

Ref:	Report Date 9-5-1999	Club: Solo	Hours: 1.5h	Name of Cave / Feature: <b>BRIDGE CAVE.</b>	Visit Date: 8-5-1999	Cave No: <b>3H-13</b>
Names in Party ( <u>Author</u> , <u>Leader</u> ): K. G. Grimes.					If no number, tick reason New Cave <input type="checkbox"/> Unidentified Old Cave <input type="checkbox"/> Can't tell which: <input type="checkbox"/>	
Purpose and result of visit: Familiarisation (to check reports that the cave was mostly rockpile and had little of interest). I am now familiar! Although mostly rockpile, the cave does have several interesting features..					Area Name: <b>Volcanics (Byaduk)</b>	
					Type of feature (if not Cave):	
Comments/recommendations (if any): <ul style="list-style-type: none"> <li>● The cave deserves a better map (the attached sketches are just rough annotations and modifications of Ollier's small-scale sketch map).</li> <li>● The reticulations deserve a closer study + sampling for mineralogy, organic content, and microscope study.</li> <li>● The chalky material in the eastern cave also deserves sampling for minerals. No samples were collected on this visit.</li> <li>● Technically this is "one" cave as one can travel beneath overhangs from west to east cave.</li> <li>● I felt that Ollier's sketch map was under-estimating the passage lengths - but perhaps I was over-estimating them!.</li> </ul>						
Description: <b>Summary:</b> A complexly branched large tube system that comprises a bridge between to big collapse dolines and passages at both east and west ends. It is all considerably modified by collapse but with some original wall, floor and roof structures preserved in places. See attached sketch-map and sections. The cave has had some visitation (footprints & tracked sections) but is still fairly "pristine". <b>West cave:</b> The far end of the west cave has the best-preserved original features. This area does not appear on Ollier's map - he may not have seen it as the entry point is not obvious to a cursory look. Here the roof is low (1-2m) and cusped with some lava drips, and has abundant well-developed mud(?) reticulations. The floor is mounded and formed of irregularly broken and contorted pahoehoe lava. Some of the floor here had coatings of a hard white powdery material. The eastern end of this section goes back under a false-floor (with collapse rubble above). <b>Decorations:</b> There are locally good examples of lava drips, dribbles and ribs where the original roof & walls are preserved. Many of the drips have secondary "cave-coral" growths (calcite?). Partly-peeled linings occur at floor level in several places. Reticulations occur in the west cave. An area of soft chalky deposit in the eastern cave warrants further study. <b>Lava floors:</b> The exposed lava floors are all irregularly contorted and fractured pahoehoe - this was a turbulent flow with pressure heaving of a slabby crust - not a smooth lava lake. <b>Bedrock:</b> The fractured walls show both thick massive lava and thinner bedded lava and some thin beds of lumpy pahoehoe material. In one place on the roof of the western cave there is a yellow surface of the underside of a lumpy pahoehoe flow. Pockets (drained lobes) within the lava beds have spiny surfaces. Ollier & Brown illustrate their "layered lava" theory with a photo from this cave wall. What I saw could as easily be explained as a series of stacked flows of variable thickness (overflows from an original open channel before it roofed over to make the tube). <b>Reticulations:</b> The reticulations on the west passage roof were patterns of a soft pale brown muddy material forming anastomosing ridges up to 30mm across and 5mm? thick. This material is easily accessible and deserves further study. <b>Chalky deposit:</b> In the eastern cave one wall had an extensive deposit of white chalky material that was moderately soft. This had bulbous structures similar to speleothems and also vertical striae that might be erosion grooves from dripping water. The material needs a mineral assay - it could be old guano, dried moonmilk, or some other cave mineral. <b>Bats:</b> No bats were seen, but there was some damp guano towards the back of the large rockpile chamber of the west passage. Wakefield (1971) refers to a specimen collected "in cavern behind bat chamber" which suggests that a bat colony did exist here. Swallows (or Swifts?) nest in the entrance areas. <b>Bones:</b> There was a lot of small bone material (owl roost?) at the far end of the longer passage of the eastern cave (mostly long-bones, few skulls). This might be one of Wakefield's (1964) collection sites? <b>Vegetation:</b> A lot of the ferns and grass in the entrance areas was dead - this effect has also been seen in the other caves at Byaduk and presumably reflects the several years of low rainfall we have had in the region.						
Topo Sheet:		Scale: 1:	Best Grid co-ords:		Parish/Hundred:	Allotment:
How to get there: Climb down buttress on south side of west doline - is easier than it looks (follow down inside the crack then west) .					Equipment: Standard horizontal. Hand-line for climb-down for non-rockclimbers .	



Western Doline of Bridge Cave.

Tick the boxes for selected headings, then write about each in sequence, using the correct numbers and headings.

4 Cave type	<input checked="" type="checkbox"/>	24 Hazards	<input checked="" type="checkbox"/>	38 Air temperature	<input type="checkbox"/>	Geol. Strata names	<input type="checkbox"/>
5 Rock type	<input checked="" type="checkbox"/>	25 Difficulties	<input type="checkbox"/>	39 Humidity	<input type="checkbox"/>	Dip & Strike	<input type="checkbox"/>
6 Other entr numbers	<input type="checkbox"/>	26 Degree explored	<input type="checkbox"/>	40 Moisture level	<input type="checkbox"/>	Main stream flow	<input type="checkbox"/>
7 Total entrs	<input type="checkbox"/>	27 Prospects	<input type="checkbox"/>	41 Discoverer & date	<input type="checkbox"/>	Inflow & Outflow points	<input type="checkbox"/>
8 Entr type	<input type="checkbox"/>	28 Owner category	<input type="checkbox"/>	42 Extension discov.	<input type="checkbox"/>	Water composition	<input type="checkbox"/>
9 Development	<input checked="" type="checkbox"/>	29 Present Cave Use	<input type="checkbox"/>	44 Contents	<input type="checkbox"/>	Gases	<input type="checkbox"/>
10 Decoration	<input checked="" type="checkbox"/>	30 Present surface use	<input type="checkbox"/>	45 Species	<input type="checkbox"/>	Likely archeol. Site?	<input type="checkbox"/>
11,12 Length & method	<input type="checkbox"/>	31 Damage	<input checked="" type="checkbox"/>	46 Important for	<input checked="" type="checkbox"/>	Age of archeol. material	<input type="checkbox"/>
13-14 Vert Range/method	<input type="checkbox"/>	32 Management class	<input type="checkbox"/>	47 References	<input checked="" type="checkbox"/>	Age of paleontol. Material	<input type="checkbox"/>
15 Largest chamber	<input type="checkbox"/>	33 Protection	<input type="checkbox"/>	Entr Doline size	<input type="checkbox"/>	Peak tourist count / day	<input type="checkbox"/>
16 Pitches	<input type="checkbox"/>	34 Permission from	<input type="checkbox"/>	Watersheds	<input type="checkbox"/>	Yearly tourist count	<input type="checkbox"/>
17 Horizontal Extent	<input type="checkbox"/>	35 % mapped	<input type="checkbox"/>	No. Of levels	<input type="checkbox"/>	Conservation rating	<input type="checkbox"/>
18,19 Latitude & Longitude	<input type="checkbox"/>	36 Widest Map	<input type="checkbox"/>	Accidents	<input type="checkbox"/>	Best area map	<input type="checkbox"/>
23 Entr elevation	<input type="checkbox"/>	37 Entrance Marker	<input type="checkbox"/>	Rescue comments	<input type="checkbox"/>	2 bearings & distances	<input type="checkbox"/>

**4: Type:** = lava tube

**5: Rock** = basalt

**9: Dev** = two large collapse dolines lead to several complex large lava tubes. Mostly collapse modified.

**10: Decs** = some good unusual decs (lava).

**24: Haz** = unsafe steps (rubble). Thin roof at edge of doline in places.

**31: Dmg** = a little muddying

**46: Sig** = geology, biology, mineralogy?

**47: Refs:** **Ollier & Brown (1964)** *The Byaduk Lava Caves*. Vic Nat vol 80, pp 279-290.

**Ollier & Brown (1965)** *Lava caves of Victoria*. Bull Vulcan. Vol 28, pp 215-229. (Plate II is photo of "layered lava" in doline wall of Bridge Cave)

**Wakefield (1964)** *Mammal sub-fossils from basalt caves in south-western Victoria*. Vic Nat. vol 80, pp 274-278.

**Wakefield (1971)** *The Brush-tailed Rock-wallaby (Petrogale penicillata) in western Victoria*. Vic Nat. vol 88, pp 92-... [specimen collected from Bridge Cave].

