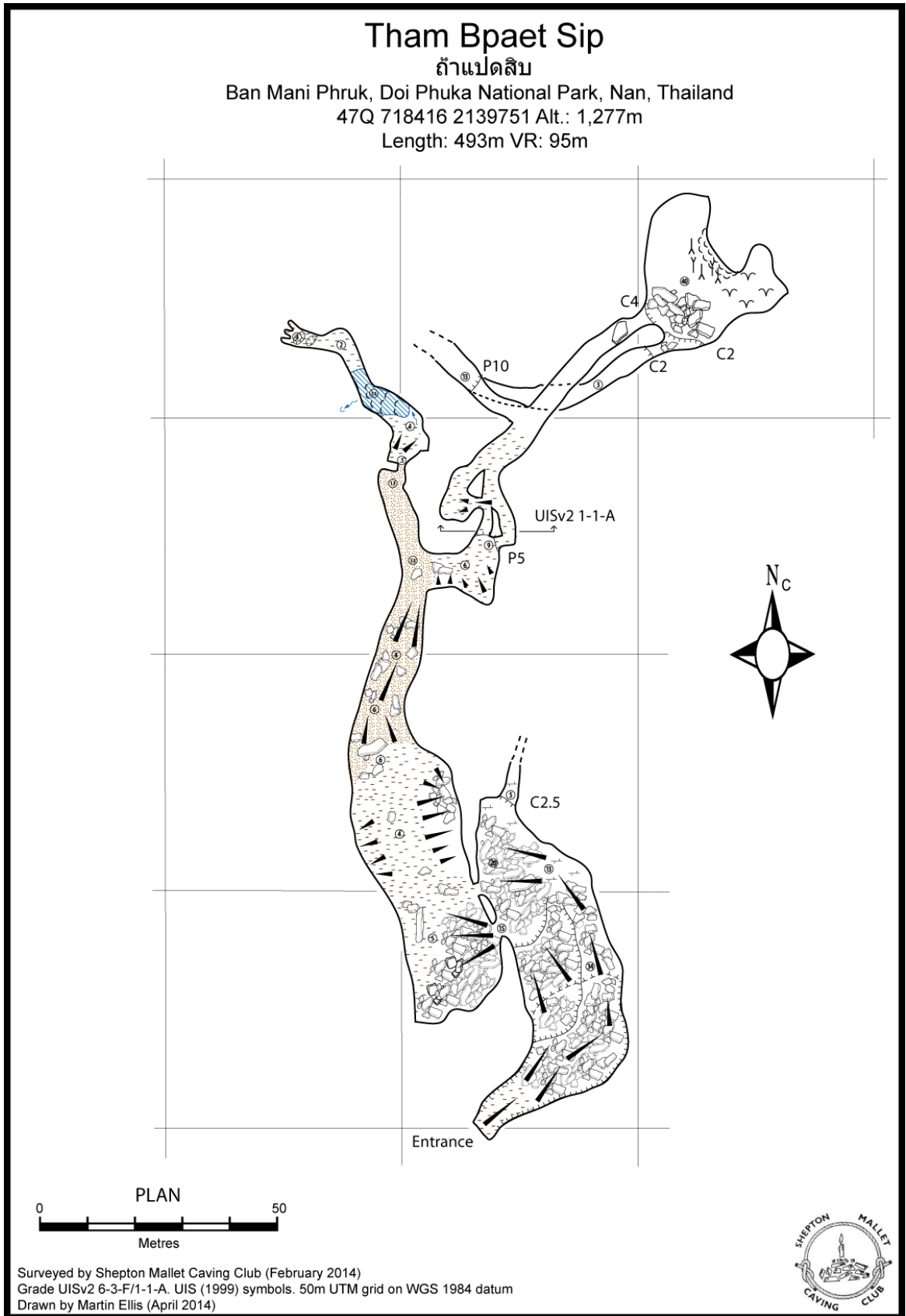
From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 7.5km, through a farm, to a parking area on the left (east) at 47Q 717230 2140830 where the track to Tham Bpaet Sip turns off. Follow this track up the hill (it had been improved in 2014) for 1km to where it ends at a large clearing. The cave is about 1km away to the south-east on mainly good paths apart from the final short ascent up the very large collapse entrance. The only route finding problem is where to turn off the main path and head right/downhill to cross a stream bed.

Access to the cave is from the south side of the large collapse doline, is very steep and a handline is useful to descend the upper section. The floor of the collapse is a mass of boulders. Straight on is a passage that has been explored to a short climb down. The main passage is on the left hand side of the boulder slope where a couple of hole give access to the large passage. Heading north it is necessary to ascend the boulders for a few metres before starting to descend a rubble slope. Passing a side passage on the right the slope descends to a short crawl before opening out again and descending to some gours and a stream that had a trickle of water in February 2014. The other side of this very muddy section the passage continues and a hole in the mud floor passage has been passed to an undescended pitch estimated at 15m.

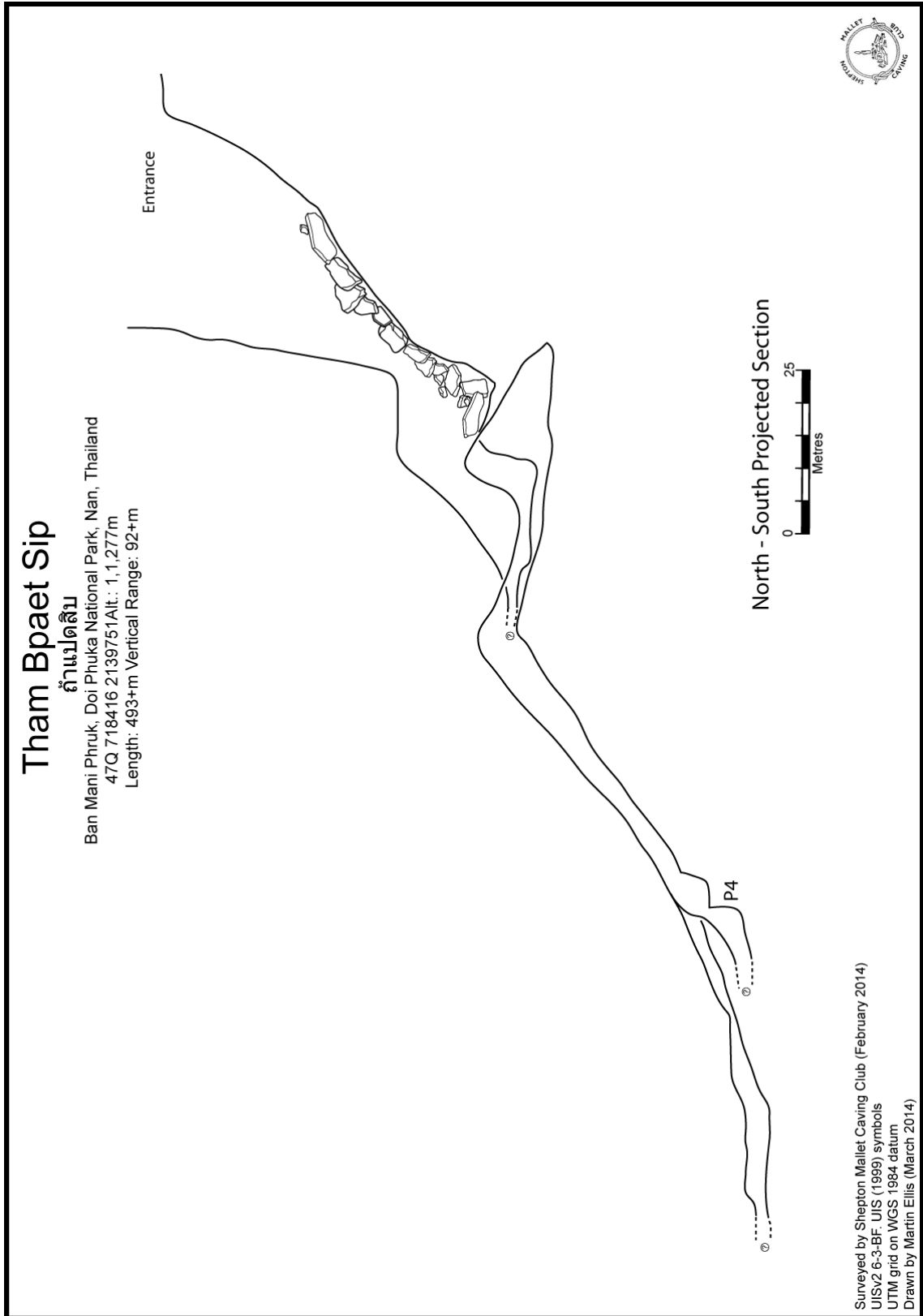
Back on the rubble slope the side passage on the right soon reaches a pitch of 5m (rigged from two 8mm spits). Below the pitch a mud floored passage leads after 80m to a 4m climb down into a chamber 30m in diameter and 40m high. From the chamber a passage 2m high and 3m wide has been followed downslope for an estimated 60m and was left with the way on open.

On the first visit to the cave in March 2013 a large passage was reported heading south from the entrance area. This was explored past many formations for about 50m and left as an ongoing lead. However, in February 2013 this passage was not seen.

P5 - backup 8mm spit and 8mm spit over the pitch.



Survey 13: Tham Bpaet Sip



Survey 14: Tham Bpaet Sip (section)

Tham Khang Khao 1

ถ้ำค้างคาว๑

47Q 719417 2142560 Altitude: 1,630m

Length: ≈40m Vertical range: ≈40m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 1.2km. The cave is high on a ridge.

The entrance is 4m x 4m, becoming more rift like with depth. The cave could be 40m or more deep and boulders hit a mud floor. The cave is a bat collection site.

Tham Khang Khao 2

ถ้ำค้างคาว๒

47Q 718552 2141729 Altitude: 1,398m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 800m.

The entrance passage, which is too low to walk in, drops into a 15m chamber with formations and bats.

Tham Nok Nang En 1

ถ้ำนกนางแอ่น๑

47Q 719344 2142468 Altitude: 1,621m

Length: ≈25m Vertical range: ≈25m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 1.2km. The cave is high on a ridge.

The cave is a rift about 25m long, 6m wide and 25m deep. It is a swallow collection site.



Photograph 12: Phil Collett & Tomek Wyderka at the Tham Bpaet Sip entrance collapse (Martin Ellis)



Photograph 13: Martin Ellis at the muddy gours in Tham Bpaet Sip (Sean Howe)

Tham Nok Nang En 2

ถ้ำนกนางแอ่น๒

47Q 719350 2142512 Altitude: 1,611m

Length: ≈60m Vertical range: ≈60m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 1.2km. The cave is high on a ridge.

This is a 10m x 7m oval shaft, approximately 60m deep, with swallow netting on the entrance.

Tham Nok Nang En 3

ถ้ำนกนางแอ่น๓

47Q 719416 2142543 Altitude: 1,620m

Length: ≈25m Vertical range: ≈25m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 1.2km. The cave is high on a ridge.

This is a 5m x 7m oval shaft, about 20 to 35m deep to where a mud and boulder floor can be seen.

Tham Ton Daolang

47Q 719293 2142455 Altitude: 1,608m

Length: ≈55m Vertical range: ≈20m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 1.2km. The cave is high on a ridge and the entrance contains a large tree.

The entrance rift is 15m long, 3-4m wide and 10m deep. A short free-climb of approximately 3m at the bottom of the entrance abseil leads to a square passage which goes 40m down dip to end at a silt choke.

Tham Ton Som

47Q 718894 2141536 Altitude: 1,406m
Length: ≈6m Vertical range: ≈6m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km. The cave is at the bottom of a prominent shakehole near the path.

The rift entrance heads north-north-west. It is 3m wide and 6m deep and continues to a pitch, the bottom of which was beyond the reach of lights.

Tham Ton Teum

47Q 719198 2141805 Altitude: 1,466m
Length: ≈10m Vertical range: ≈10m

From the Security Development Project headquarters take the sealed road south towards Ban Mani Phruk 2. As this road turns north take a dirt road south. Drive past the National Park ranger station to a crossroads with a large Hmong shrine. Take the track going straight ahead (south) and follow this for 6km, through a farm, to a parking area on the left (east) at 47Q 717475 2141825. A few metres back up the track from the parking area a good motorbike track heads east which can be followed for 500m to a clearing with a small field. Go past the large, fenced off, collapse entrance of Cave NA0174 and follow paths that go right (south-east) and uphill for 1.2km before turning north, continuing uphill, for another 500m.

A 10m pitch with a draught goes to a deep pitch that has not been descended.

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Appendices

Cave Data Summary

Name	Code	Area	Co-ordinates	Altitude	Length	VR
Cave NA0072	NA0072	Central East	47Q 719210 2150444	1,569	36	22
Cave NA0096	NA0096	Central West	47Q 715556 2149736	1,162	64	27
Cave NA0100	NA0100	Central West	47Q 717333 2148702	1,397	326	14
Cave NA0103	NA0103	Central West	47Q 715053 2147155	1,200	≈30+	
Cave NA0106	NA0106	Central West	47Q 714593 2146918	1,184	≈70+	
Cave NA0121	NA0121	South	47Q 717742 2142224	1,269	672	101
Cave NA0122/NA0135	NA0122	South	47Q 717330 2140874 47Q 717463 2140877 47Q 717541 2140897	1,210 1,218 1,236	1,929	100
Cave NA0134	NA0134	South	47Q 716908 2141105	1,245	290	87
Cave NA0140	NA0140	South	47Q 717781 2142103	1,269	≈20	≈7
Cave NA0141	NA0141	Central West	47Q 717358 2148959	1,390	105	7
Cave NA0152	NA0152	Central East	47Q 718509 2145020	1,414		
Cave NA0153	NA0153	Central East	47Q 718495 2145045	1,400		
Cave NA0165	NA0165	North East	47Q 718713 2154185	1,427		
Cave NA0174	NA0174	South	47Q 717843 2142092	1,253	≈17	≈10
Huai Nam Dan Sink	NA0046	Central West	47Q 716531 2148501	1,380	0	0
Nam Huat Sink	NA0123	South	47Q 717150 2139975	1,193		
Shaft NA0070	NA0070	Central West	47Q 715980 2148191	1,326	≈8	≈8
Shaft NA0071	NA0071	Central West	47Q 716408 2148319	1,417	26	20
Shaft NA0097	NA0097	Central West	47Q 715719 2149232	1,287	9	9
Shaft NA0133	NA0133	Central West	47Q 715489 2147966	1,355	117	49
Shaft NA0136	NA0136	South	47Q 717318 2139705	1,199		
Shaft NA0137	NA0137	South	47Q 717341 2139579	1,219		
Shaft NA0138	NA0138	South	47Q 717364 2140395	1,234		
Shaft NA0139	NA0139	South	47Q 717372 2140391	1,245		
Shaft NA0150	NA0150	South	47Q 717860 2140402	1,274		
Shaft NA0176	NA0176	South	47Q 717774 2142089	1,267		
Shaft NA0177	NA0177	South	47Q 717577 2141991	1,253		
Sink NA0073	NA0073	Central East	47Q 719494 2149506	1,495	0	0
Sink NA0086	NA0086	North East	47Q 717499 2157050	1,167		
Sink NA0087	NA0087	North East	47Q 717924 2155750	1,308		
Sink NA0088	NA0088	North East	47Q 718149 2155200	1,309		
Sink NA0089	NA0089	North East	47Q 718499 2154600	1,357		
Sink NA0090	NA0090	North East	47Q 719074 2153600	1,382	0	0
Sink NA0091	NA0091	North East	47Q 719050 2153250	1,396	0	0
Sink NA0092	NA0092	North East	47Q 719049 2152950	1,409	0	0
Sink NA0093	NA0093	Central West	47Q 717199 2149850	1,340		
Sink NA0094	NA0094	Central West	47Q 717200 2149750	1,345		
Sink NA0095	NA0095	Central West	47Q 715549 2150025	1,168		
Sink NA0098	NA0098	Central West	47Q 715700 2148750	1,275		
Sink NA0099	NA0099	Central West	47Q 715750 2148450	1,273		
Sink NA0101	NA0100	Central West	47Q 716300 2147950	1,290		
Sink NA0102	NA0102	Central West	47Q 716250 2147900	1,290		
Sink NA0104	NA0104	Central West	47Q 715025 2147050	1,221		
Sink NA0105	NA0105	Central West	47Q 715850 2146975	1,219		
Sink NA0107	NA0107	Central East	47Q 719611 2147740	1,378	0	0
Sink NA0108	NA0108	Central East	47Q 718833 2147133	1,381	0	0
Sink NA0109	NA0109	Central East	47Q 718750 2145950	1,364		
Sink NA0110	NA0110	Central East	47Q 719800 2145950	1,220		
Sink NA0111	NA0111	Central East	47Q 719750 2145600	1,244		

Name	Code	Area	Co-ordinates	Altitude	Length	VR
Sink NA0112	NA0112	Central East	47Q 718332 2145597	1,389	0	0
Sink NA0113	NA0113	Central East	47Q 718600 2145550	1,386		
Sink NA0114	NA0114	Central East	47Q 718925 2144800	1,426		
Sink NA0115	NA0115	Central East	47Q 718500 2144650	1,362		
Sink NA0116	NA0116	Central East	47Q 718500 2144600	1,362		
Sink NA0117	NA0117	Central East	47Q 718466 2144336	1,350		
Sink NA0118	NA0118	Central East	47Q 718750 2144200	1,421		
Sink NA0119	NA0119	Central East	47Q 718300 2143800	1,381		
Sink NA0120	NA0120	Central East	47Q 718550 2143800	1,419		
Sink NA0124	NA0124	South	47Q 717600 2139600	1,201		
Sink NA0125	NA0125	South	47Q 717400 2139400	1,197		
Sink NA0126	NA0126	South	47Q 719750 2139400	1,332		
Sink NA0143	NA0143	Central East	47Q 718379 2145647	1,389		
Sink NA0175	NA0175	South	47Q 718008 2142034	1,250	≈10	≈5
Sink NA0178	NA0178	South	47Q 717835 2141980	1,253		
Tham Bpaet Sip	NA0149	South	47Q 718416 2139751	1,277	493+	95
Tham Champi	NA0044	North West	47Q 714695 2153651	943	393	32
Tham Din Neao	NA0083	South	47Q 717622 2140173	1,222	365+	29
Tham Ho Chai	NA0048	North West	47Q 715099 2153429	1,182	≈30	
Tham Ho Ying	NA0047	North West	47Q 715142 2153408	1,205	≈100	
Tham Huai Poen	NA0069	Central East	47Q 718582 2146224	1,350	467	175
Tham Khang Khao 1	NA0172	South	47Q 719417 2142560	1,630	≈40	≈40
Tham Khang Khao 2	NA0173	South	47Q 718552 2141729	1,398		
Tham Men	NA0132	Central West	47Q 715078 2147949	1,293	283	46
Tham Nam Dan	NA0045	Central West	47Q 716567 2148432	1,395	100	39
Tham Nam Tok Nam Poen	NA0068	Central East	47Q 718743 2146670	1,366	569	138
Tham Nok Nang En 1	NA0169	South	47Q 719344 2142468	1,621	≈25	≈25
Tham Nok Nang En 2	NA0170	South	47Q 719350 2142512	1,611	≈60	≈60
Tham Nok Nang En 3	NA0171	South	47Q 719416 2142543	1,620	≈25	≈25
Tham Pha Daeng	NA0019	North East	47Q 716201 2156899	971	≈100	
Tham Pha Daeng 2	NA0131	North East	47Q 718446 2157194	746	80	8
Tham Pha Phueng	NA0045	Central West	47Q 717062 2150051	1,387	4,750	476
Tham Pha Thong	NA0164	North East	47Q 719366 2152294	1,363	76+	64+
Tham Phu Hua Lan	NA0049	North West	47Q 715629 2152348	1,394		
Tham Pon	NA0084	Central East	47Q 718454 2145088	1,395	164	89
Tham Rai Phin	NA0142	North East	47Q 719298 2152044	1,392	338+	164+
Tham Ton Daolang	NA0168	South	47Q 719293 2142455	1,608	≈55	≈20
Tham Ton Som	NA0166	South	47Q 718894 2141536	1,406	≈6+	≈6+
Tham Ton Teum	NA0167	South	47Q 719198 2141805	1,466	≈10+	≈10+
Tham Tukkae	NA0151	Central East	47Q 718483 2144879	1,427	≈50	≈15
Tham Wa	NA0085	Central East	47Q 718499 2145078	1,405	78	25

2013 Expedition Members

Phil Collett (Shepton Mallet Caving Club), Oxfordshire, UK
 Martin Ellis (Shepton Mallet Caving Club), Phetchabun, Thailand
 Glenn Washburn, Texas, USA
 Tomek Wyderka, Chiang Mai, Thailand

2014 Expedition Members

Keith Batten (Shepton Mallet Caving Club), Somerset, UK
 James Begley (Shepton Mallet Caving Club), Somerset, UK
 John Biffin (Shepton Mallet Caving Club), Somerset, UK
 Terry Bolger, Vientiane, Lao PDR
 Jo Campbell (Shepton Mallet Caving Club), West Sussex, UK
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Phil Collett (Shepton Mallet Caving Club), Oxfordshire, UK
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 Ivan Hollis (Shepton Mallet Caving Club), Somerset, UK
 Sean Howe (Shepton Mallet Caving Club), Bristol, UK
 Sarah Payne (Wessex Cave Club), Somerset, UK
 Emma Porter (Shepton Mallet Caving Club), Shropshire, UK
 Estelle Sandford (Bristol Exploration Club), Somerset, UK

Expedition Diaries

2013

Sun 17 Mar	PC,ME,YS drive from Lom Sak to Nan. Meet GW
Mon 18 Mar	Tham Pha Tup : explore caves Meet TW off bus from Chiang Mai and drive to Ban Mani Phruk
Tue 19 Mar	Tham Pha Phueng : find Entrance Series Cave NA0122 : survey vadose series and start of old series Tham Pha Phueng : start survey of Entrance Series
Wed 20 Mar	Tham Bpaet Sip : guided to cave and partially explored Tham Tukkae : guided to cave
Thu 21 Mar	Tham Pha Phueng : trip to top of Fitch Pitch then explore & survey Entrance Series Tham Pha Phueng : resurvey from P7 to entrance Tham Pha Phueng : Entrance Series in evening to find GW
Fri 22 Mar	Leave Ban Mani Phruk and stay in Pua Tham Sua Dao : survey cave to P4 Tham Yok Wiman : explore to estimated P20 with stream below
Sat 23 Mar	Leave Pua

2014

Sun 16 Feb	Expedition personnel get together in Lom Sak.
Mon 17 Feb	Drive to Nan and Pua
Tue 18 Feb	Drive to Ban Mani Phruk Tham Pha Phueng : top of P7 Tham Pha Phueng : top of Fitch Pitch Cave NA0096 : locate, bypass P7 and stopped by P10 Cave NA0100 : survey
Wed 19 Feb	Tham Pha Phueng : rig Fitch Pitch Tham Champi : guided to cave & survey Cave NA0096 : survey to end chamber Shaft NA0097 & Sink NA0098 : locate and investigate
Thu 20 Feb	Tham Pha Phueng : Fossil Series Bypass Pitches Tham Pha Phueng : lower streamway to terminal sump Cave NA0122 : survey Muddy Passage to climb Cave NA0121 : explore to 7m pitch & look at other sites Surface : guided tour - Tham Rai Phin, Tham Pha Tong, NA0103 & NA0106
Fri 21 Feb	Cave NA0122 : survey Muddy Passage beyond climb Cave NA0135 : explore & survey

	Cave NA0121: rig shaft Cave NA0174: descend shaft & explore to choke Surface: guided tour to ridge east of NA0121 Surface: NA0103 & NA0104 doline
Sat 22 Feb	Tham Rai Phin: explore and survey to pitches Tham Pha Tong: explore and survey to P40 Cave NA0135: continue exploration & survey Cave NA0121: continue exploration & survey Cave NA0134: descend entrance pitch to P25
Sun 23 Feb	Tham Pha Phueng: Entrance Series Tham Pha Phueng: Waterfall Inlet Series below P7 Tham Pha Phueng: end of Fossil Series Cave NA0121: finish exploration & survey
Mon 24 Feb	Sink NA0073 & Cave NA0072: investigate Cave NA0134: finish exploration & survey Cave NA0135: continue exploration & survey
Tue 25 Feb	Tham Bpaet Sip: start exploration & survey Tham Rai Phin: rig pitches Cave NA0135: complete exploration & survey Nam Dam sink: investigate
Wed 26 Feb	Tham Rai Phin: continue exploration to P40 & derig Tham Pha Phueng: derig Shaft NA0097: investigate
Thu 27 Feb	Leave Ban Mani Phruk and drive to Lom Sak
Fri 28 Feb	Sort & clean kit in Lom Sak
Sat 1 Mar	Depart Lom Sak for Bangkok.
Sun 2 Mar	Depart Bangkok.

Equipment

In 2014 the following equipment was taken to Ban Mani Phruk:

- 1,017m SRT rope
(Lengths: 11, 16, 20, 25, 29 x 2, 30 x 3, 42 x 2, 43, 65, 100, 145, 190 x 2)
- 163m handline rope
(Lengths: 24, 29, 36, 74)
- 45m electron ladders
(Lengths: 6, 7.5 x 4, 9)
- 2 x electric drills
- Hilti 8mm stainless steel anchors, 2 x Hilti setting tools
- 8mm & 10mm through bolts
- 8mm spits, 2 x spit drivers
- 63 x hangers and maillons
- 12 x karabiners
- 4 x rope protectors
- 21 x tape slings
- 4 x wire belays
- 2 x spreader
- 6 x tackle sacks
- 5 x DistoX electronic survey instruments

- 1 x 30m surveying tape
- 1 x set of surveying compass and clinometer
- 1 x rope washer
- 6 x PMR445 radios

Acknowledgements

We would like to thank Mr Phinit for allowing us to stay at the Ban Mani Phruk Security Development Project headquarters, Jaeng for ensuring our stays at the Project went without a hitch and Wirot for guiding us to many caves.

The 'base camp crew' of Yuphin, En, Puoy, Noy and Aye for doing all the cooking.

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Travis Perkins, Wells for a Bosch 18v cordless drill.

EVA Air for an additional 5 kg per person additional luggage allowance.



This report was compiled by Martin Ellis (April 2014) from contributions by the expedition members.



Photograph 14: Planning the next day's explorations (Sean Howe)

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