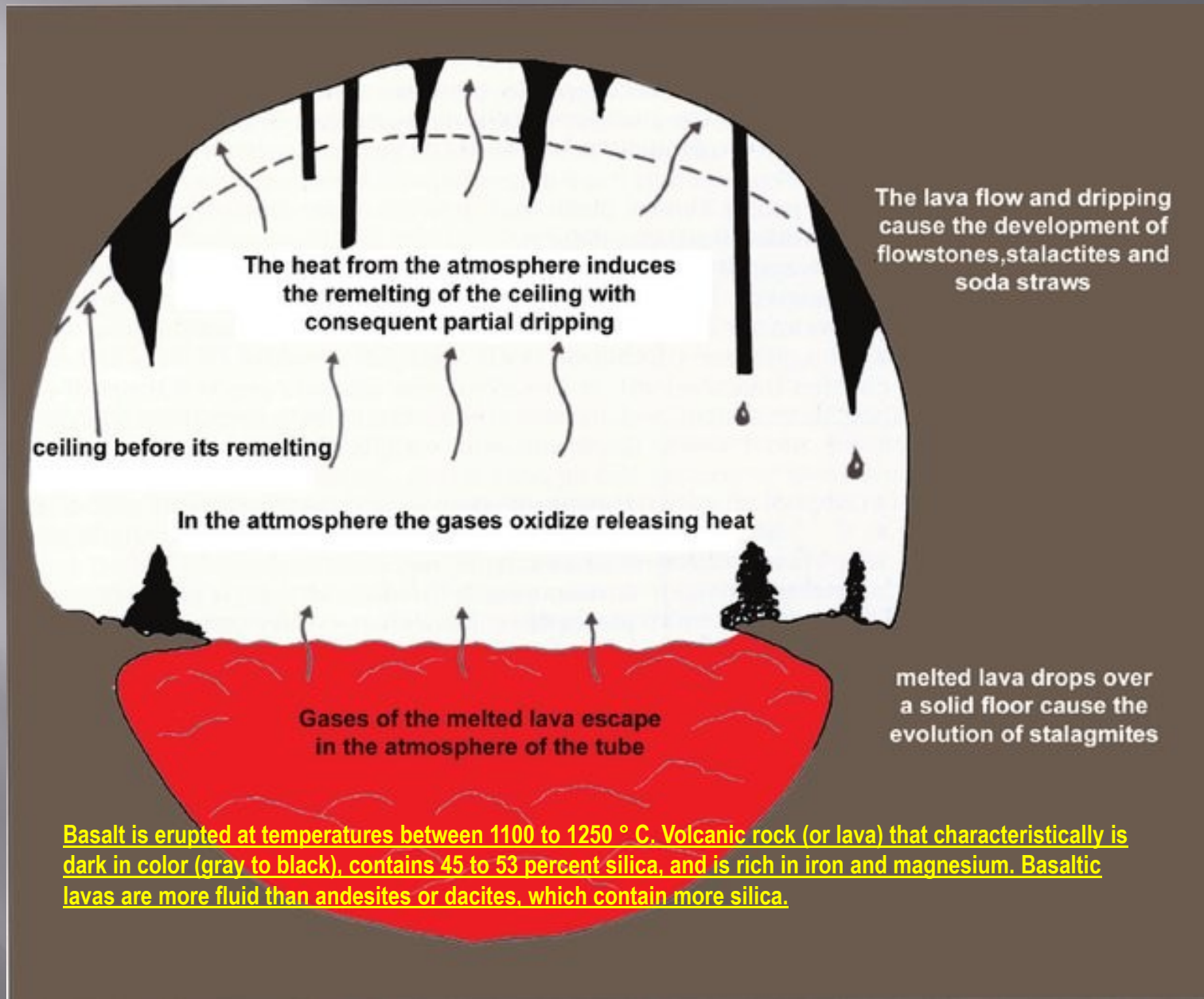




LÁVOVÉ JESKYNĚ (PYRODUCTS, LAVA TUBES)



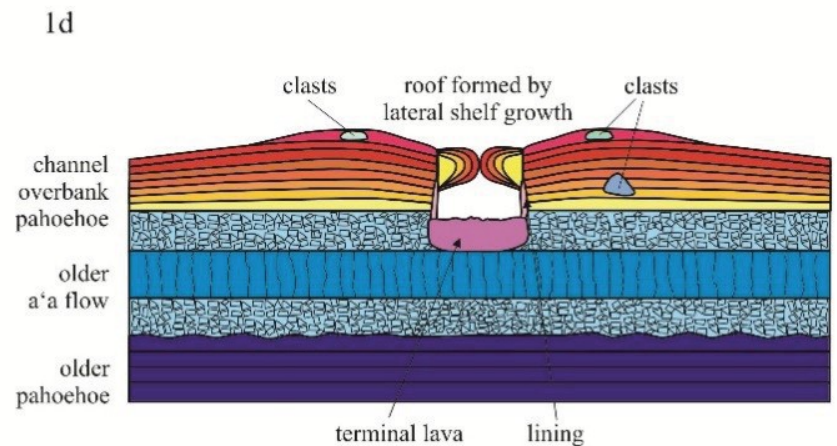
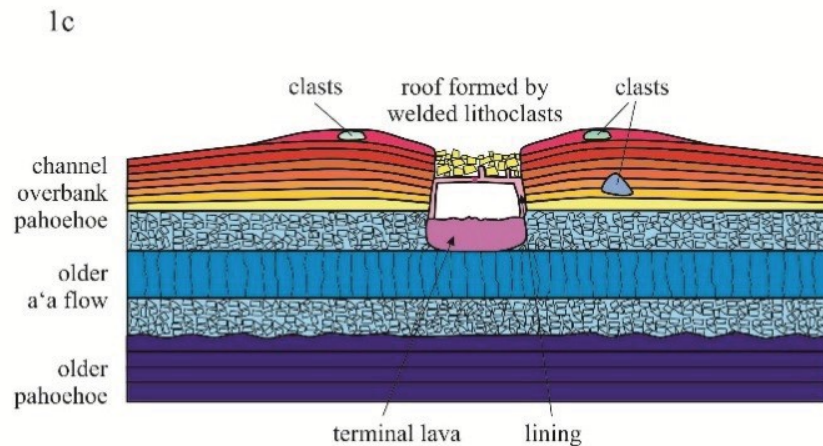
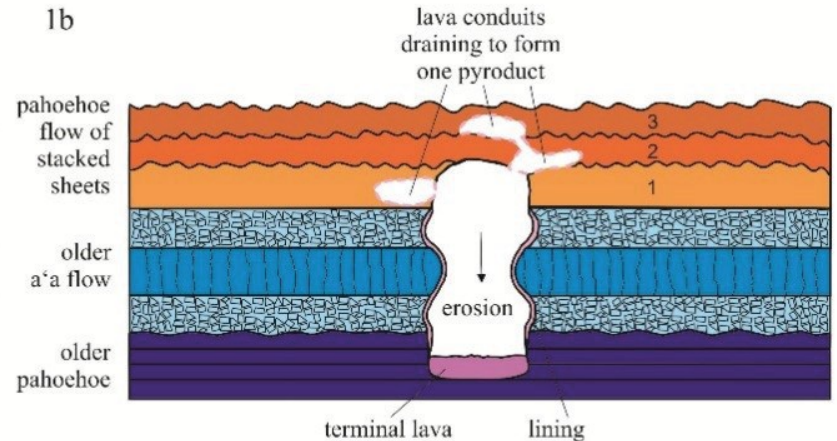
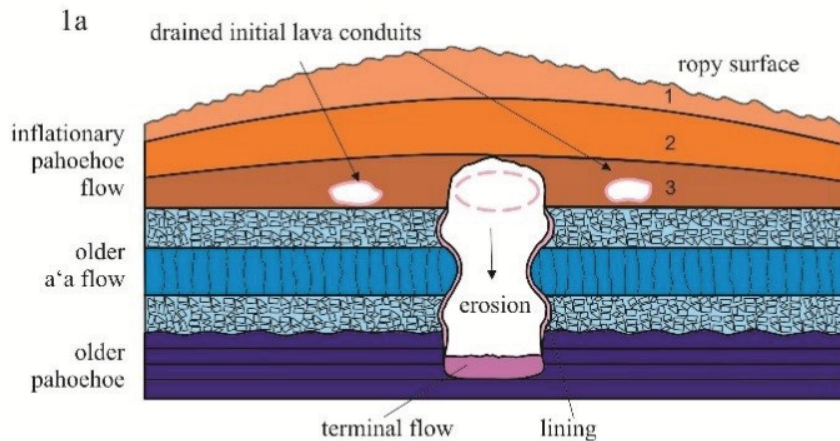
TYPY LÁVOVÝCH JESKYNÍ

(podle Kempe et al. 2017)

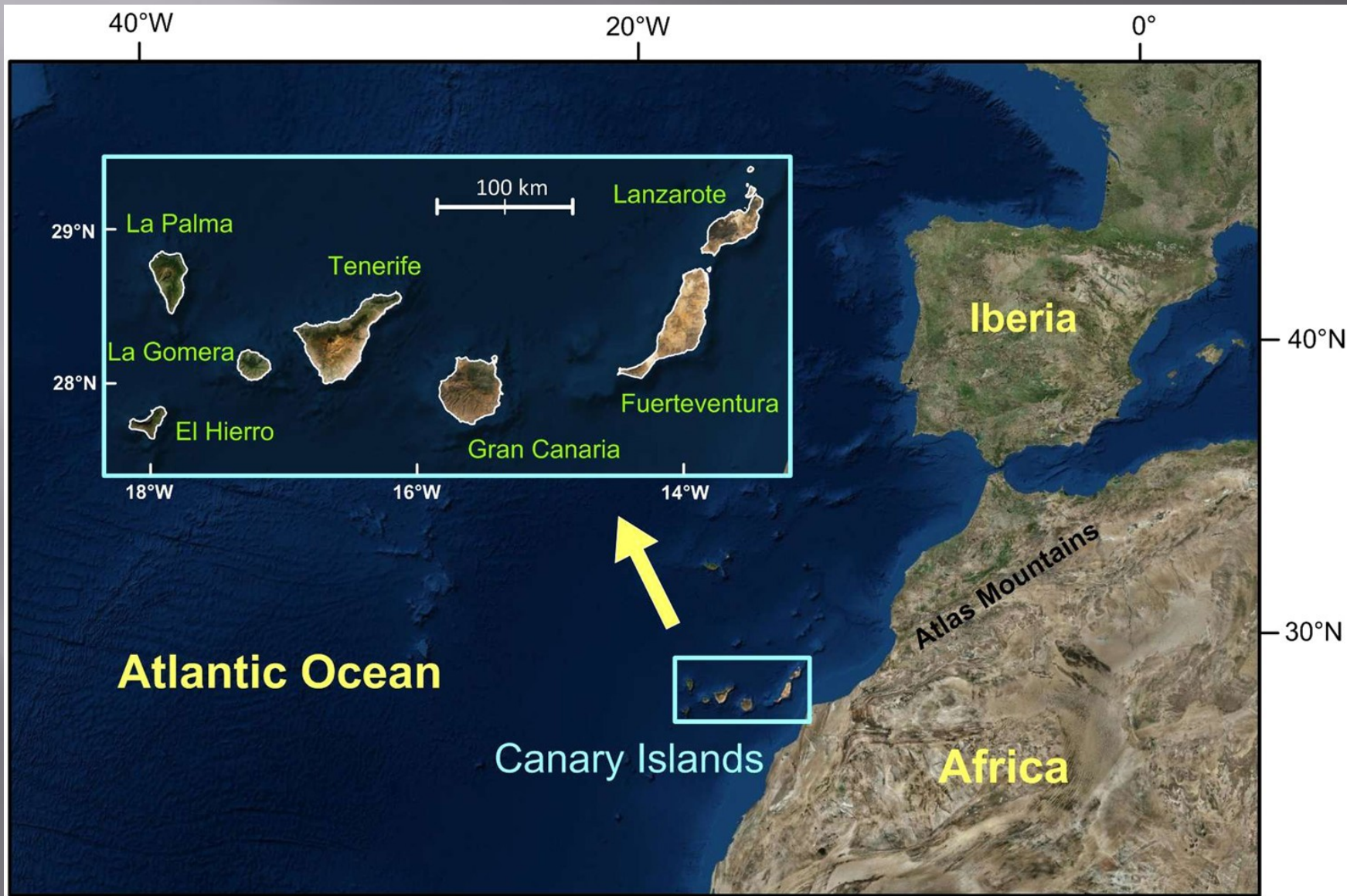
1. **Tunely vzniklé podpovrchovým prouděním lávy a následnou erozí směrem dolů**
2. **Jeskyně vytvořené splynutím menších chodeb a následující erozí**
3. **Jeskyně vytvořené „zastřešením“ lávy plovoucími litoklasty, které se ve žhavém stavu spekly**
4. **Kanály, které se překryly krustou akrečně narůstající z boků až do úplného uzavření**

GENEZE LÁVOVÝCH JESKYNÍ

(Stephan Kempe, 2017)



LÁVOVÉ JESKYNĚ LANZAROTE



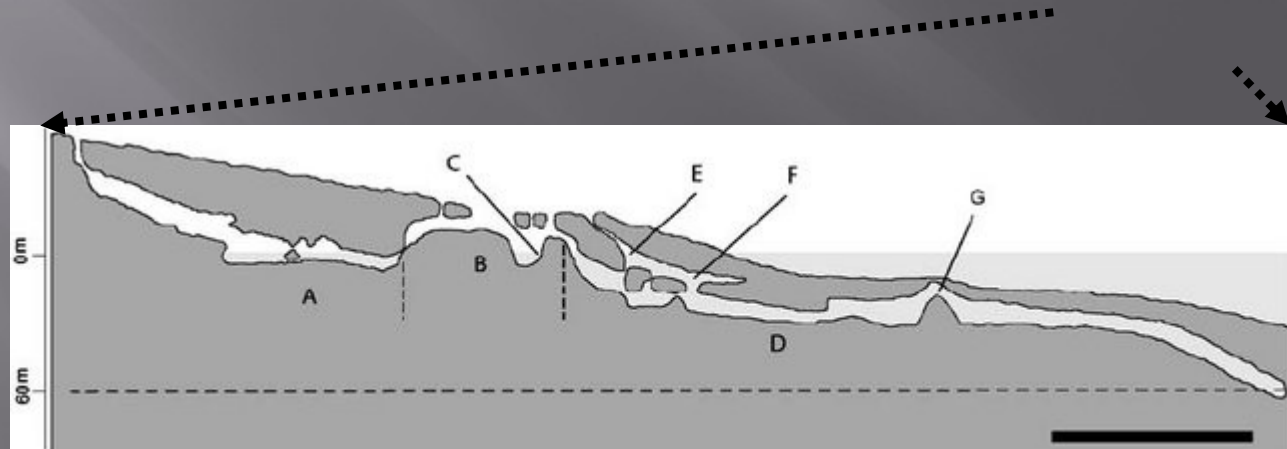
SOPKA CORONA VPRAVO NAHOŘE



Fig. 2 Schematic cross-section of the anchialine portions of the Corona lava tube. a Cueva de Los Lagos. b Jameos del Agua lagoon (dotted transversal lines reproccupied by the tourist complex). c Position esent the approximated area of the carpet of diatoms in the lagoon. d Túnel de la Atlántida. e Lago Escondido. f Dome room. g Montaña



This figure was uploaded by [Thomas M Iliffe](#)





LOS JAMEOS DEL AGUA





ENDEMIT - slepý krab (*Munidopsis polymorpha*).



Manrique Cesar, dotvoření přírody

Základy speleologie, podzim 2023



Základy speleologie, podzim 2023
Koncertní sál

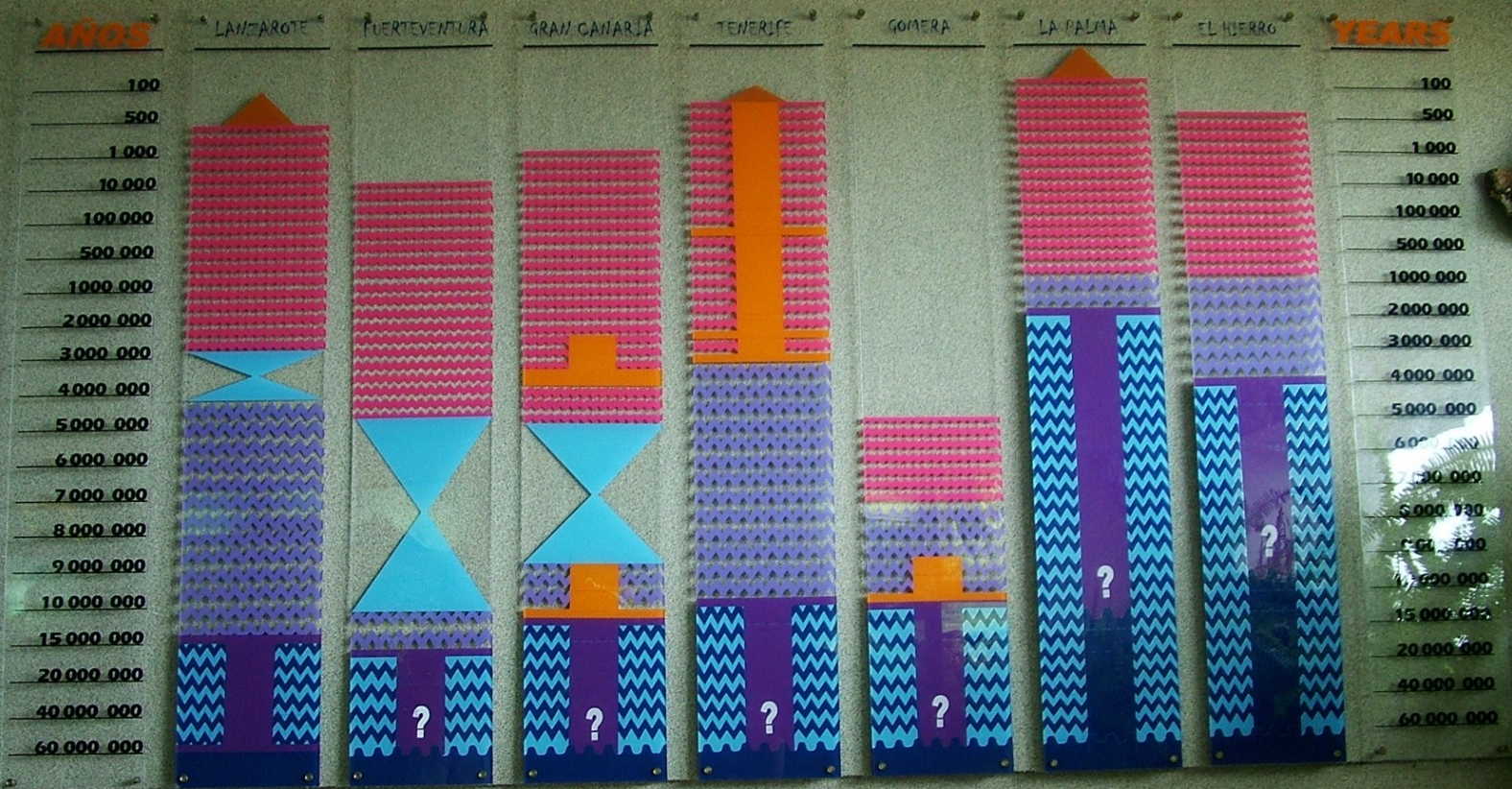






EDAD Y EVOLUCIÓN DEL VOLCANISMO CANARIO

AGE AND EVOLUTION OF THE CANARY IS. VOLCANISM



Muzeum vulkanizmu







**Národní park
Timanfaya**



Stalaktity z bazaltové lávy





Lávové tunely ve více úrovních



Lavaycles – lávové krápníky



Manjanguul Lava Tube, Jižní Korea, ostrov Jeju

Základy speleologie, podzim 2023

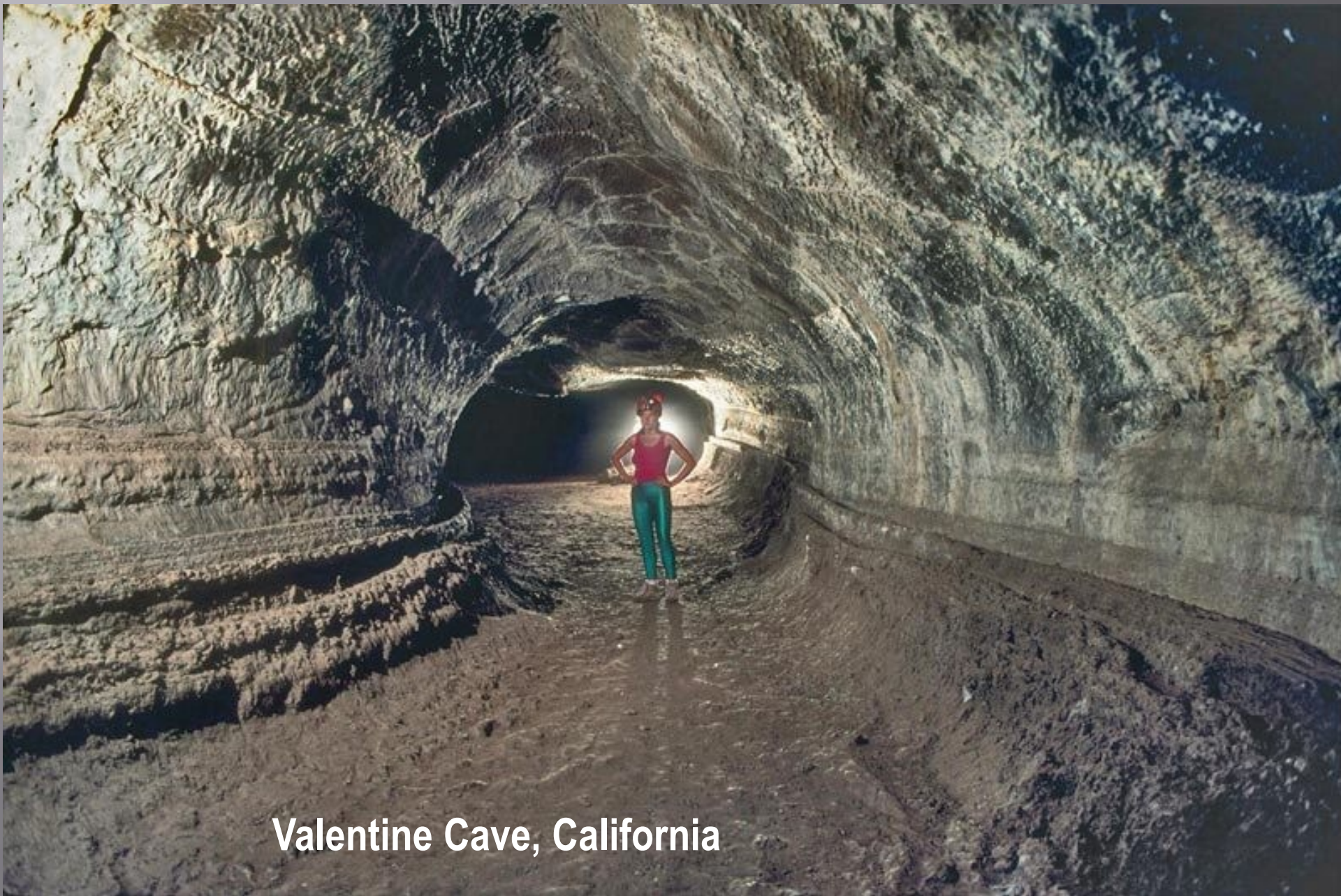


Undara, Queensland, Austrálie

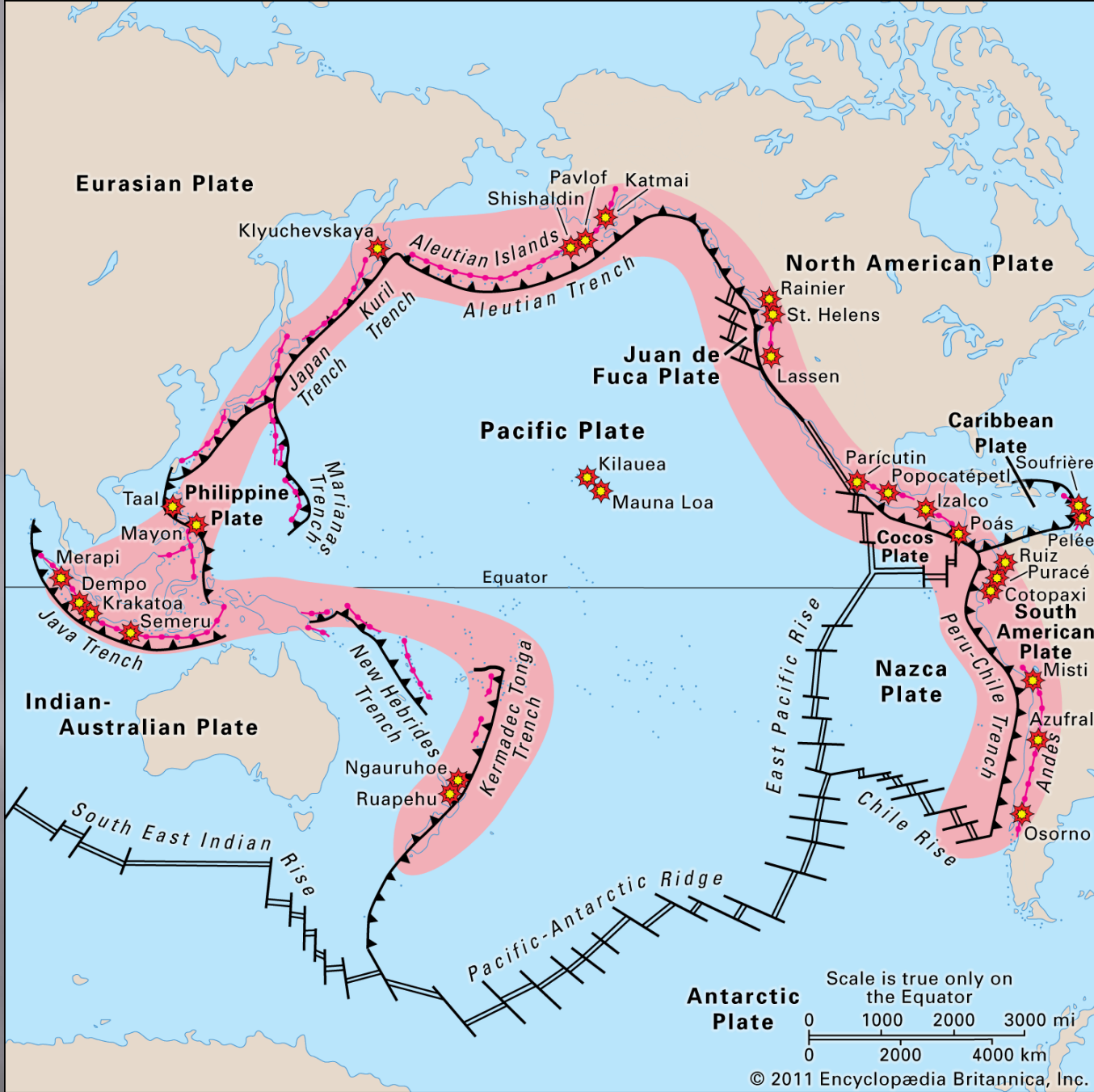


Kalifornie, USA

Základy speleologie, podzim 2023



Valentine Cave, California



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Sem zadejte hledaný výraz

Taskbar icons: File Explorer, Edge, Word, PowerPoint, File Explorer, and a red icon.

System tray: 10:29, 23.09.2021, 6 notifications.



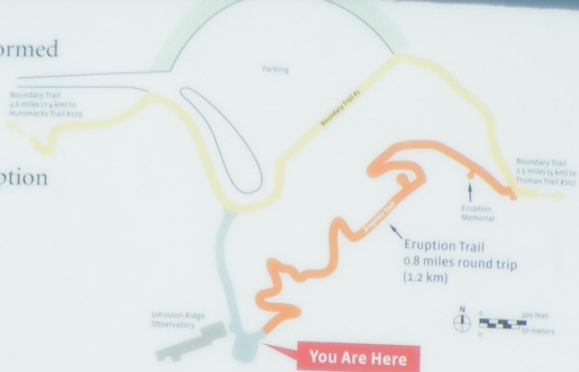
MT. St. Helens, dacitová láva

Eruption Trail

Discover the powerful events that transformed this landscape on May 18, 1980.

View the renewal of life around you.

Reflect on the sudden changes of the eruption and gradual changes as nature creates a mosaic of life. Nature's subtle rhythms prevail...until the volcano erupts again.



Reflect on those lost on May 18th at the Eruption Memorial.



May 17, 1980

One day before the eruption.



September 10, 1980

Mount St. Helens National Volcanic Monument

Pondering the Immensity of Change

A mountain collapses,
 A super-heated stone wind roars
 across the land,
 wave upon wave of pumice
 and ash erupt.
 All this in a few hours time,
 And on such a scale it challenges our
 comprehension.



Assist Nature's Recovery

- Please stay on the trail. The returning plants and shattered stumps are fragile.
- Pets are not allowed on this trail.
- Leave pumice and ash where Mount St. Helens placed it.
- Take nothing but pictures.
- Help plants return. Don't step on or pick them.

Gifford Pinchot National Forest
US Department of Agriculture



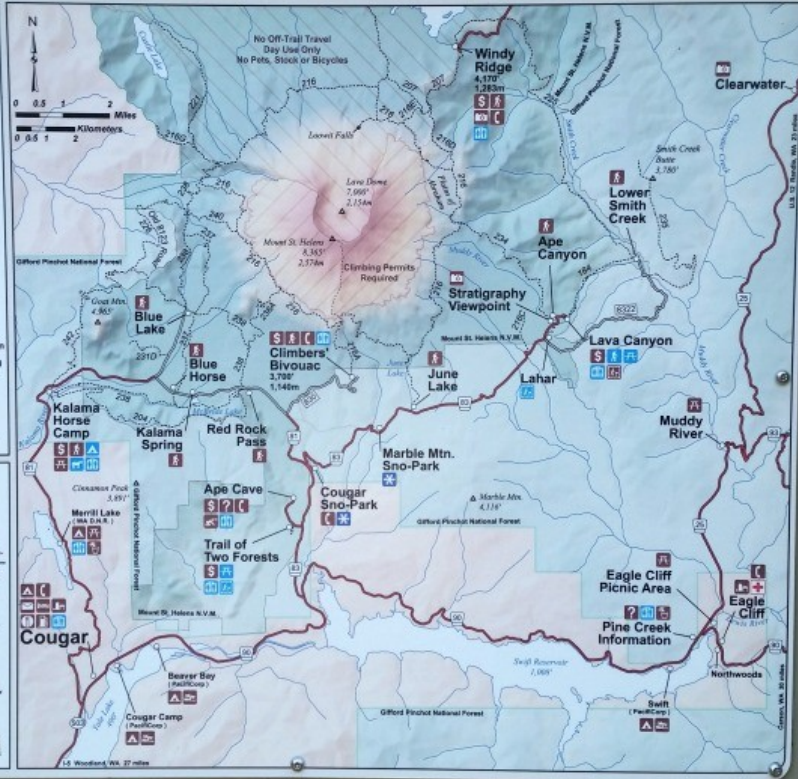
Mount St. Helens National Volcanic Monument : South Side

- Mount St. Helens National Volcanic Monument
- Gifford Pinchot National Forest
- State and Private Land

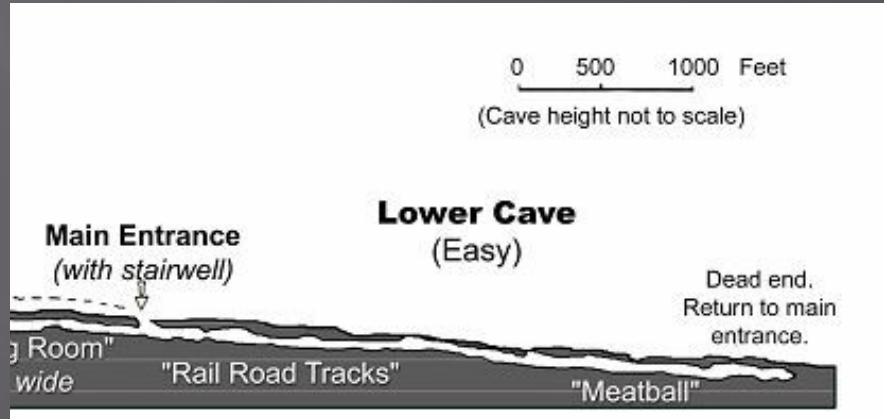
- Paved Roads
- Gravel Roads
- Trails

- Restricted Areas**
- No Off-Trail Travel, Day Use Only. No Pets, Stock or Bicycles.
 - Climbing Permits Required Above 4,800 feet.

- | | |
|-------------|--------------------|
| Trailhead | Gasoline |
| Camping | First Aid |
| Picnic Area | Restrooms |
| Viewpoint | Sno-Park |
| Information | Horse Camp |
| Telephone | Cave Exploration |
| Post Office | Interpretive Trail |
| Lodging | Drinking Water |
| Groceries | Boat Launch |
| Food | Fee Site |
- Blue Symbol Indicates Accessibility



my craftily ever after



The Third Longest Lava Tube In North America



Ape Cave was discovered in 1947 by a logger named Lawrence Johnson. However, the cave was not explored until the early 1950's when a scout troop, led by Harry Reese, lowered a team of scouts down a 17-foot overhang to the cave floor. Leaving footprints where no one ever had, these explorers were able to travel through a pristine lava tube full of fragile formations. Ape Cave was named by the Scout Troop in honor of their sponsor, the St. Helens Apes. This local group was made up primarily of foresters. The sponsor's name, St. Helens Apes, may have come from an old term used for foresters in the area, "brush apes," or from the legend of Bigfoot.

About 2,000 years ago, fluid basaltic lava poured down the southern flank of the volcano. As the lava flowed, chunks of the lava's surface cooled, crashed and fused together creating a hardened crust. In turn, the crust insulated the molten lava beneath, allowing it to remain fluid and travel down to the Lewis River Valley.

The hot flowing lava began melting into the pre-existing rock and soil. This thermal erosion deepened and widened the channel of the flow. The level of lava in the tube rose and fell as the eruption surged and slowed, contributing to the unique contours of the walls. During this eruptive period, hot fluid lava pulsed through the tube for months, possibly up to a year, until the eruption subsided. As a result of this rare eruption, a spectacular 13,042 foot (3976m) long lava tube, the third longest in North America, was created.







Aglomerátové tufy ve stěnách



Útvar zvaný „meatball“



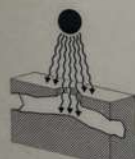
Kontury odrážející pulsování lávy

Drop by drop, water carries life into Ape Cave

In the Dark



While the world above and below ground might seem separate, there are many connections.



Most of the light coming to Ape Cave may be absorbed, but particles of the light filter to the cave.

Life cycles beneath our feet
 Energy for life above ground comes mostly in the form of sunlight. But light cannot penetrate the ground, so energy for life in lava tubes comes from other sources. Water that seeps through the soil becomes nutrient-rich and carries the greatest natural source of energy for life into Ape Cave. Water, filling in where sunlight leaves off, brings energy into the cave to fuel life cycles beneath our feet.



Cave Cricket
Stethophyllax



Salamander
Ambystoma



Fungus gnat and larvae
Chironomus

Cave Slime

While much scientific work shows green on the ceiling and walls inside Ape Cave, these colonies of fungi and bacteria get nutrients from the water that drips through cracks in the lava tubes.



Dryadeidola
Dryadeidola



Little brown bat
Myotis



Harvestman
Opiliones



Deer mouse
Peromyscus

Fragile existence

Salamander
 Salamanders are attracted to cave entrances by the abundance of insects that swarm in the cool, moist environments near the edge of darkness.

Little brown bat
 Ape Cave was once a common summer roost for little brown bats, but they are seldom seen today. Some caves are protected to trap bats and not disturbed by the lights and noise of people.

Harvestman
 Harvestman-like creatures spend their lives in the dark and use their long legs to help them "hunt" in the dark.

Deer mice
 Deer mice, found throughout the forest, are also often found inside Ape Cave in swarming, breeding numbers, including later with by common visitors.

Dryadeidola
 Dryadeidola are detritivores, which eat insects, dead and decomposing plants, including fungus gnat larvae.

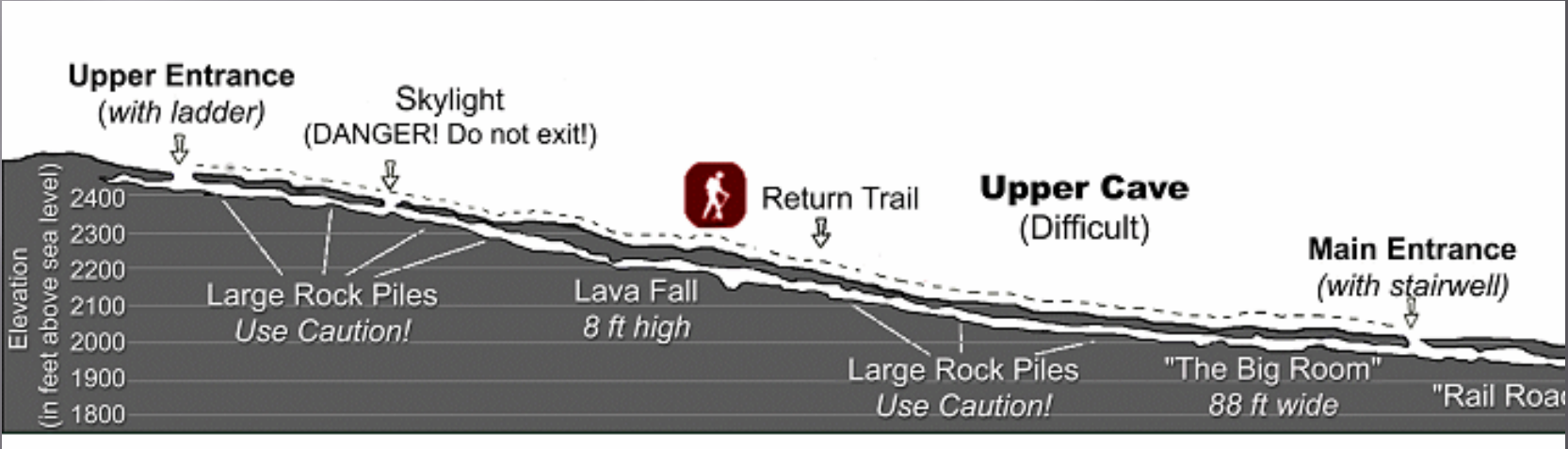
Fungus gnat and larvae
 The most common source of energy for fungus gnat larvae is the water that drips through cracks in the lava tubes.

Cave cricket
 Cave crickets are the most common cave cricket in the cave. They are found in the cave.

A delicate balance
 Beyond the influence of light is an alien world. Few plants and animals have adapted to life without sunlight. Life cycles in lava tubes revolve slowly and are easily upset. Organisms that decompose organic material in the forest are scarce in Ape Cave. Wood and litter left in the lava tube can disrupt the delicate natural balance.









Děkuji za pozornost