

# Izgubljeni Raj – Migovec 2011



Where have all the cavers gone?

# MIGOVEC CAVERS

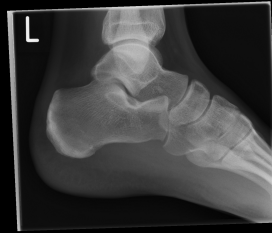


YOUR EXPEDITION NEEDS

# YOU"







(2 broken heels)



40	<p><b>Jun 24 Fri 12.07 Quaking Pot, North Yorkshire - Cave Rescue</b></p> <p>A caver (m, 22) fell about 10m when he lost control abseiling down the third pitch, sustaining fractures to both heel bones. Following treatment by CRO he was hauled up the pitches and assisted along the crawls to the surface. A team doctor provided further treatment before the casualty was transferred by stretcher to an air ambulance for evacuation off the hill.</p>	150
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Edale Mountain Rescue Team  
 Incident #16  
 Sunday – 06/03/2011 – 13:15  
**Fallen Climber**

The team were called to a fallen climber at Froggatt Edge. Whilst soloing at the Downhill Racer area of the crag he fell off and suffered a head injury which induced a short seizure. He was given medical attention by one of our paramedics in conjunction with an EMAS paramedic. After which he was evacuated to the top of the crag and flown to the NGH in Sheffield by Helimed 72.

(10 broken bones)



# Talk Structure

- Tolminski Migovec
  - Where? Why? Exploration history
  - Living on the Mountain; Living in the Caves
- Exploration Findings (Vrtnarija)
  - Insomnia: The Deep Wet Lead
  - The Serpentine, Let na Drugi Svet & Lower Pleasures
  - Kamikaze: To the East
- Conclusion & The Future
  - Did Someone Mention the Connection?









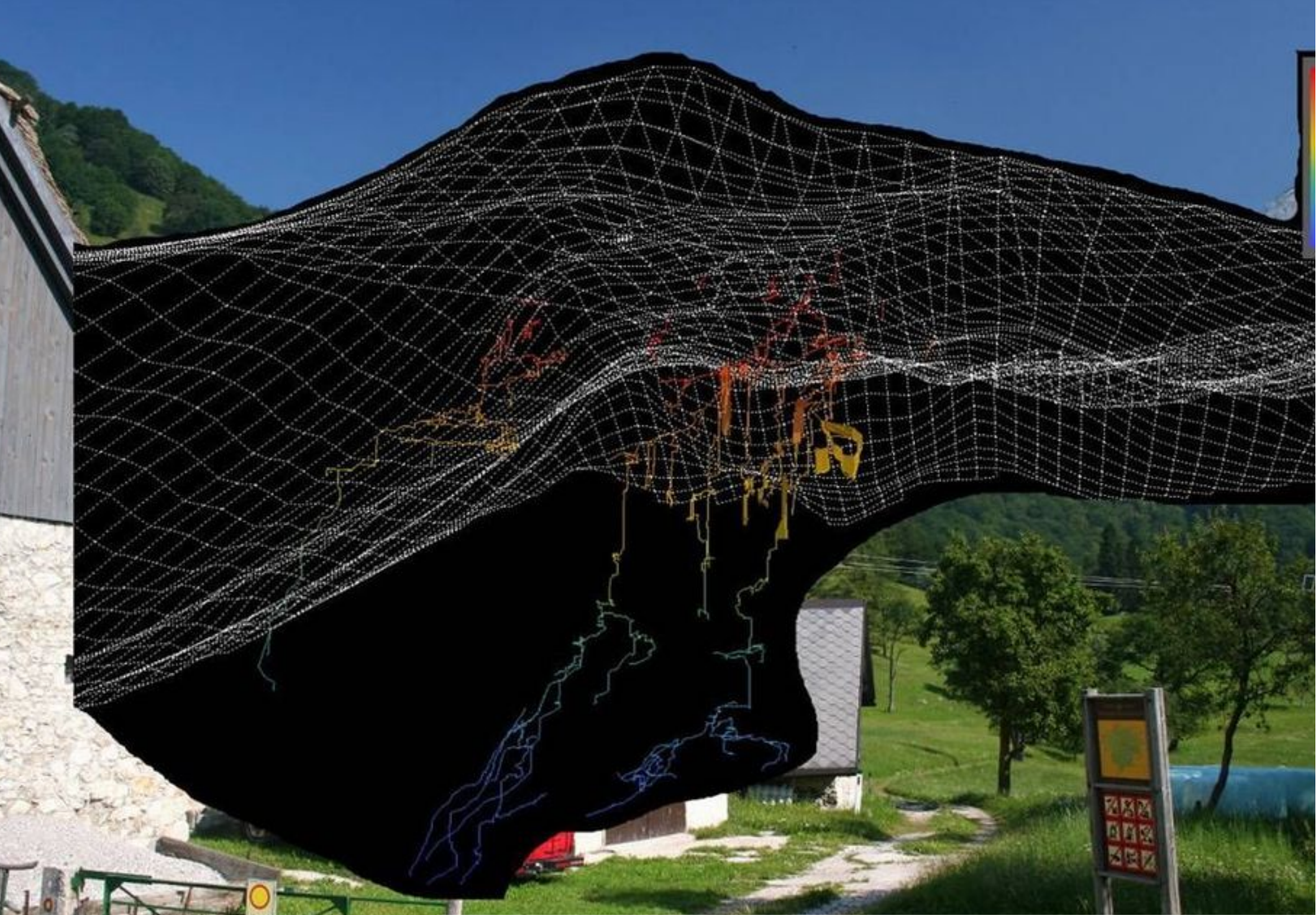


Tolminski Migovec  
1868m

Ravne  
912m

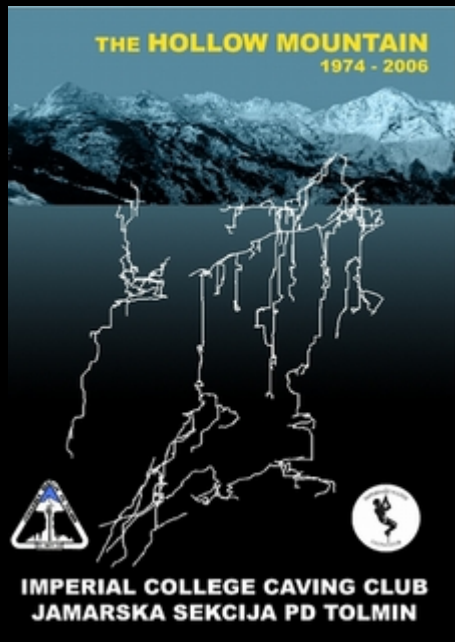






**27.86km total cave passage (2011)**

# History of Migovec

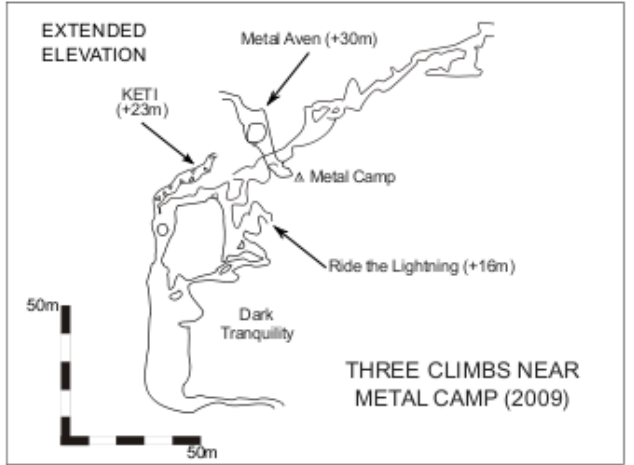
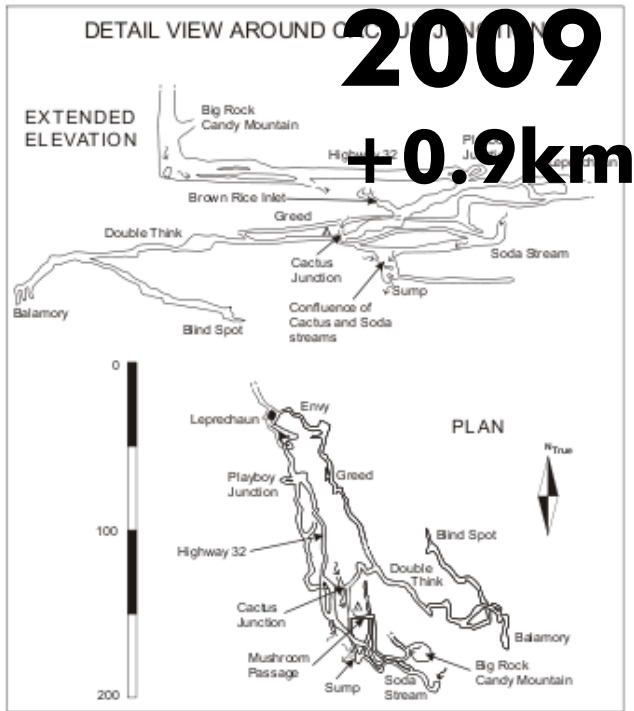
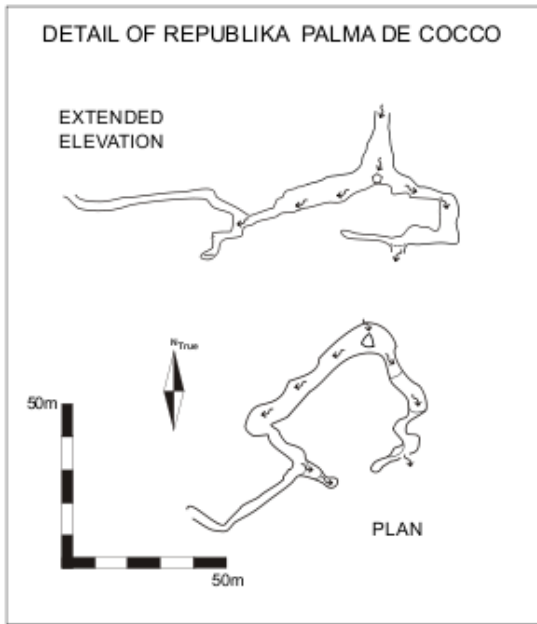
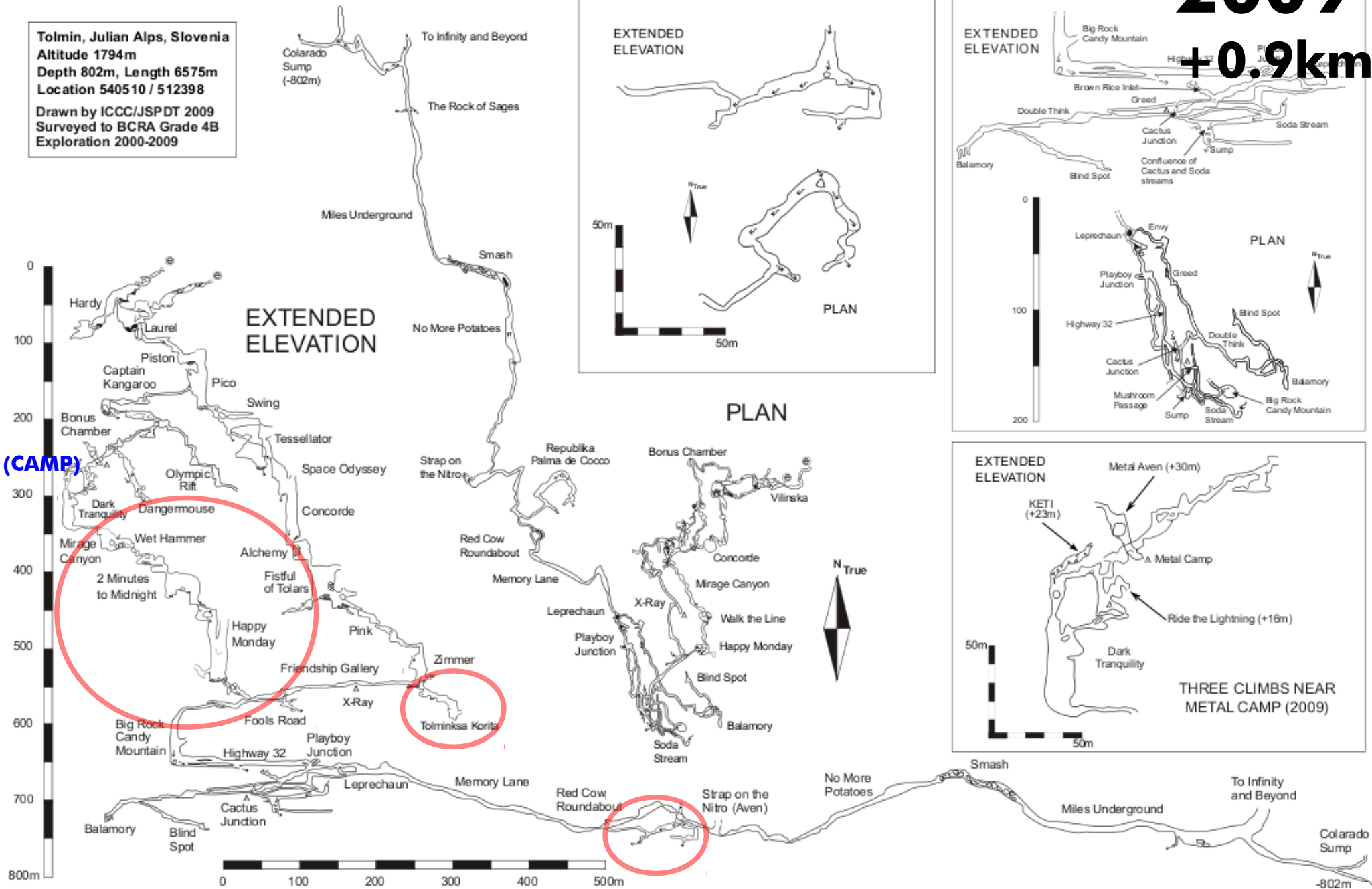


- Exploration 1974–2006 covered in 'The Hollow Mountain'
  - PDFs Free & online, printed copies at cost (£6.31 + P&P) from Lulu.com
- 2007: New caves on Western Edge of plateau, "Kill 'em All"
- 2008: Rerig. M2 (-350m), concerted efforts pushing Captain Kangaroo



# VRTNARIJA

Tolmin, Julian Alps, Slovenia  
 Altitude 1794m  
 Depth 802m, Length 6575m  
 Location 540510 / 512398  
 Drawn by ICCC/JSPDT 2009  
 Surveyed to BCRA Grade 4B  
 Exploration 2000-2009








**2009**  
**+0.9km**

# VRTNARIJA

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 Surveyed to BCRA Grade 4B  
 Exploration 2000-2010

# 2010 +2.2km

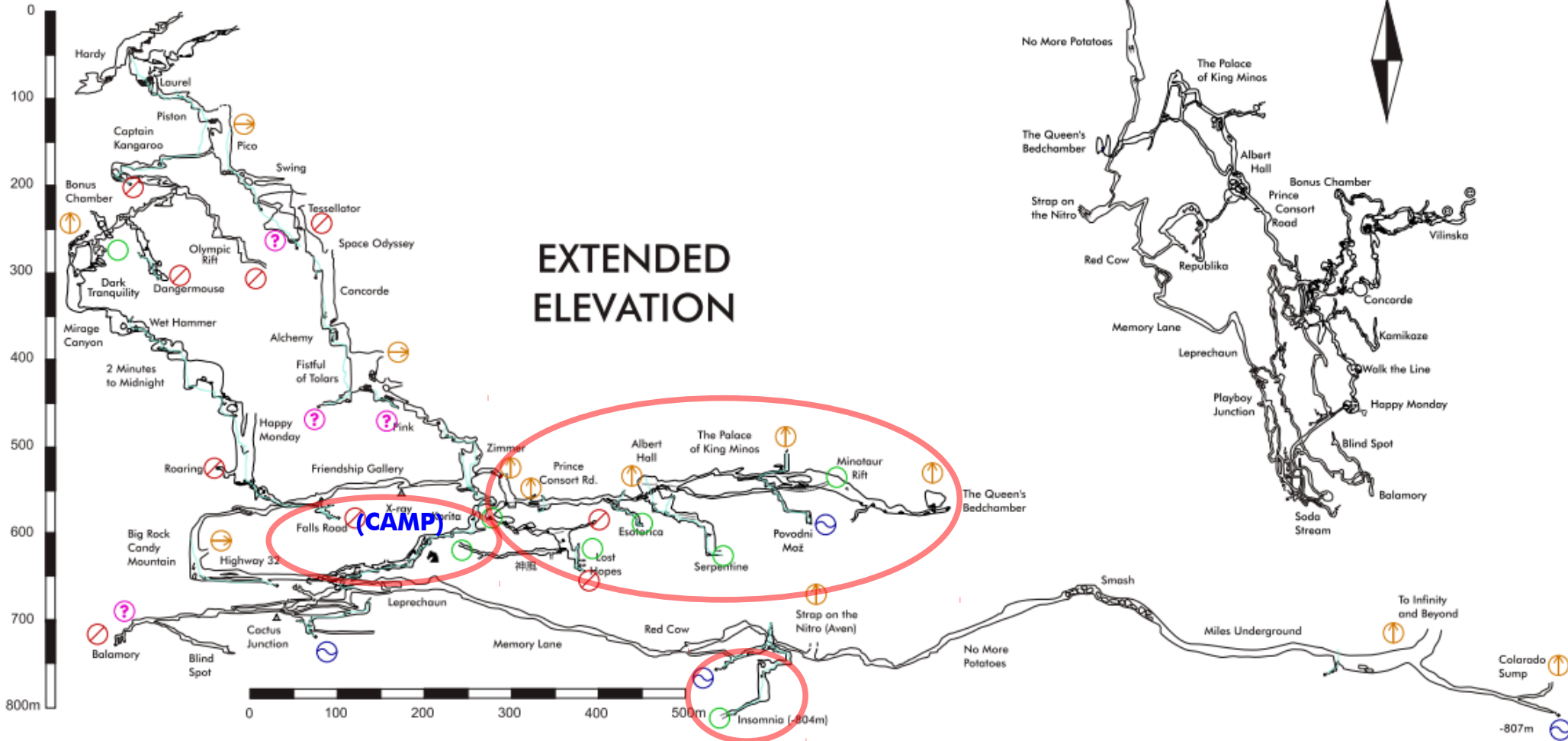
## Guide to the Leads

-  Lead Requires Enlargement
-  Open Lead
-  Sump
-  Climbing Lead
-  Unsure of Situation

## PLAN



## EXTENDED ELEVATION





# Living on the Mountain



~1km  
Ascent



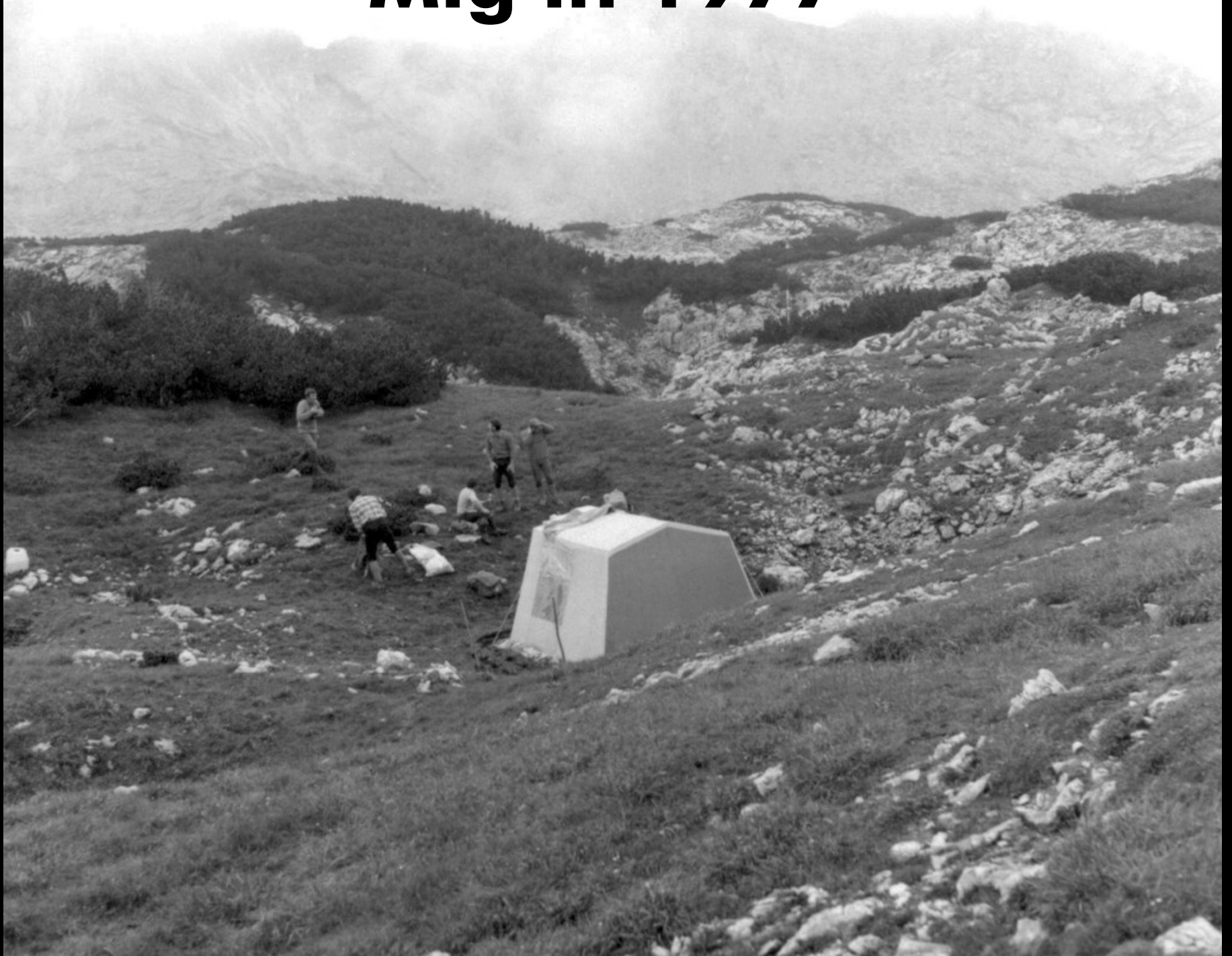








# Mig in 1977





# Mig in 2008





# The Bivi

























# Solar Power





# Snow in July?!





# Camp X-Ray (2003, 2010–2011) -550m









2011





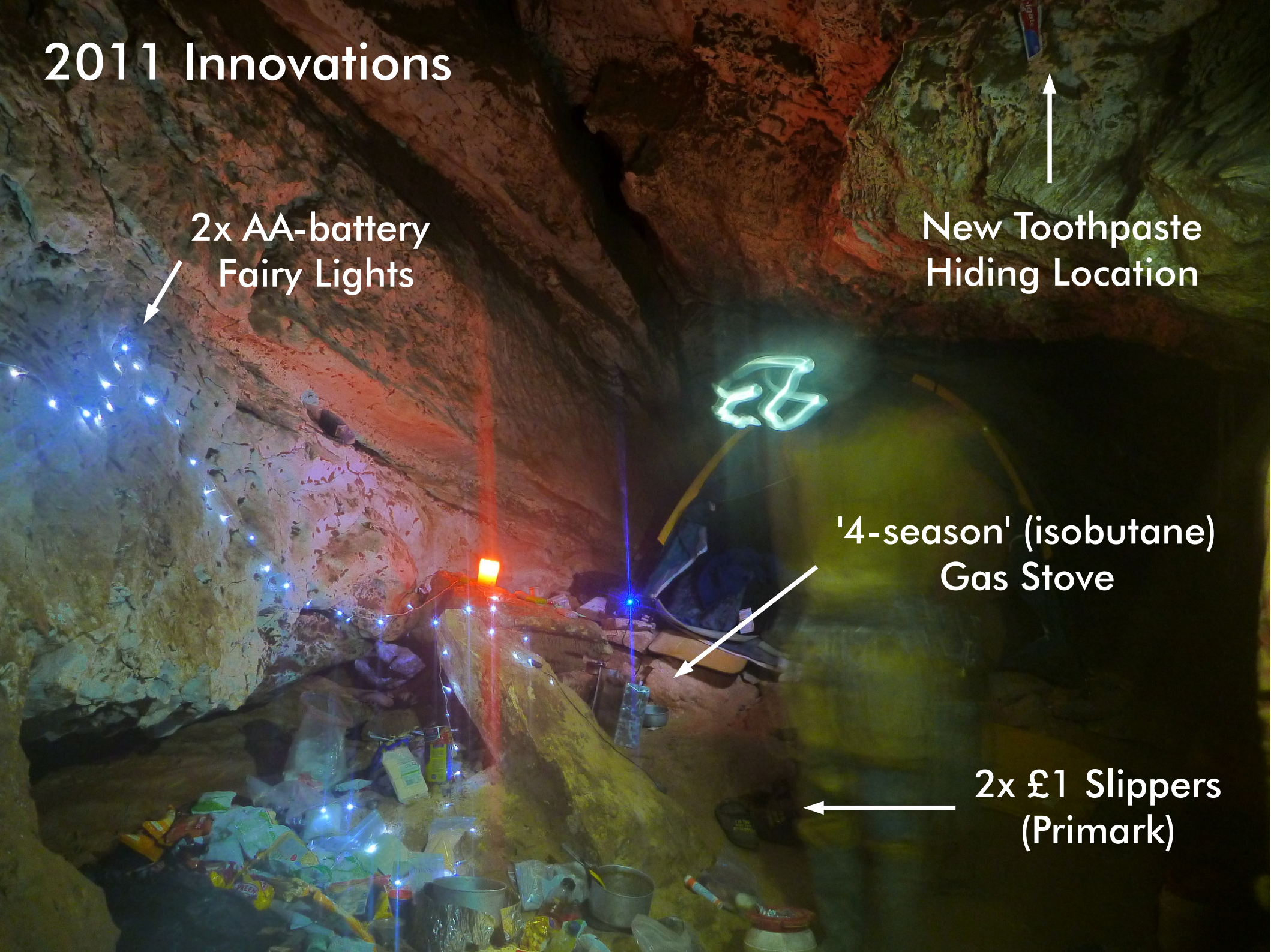
# 2011 Innovations

2x AA-battery  
Fairy Lights

New Toothpaste  
Hiding Location

'4-season' (isobutane)  
Gas Stove

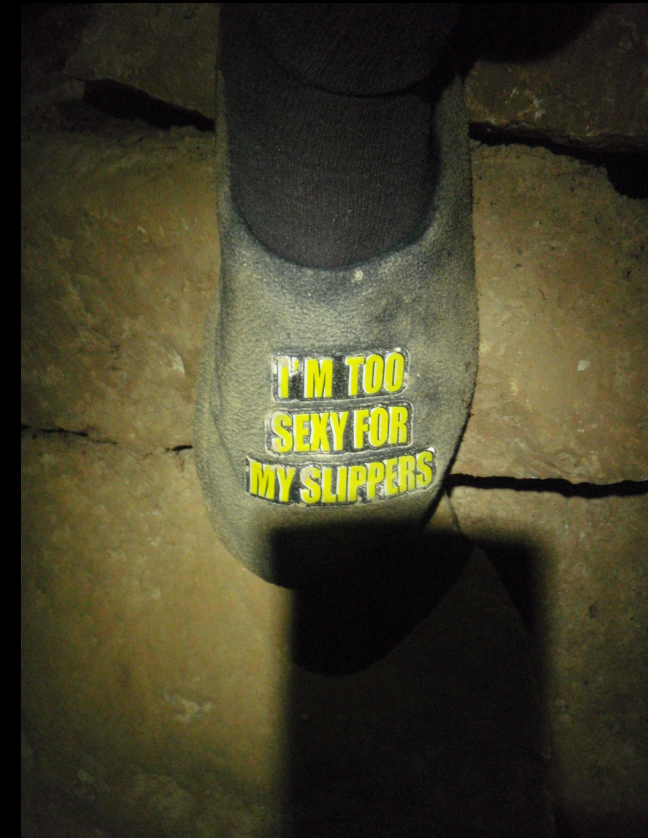
2x £1 Slippers  
(Primark)

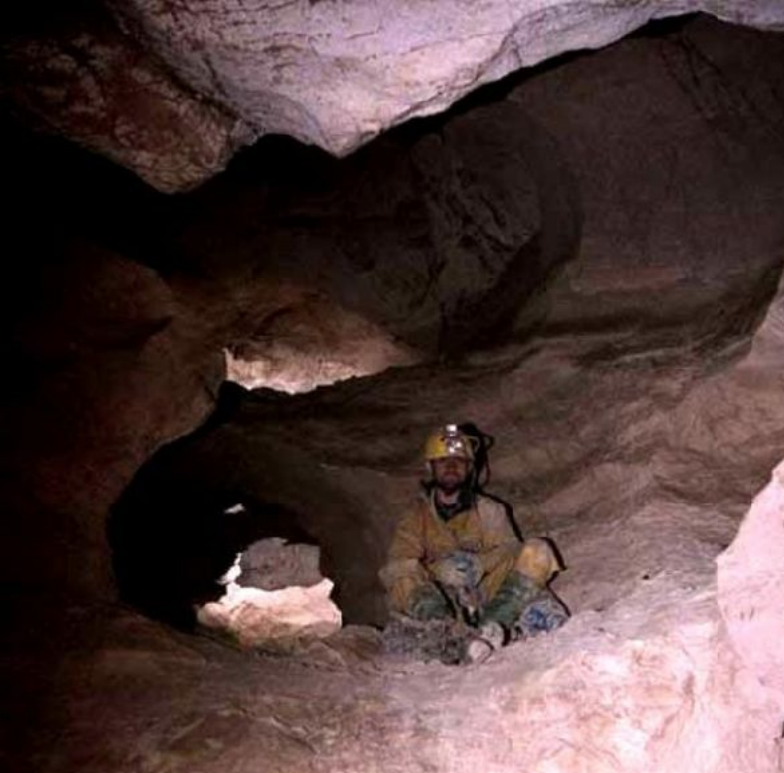




# 'Plenty Comfort' Camp

Rotating 2x2-person 'hot bedding camp'  
Mostly 2-night 3-day camps (2 work days)  
→ 12-cavers continuous @ full capacity

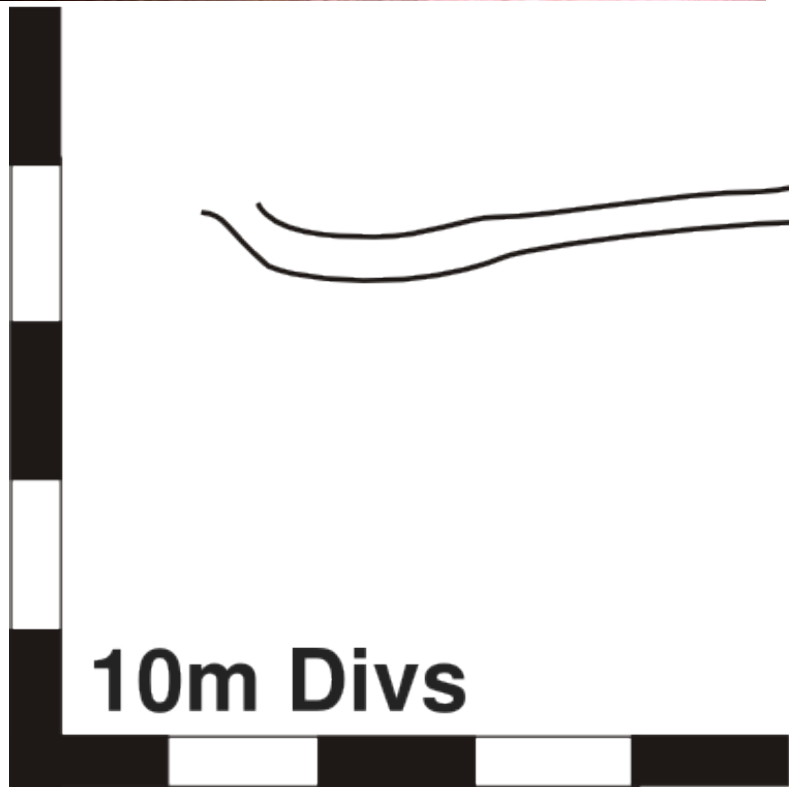




**2009: 'Republica Palma de Coco'**

**2010: 'Insomnia'**

**58m vertical extension (-802m)**

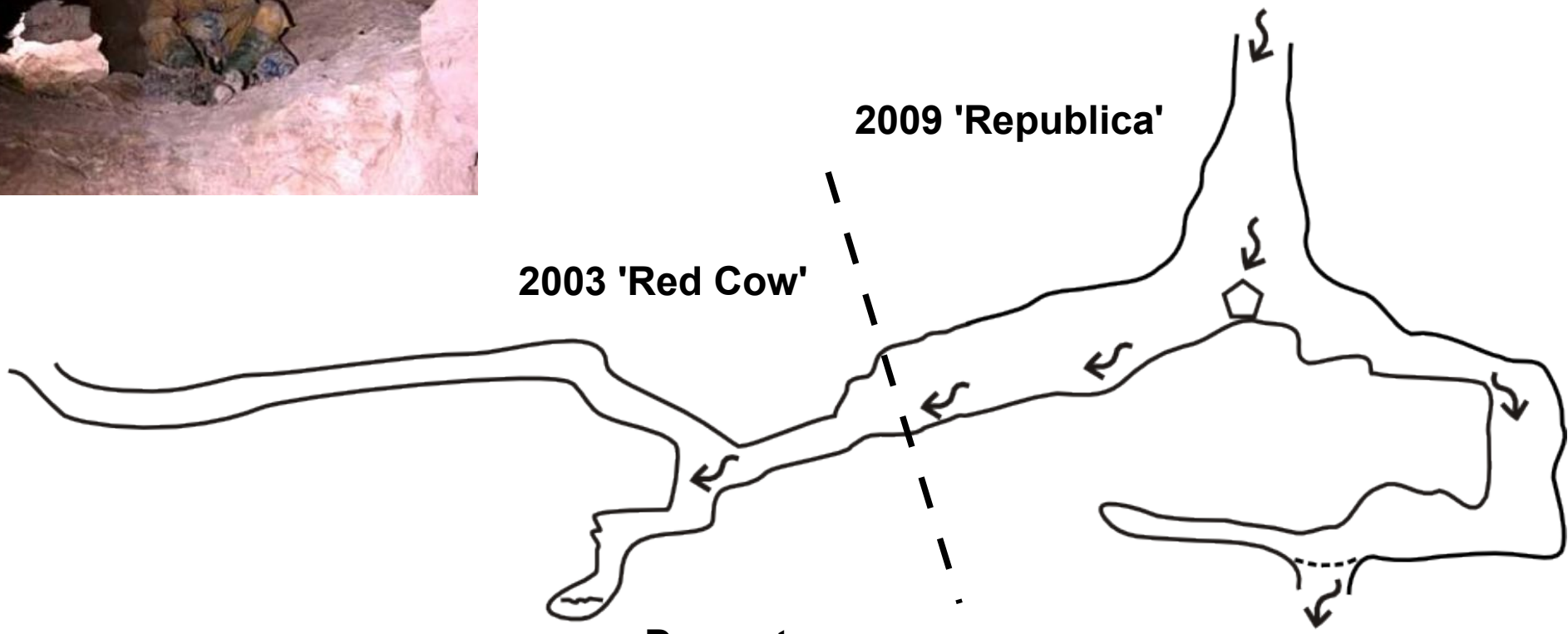


**2003 'Red Cow'**

**2009 'Republica'**

**Downstream  
Sump (perched)**

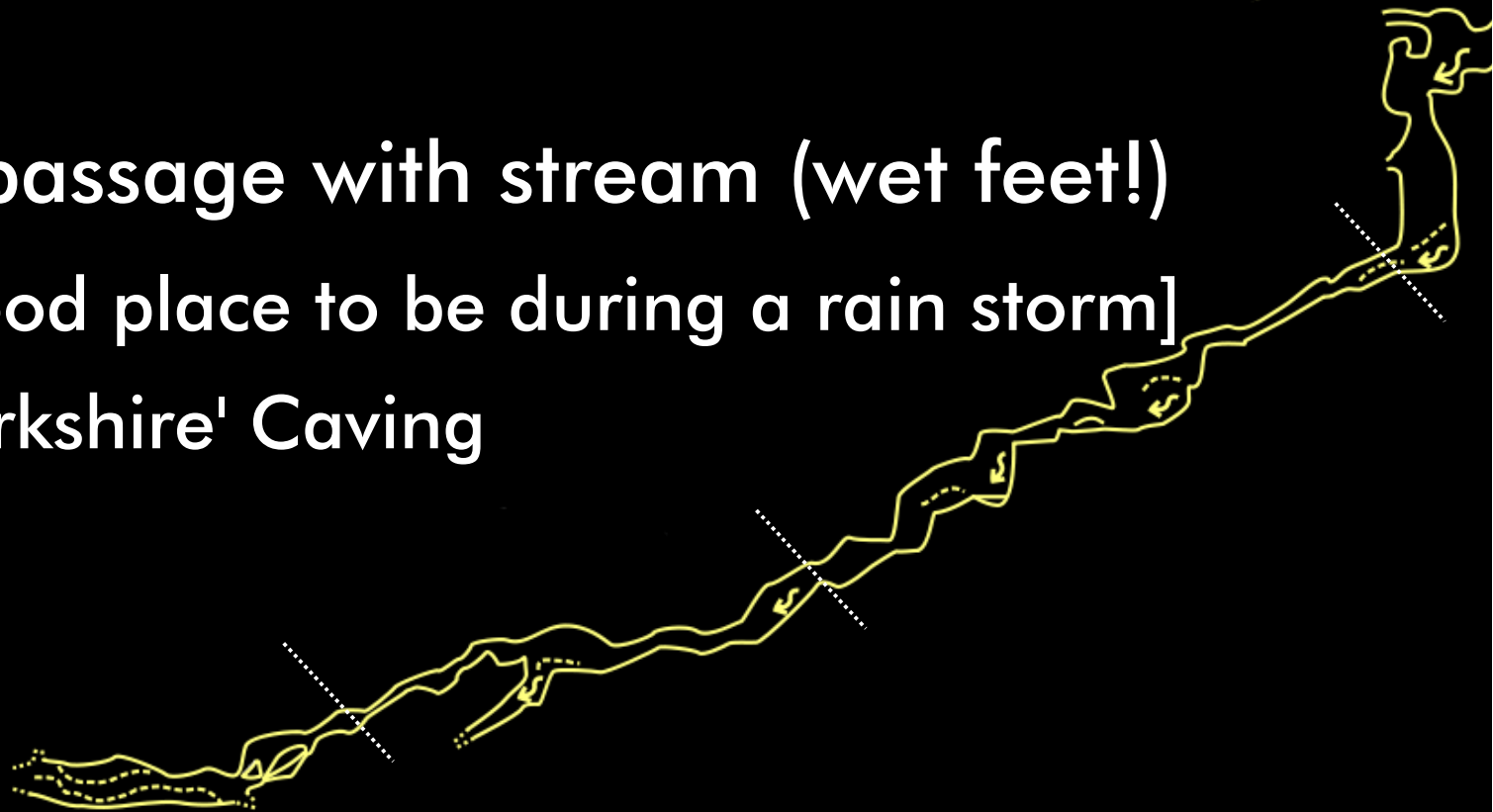
**Can see 30-odd  
metres down  
rift + cascades**





# Insomnia: The Deep Wet Lead

- ~4—5 hr return from pushing front → camp
- (Insomnia -802m → Day Dreamers -861m → Penguin's Egg -871m → Winter's Journey -888m)
- Confined passage with stream (wet feet!)
  - [Not a good place to be during a rain storm]
  - Great 'Yorkshire' Caving





-885m





-888m





# Unhappy Ending?

- 3 trips down here this summer
- Wet route becomes impassably tight (@ -875m)
- Dry bypass enters chamber with significant silt deposits, sound of water through too-tight rift
- Draught emerges from too-tight rift and follows 70° inclined bedding NNW
- Hypothesise we're above a (perched?) sump that backs up
- Bedding plane squeeze force-able to a sump bypass?



# Migovec's Usual Tricks



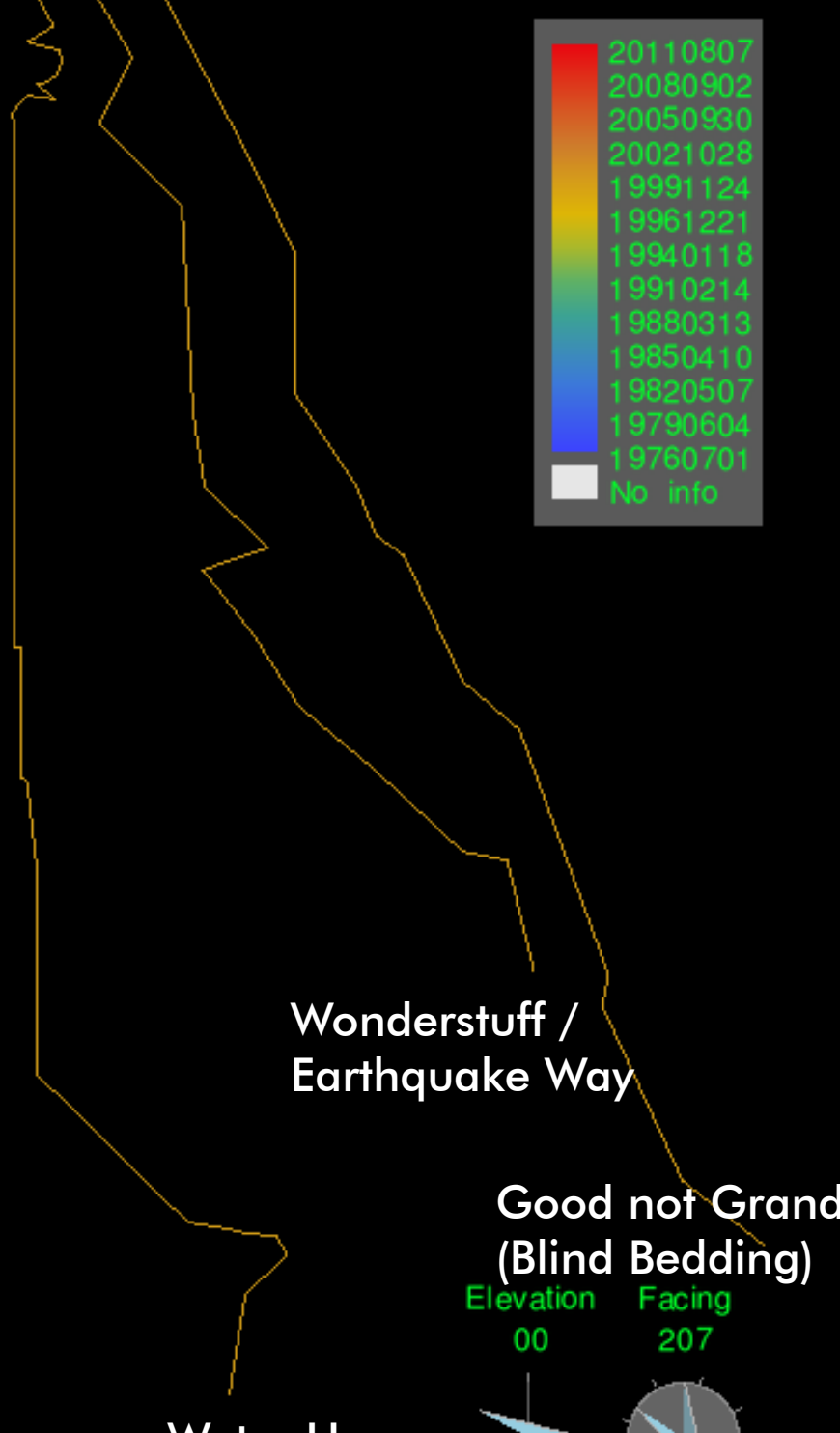
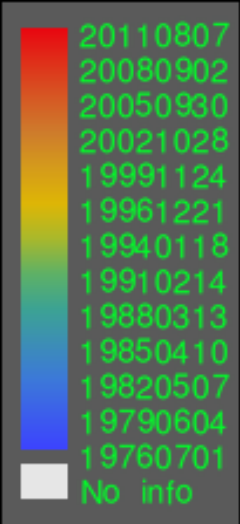
Green Back (Vrtnarija, -297m)



Stalemate (Vrtnarija, -659m)



# Water Table at +890m Sea Level ?



Winter Journey (2011)

Pencil Sump

Wonderstuff /  
Earthquake Way

Good not Grand  
(Blind Bedding)

Elevation 00 Facing 207



Water Hope



0 50m



# Prospects?

- 250m separation between the two sumps in Sysmig & probable (currently inaccessible) sump level in Vrtnarija
- Geology 'best guess' is water table dipping at  $\sim 15^\circ$  from SE  $\rightarrow$  NW
- We have deep leads in Vrtnarija from 2004 that are 800m NNW of the hypothesised sump ...  $\sim 100$ m more depth potential

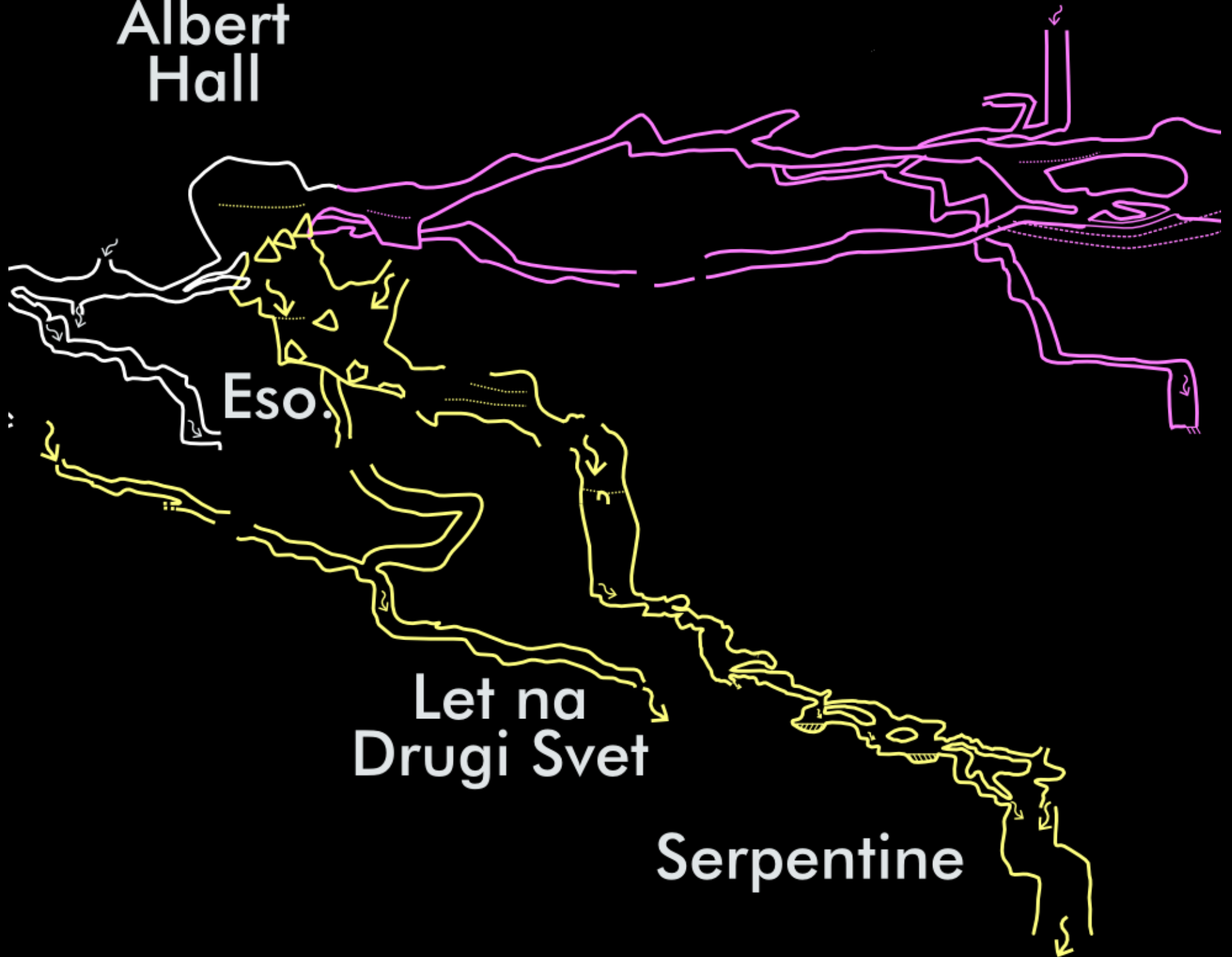


# The Serpentine & Let na Drugi Svet





**Albert  
Hall**



**Eso.**

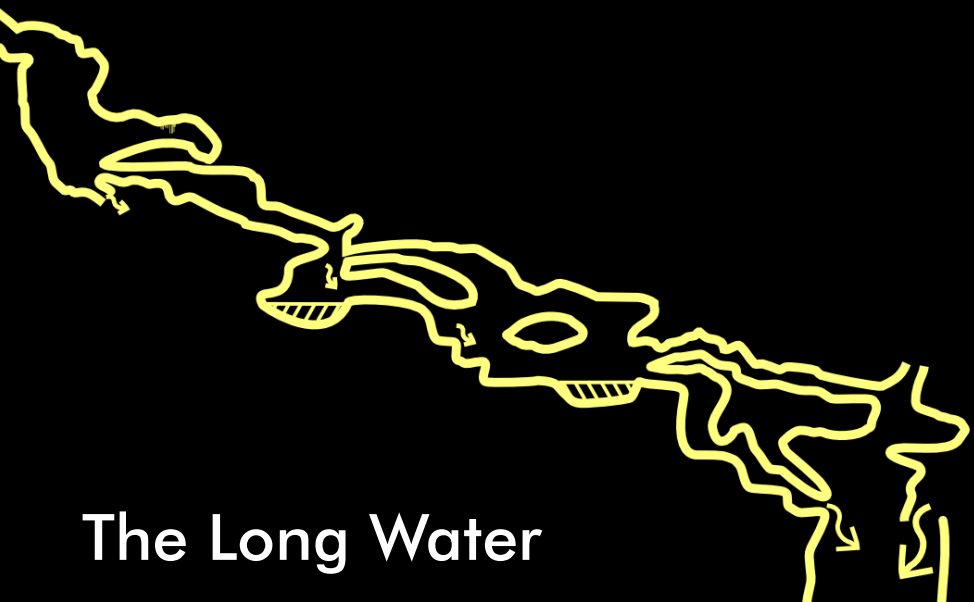
**Let na  
Drugi Svet**

**Serpentine**









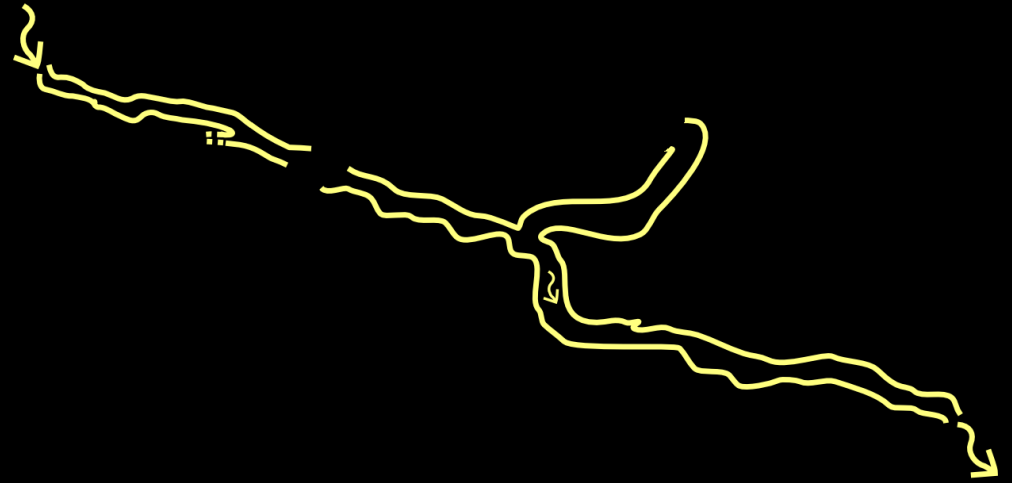
The Long Water



# Let na Drugi Svet ( Flight to Another World )









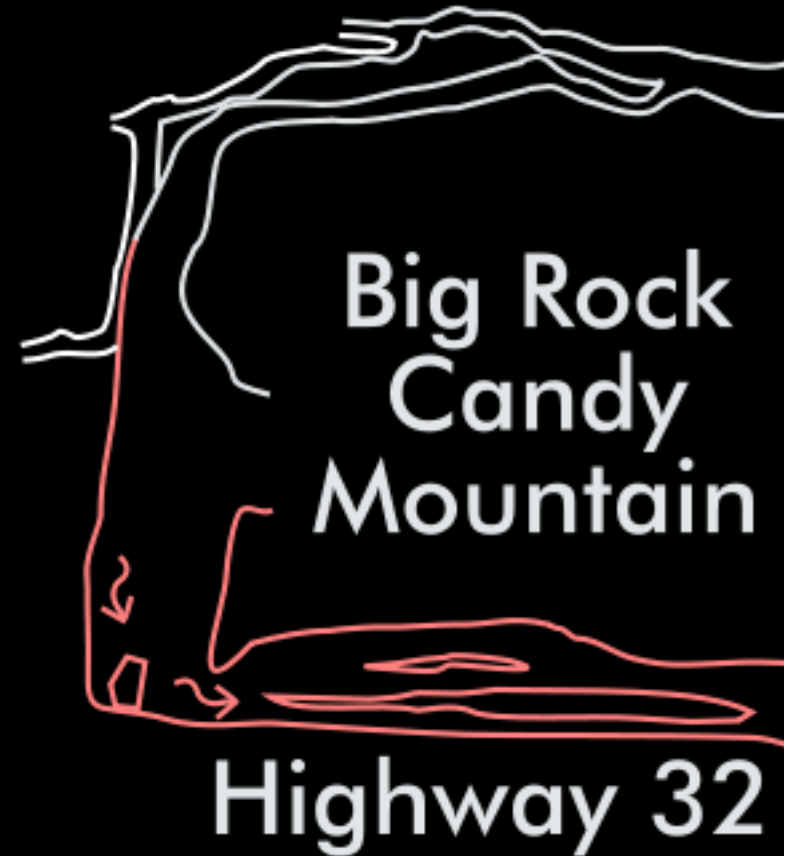
# Queen's Bedchamber



# Cheetah Swing

# Lower Pleasures

A dig that went!

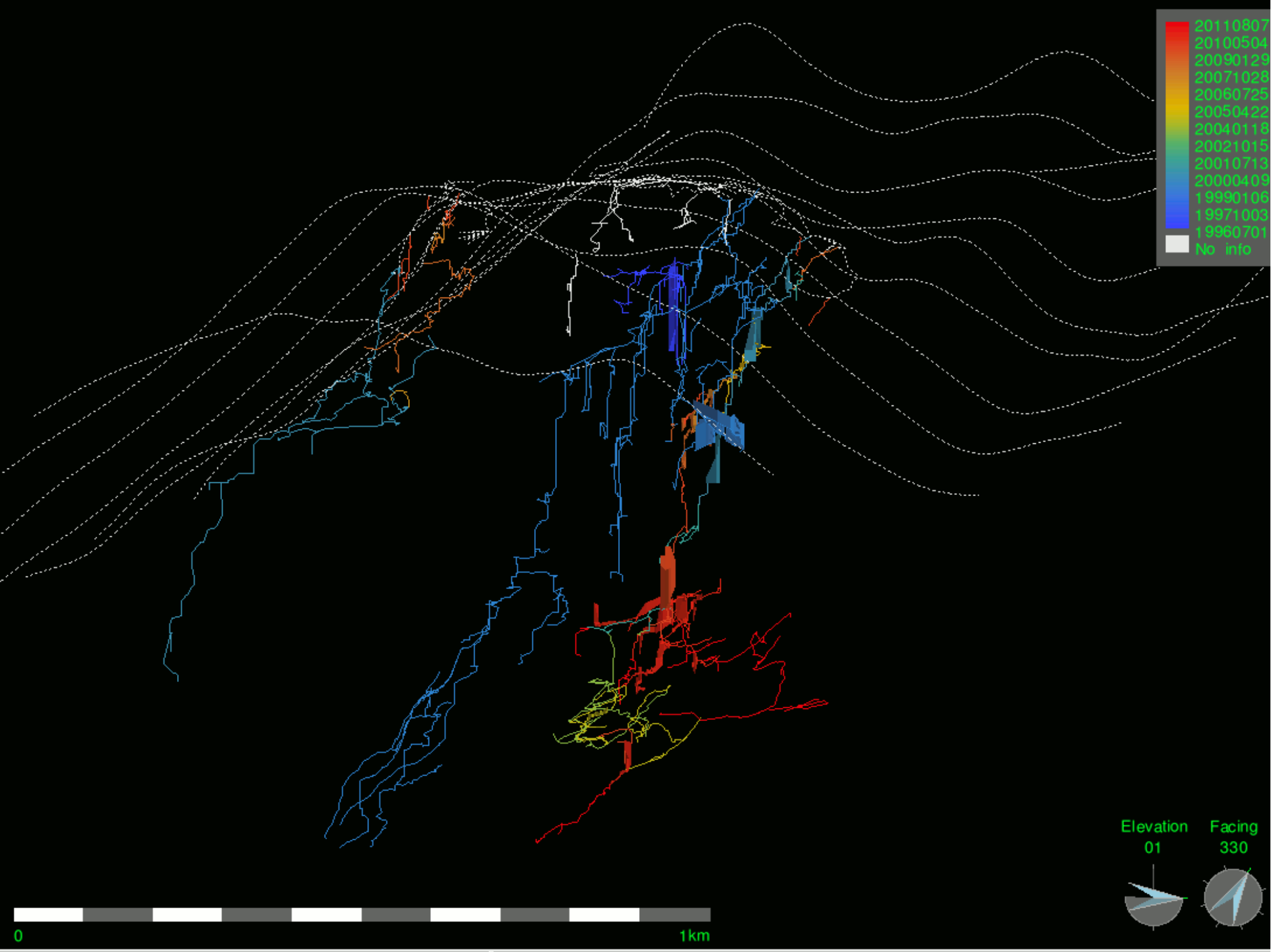




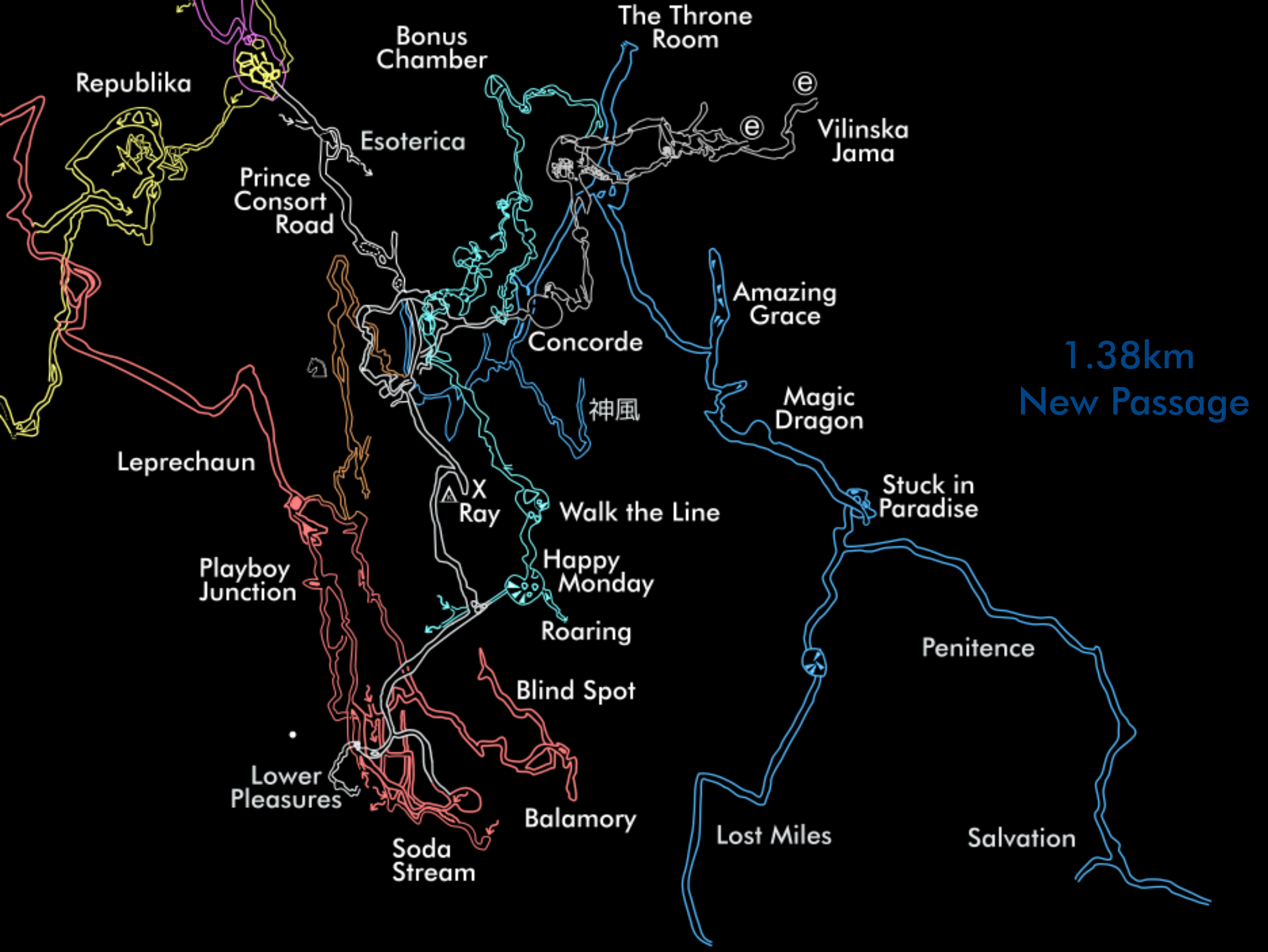
# Kamikaze













# Stuck in Paradise (P69m)



Stuck in  
Paradise



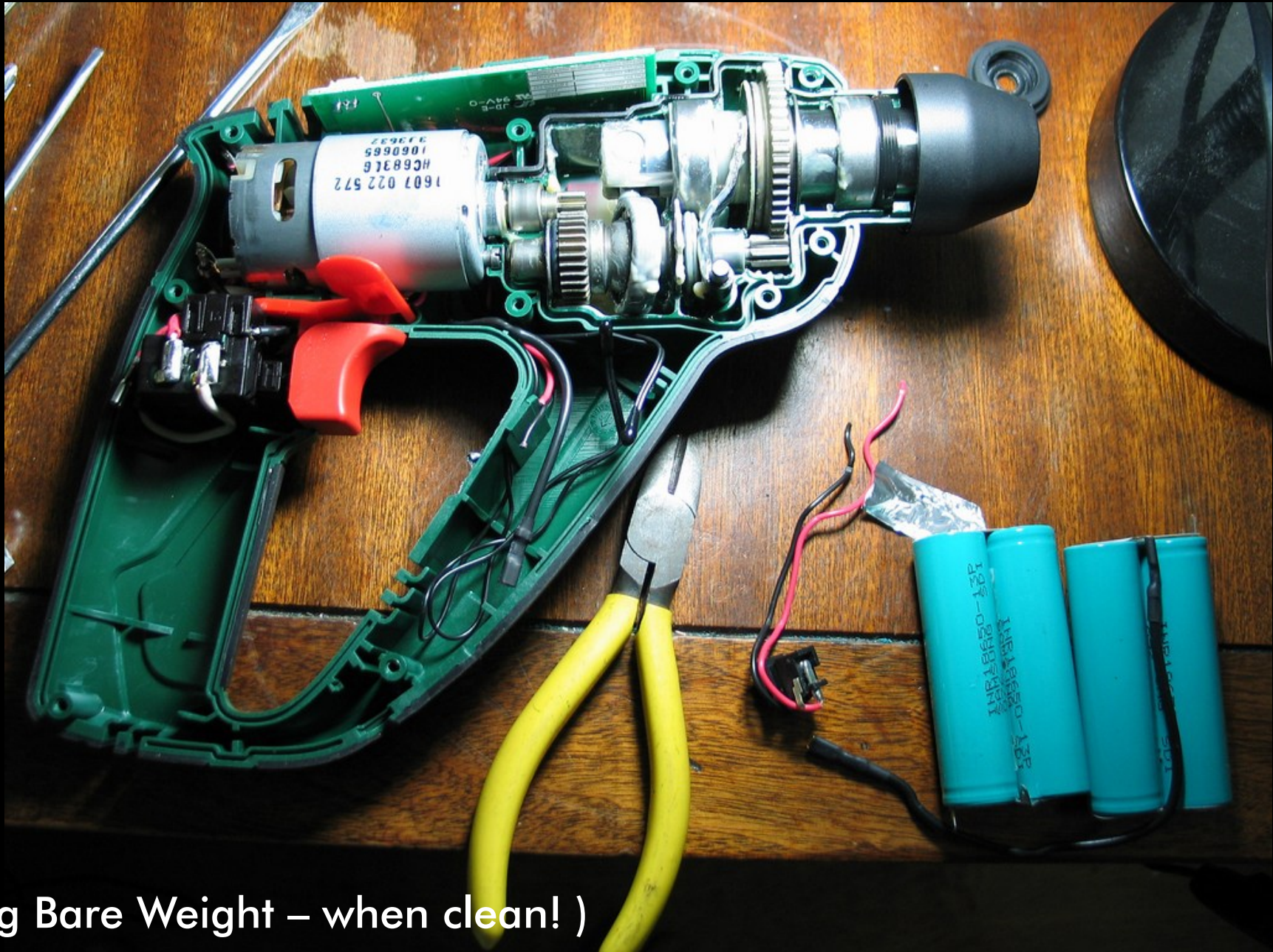
# Bosch's Uneo



Bosch 'do it' UK



# A Caver's Uneo



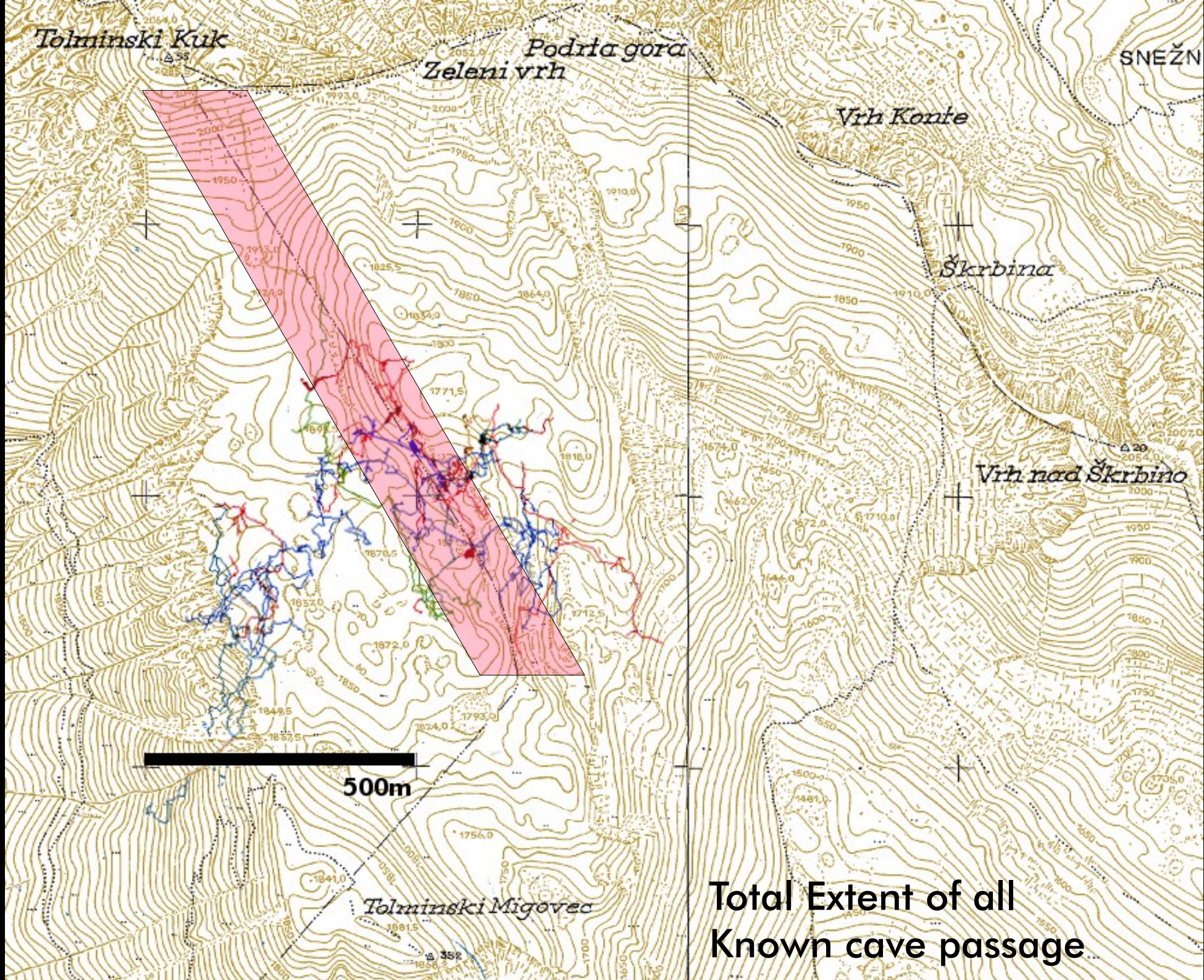
( 900g Bare Weight – when clean! )



**50+ Bolts, 200m rigging later...**

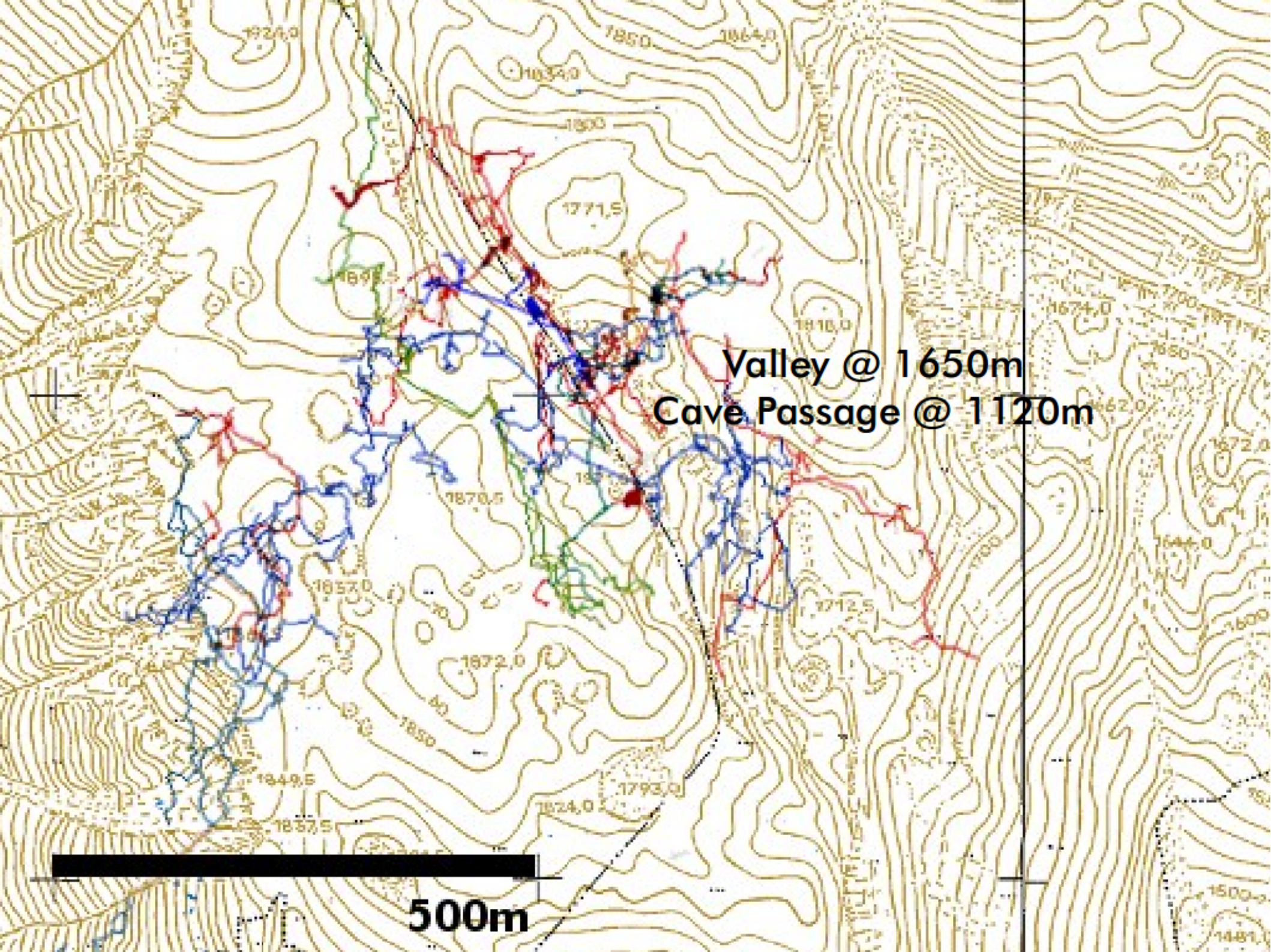






Total Extent of all  
Known cave passage



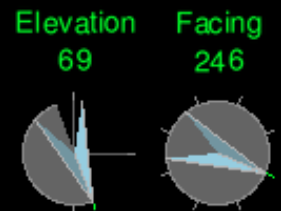


Valley @ 1650m  
Cave Passage @ 1120m

500m

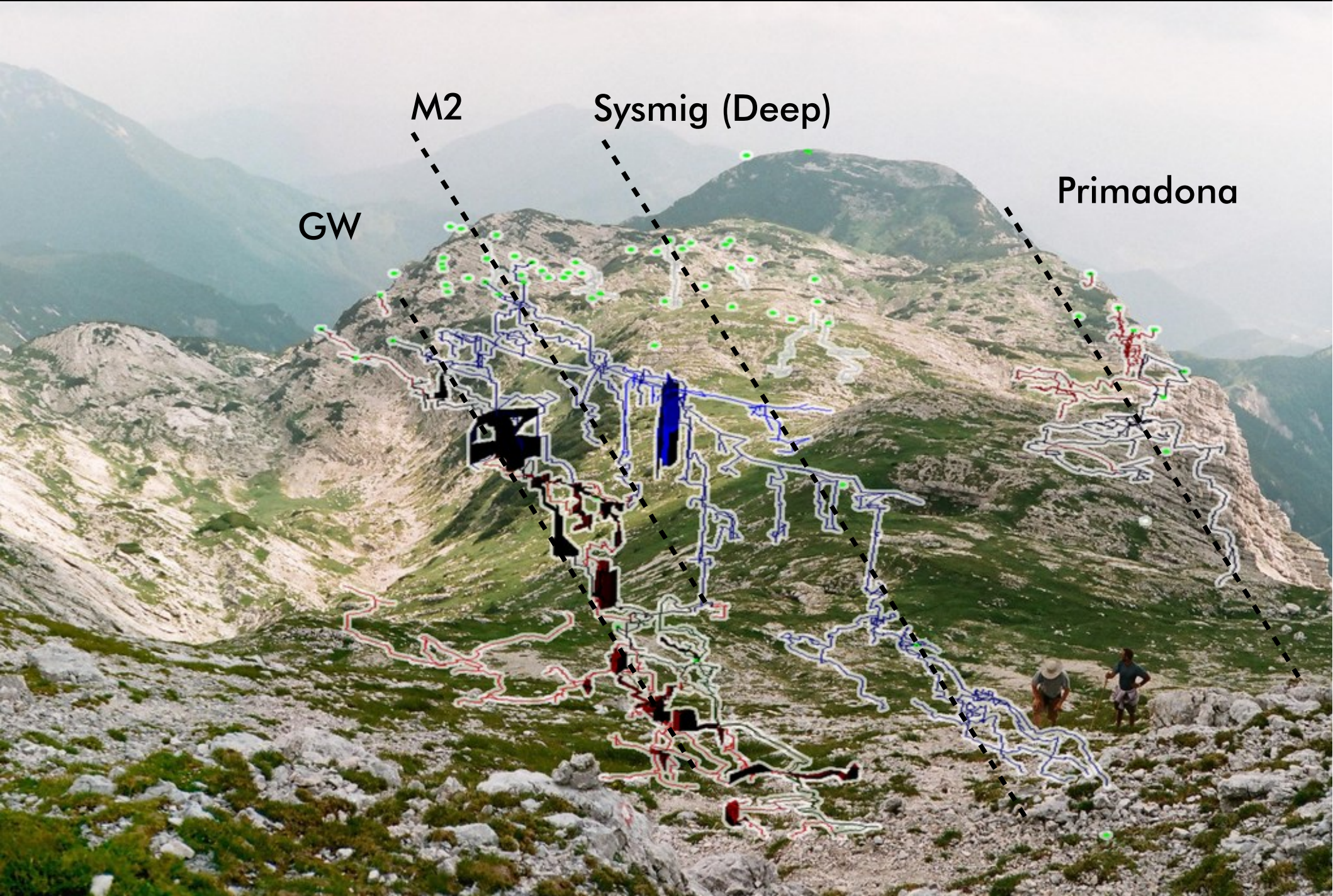


# The Vrtnarija Slab





# To the East! - 1.38km





# CaverStats

- 29 cavers this summer (Aged 19–59)
  - 14 UK-based cavers, 14 Slovene, 1 joint
- Made 77 caver-trips
- 21 cavers spent 77 caver-nights at underground camp
- Exploration occurred over a 14-day period

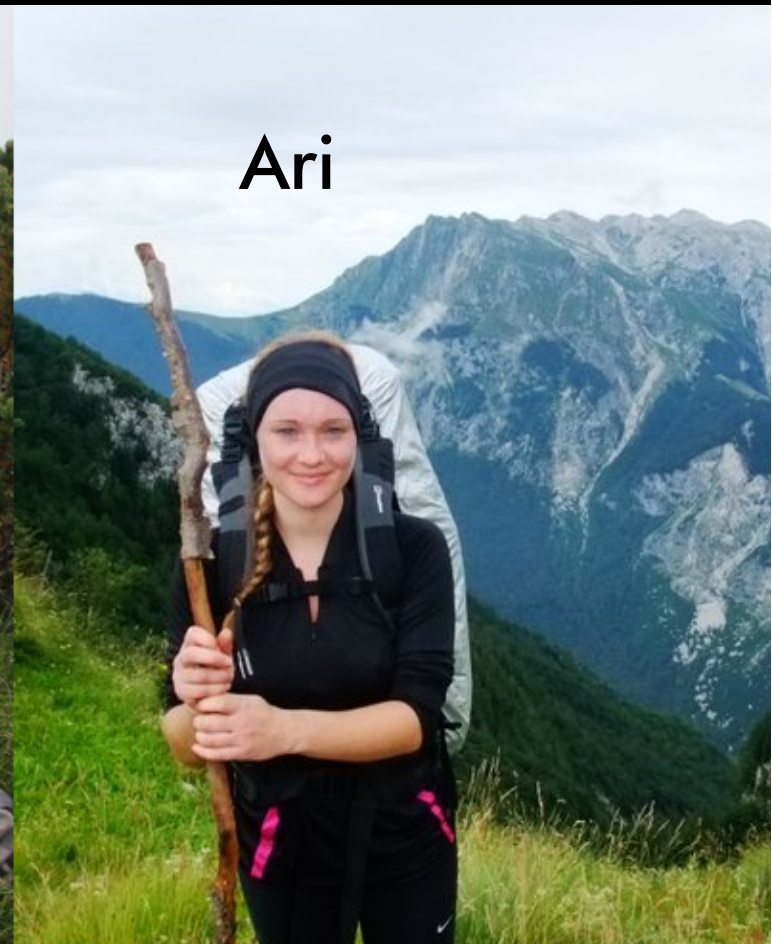


# First Expedition

Four undergraduates on their first expedition

Majority made it to underground camp & pushed cave at  $>500\text{m}$  deep

→ Training & building experience more important than metres! ←





# SpeleoStats

- 2009–2011 Doubled Length of Vrtnarija
  - All by exploration deeper than -350m, vast majority on overnight camping trips
- System Migovec & Vrtnarija now #5 & #6 longest in Slovenia (#7 and #10 deepest)
- If joined they are 22.6km (Longest in Slovenia... )

Vrtnarija:            2010 → 2011

8796m / 807m → 11025m / 888m






Sysmig: (2008) 11.49km / 970m



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## Guide to the Leads

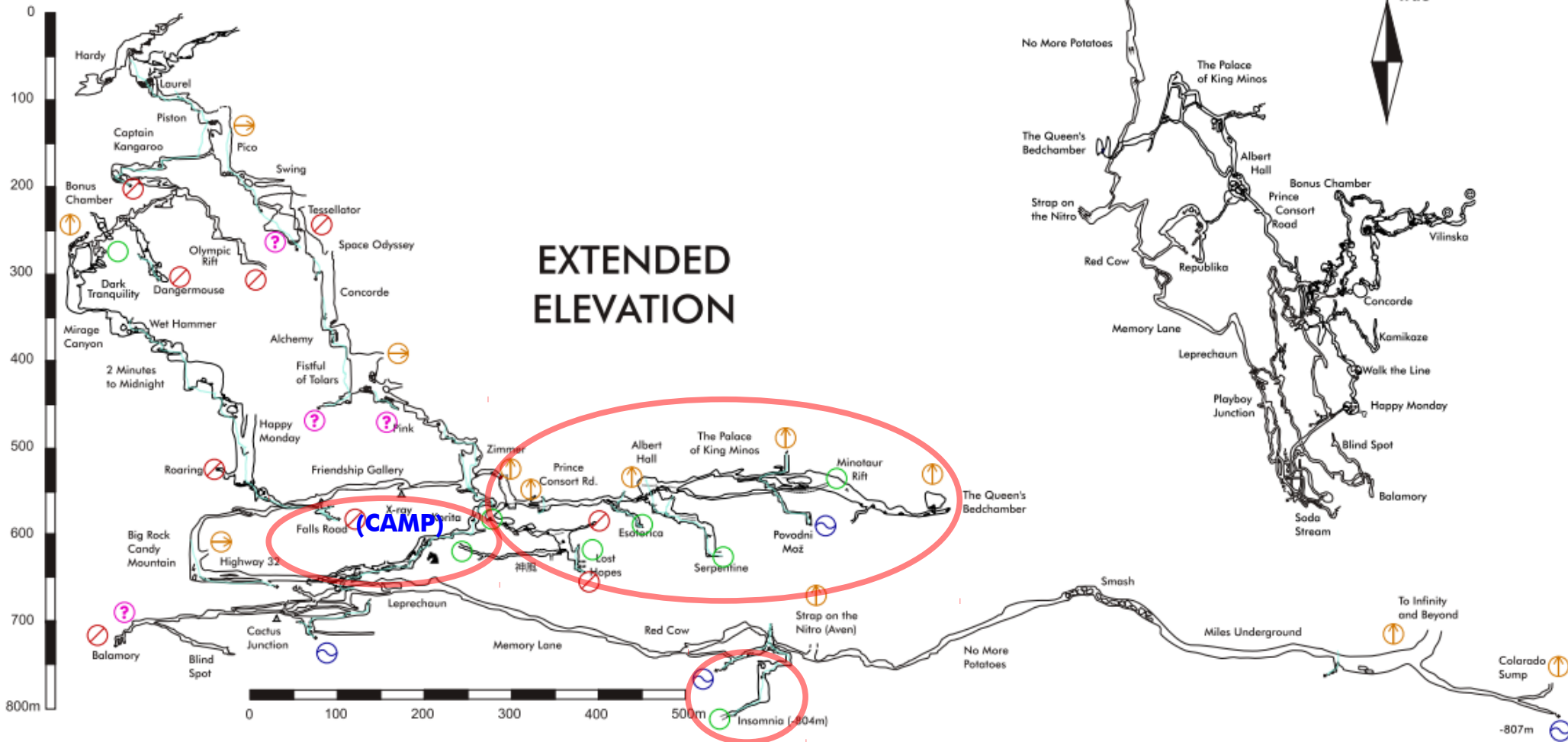
-  **Lead Requires Enlargement**
-  **Open Lead**
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# 2010 +2.2km

## PLAN



## EXTENDED ELEVATION





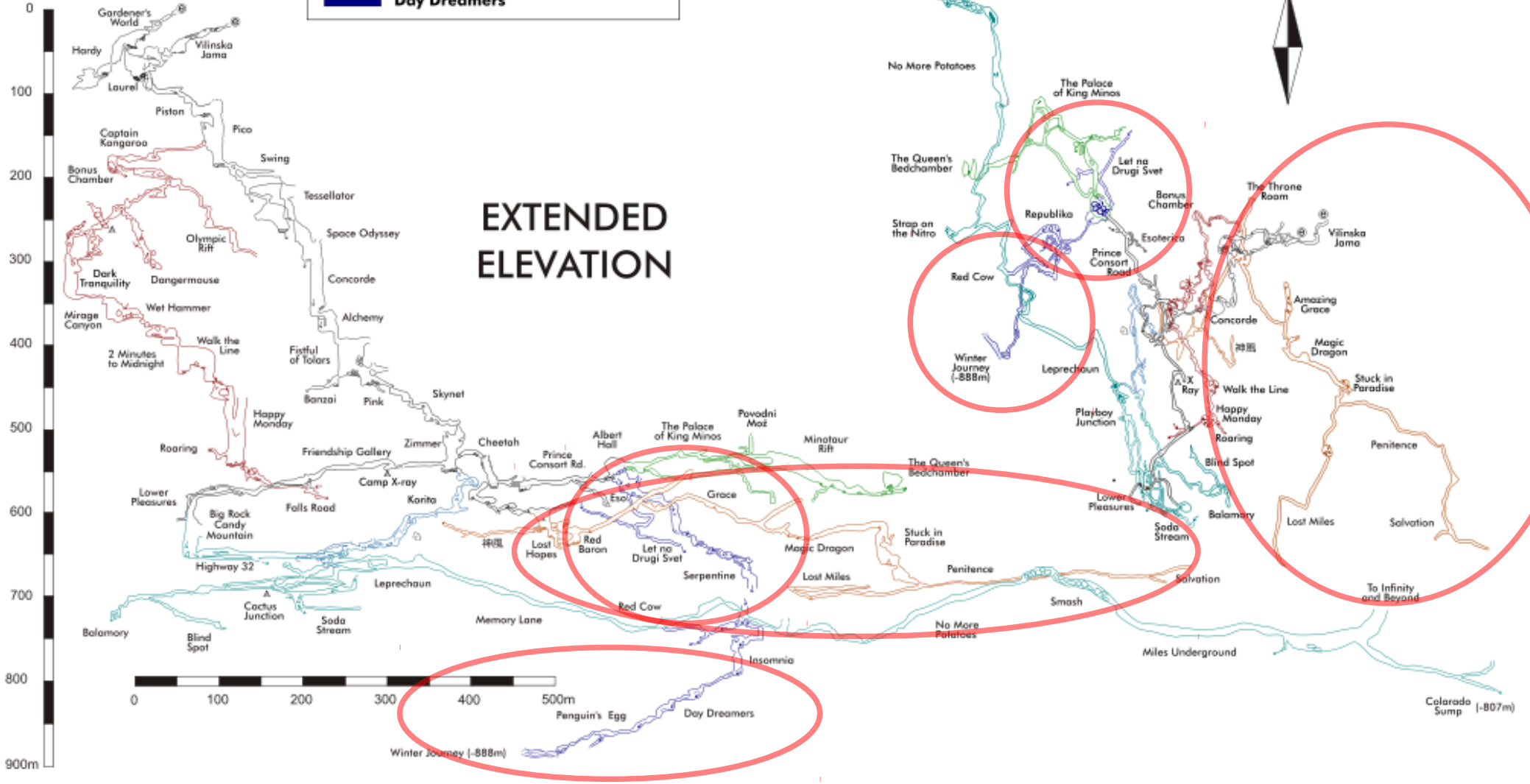
# VRTNARIJA

Tolmin, Julian Alps, Slovenia  
 Altitude 1794m  
 Depth 888m, Length 11025m  
 Location 540510 / 512398  
 Drawn by ICCC/JSPDT 2011  
 Surveyed to BCRA Grade 4-5B  
 Exploration 2000-2011

- Entrance Series to Fistful
- Captain Kangaroo
- Friendship Gallery / Consort
- Palace of King Minos
- Tolminska Korita
- Kamikaze / Stuck in Paradise
- The Serpentine / Let na Drugi Svet
- Deep 2003/2004 Extensions
- Day Dreamers

# 2011 +2.2km

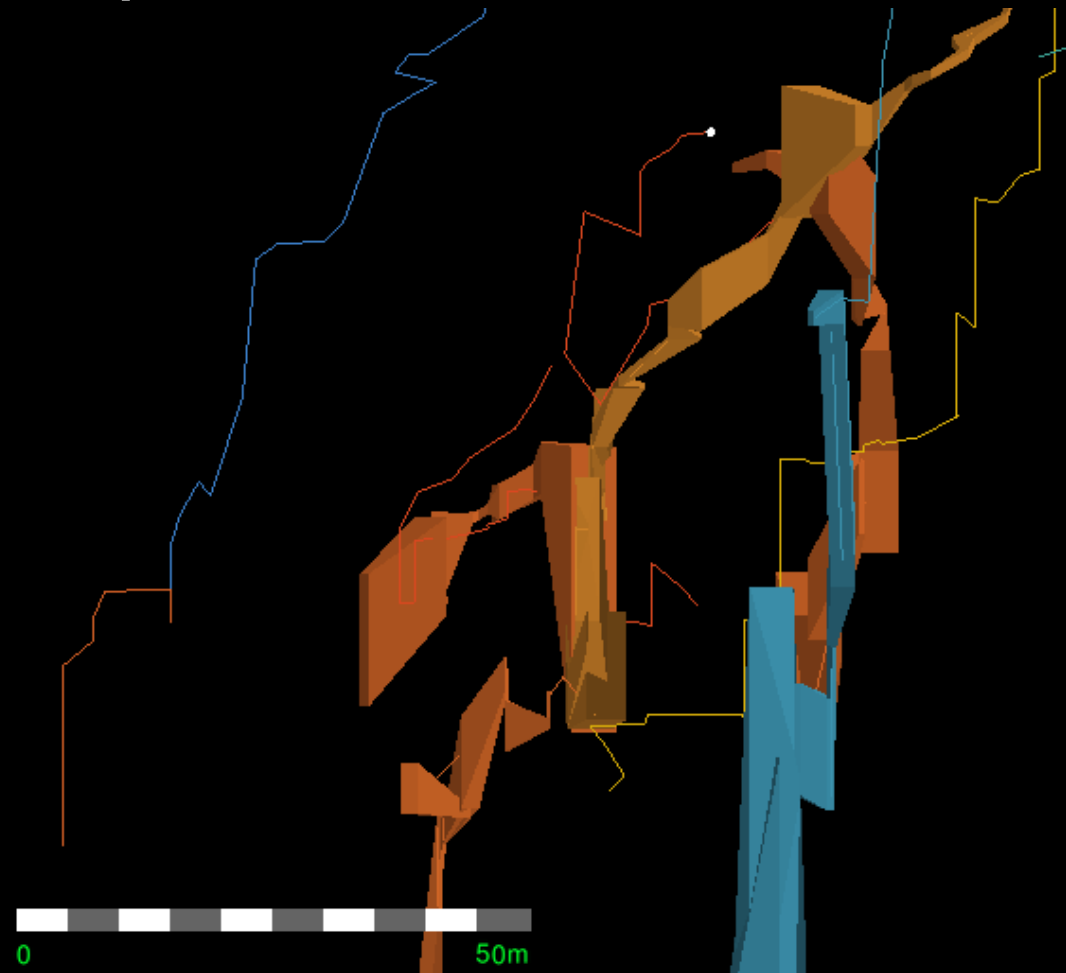
## PLAN





# Did Someone Mention the Connection?

- Vrtnarija to Kavkna Jama: 25–75m separation
  - Connection has been major aim since 2008–













# Izgubljeni Raj 2011 – (Derig) Team

















# Acknowledgements

- Financial support from the Ghar Parau Foundation & Imperial College Union (Tour Transport Grant)
  - Nia & Jonny assisted by Alex Pitcher awards
- We were the grateful recipients of the Wilhelm Putick Prize (Nagrada Viljema Puticka) for the 'best cave exploration in Slovenia during 2010'
  - 80W Solar Panel & set of new survey instruments

Gear & support:

- Beast, Starless River

 BEAST

  
STARLESS  
RIVER