[*abstract of a talk given to the Karst Studies Workshop at Mole Creek, Tasmania, 1998*]

The Scott Creek Karst:

Stream drainage diverted underground by a lava flow?

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Scott Creek, near Byaduk in west Victoria, is in a valley incised through a plateau of weathered volcanic rocks into the underlying, soft, Miocene Port Campbell Limestone. The floor of the valley has modern swamp deposits overlying a late Quaternary (possibly Holocene) basaltic lava flow from nearby Mount Napier. A stream sink is reported at the upstream end of an area of basaltic stony rises (access was forbidden!), and a series of steepheads and associated intermittent springs occur about 1km downstream. In between there are a number of degraded dolines and one large collapse doline (Craig's Hole, 50m across and 13m deep). Two caves are known, the larger has the trace of a discontinuous stream channel on its floor. There is also an unexplored wet entrance beside the present surface stream.

Local folk-lore has it that the stream sink originally took the entire surface flow which rose again from the springs 1km downstream, but last century the sink was deliberately blocked to divert the water along a surface course for stock supply (George Christie, pers. comm.). The springs are now somewhat degraded. The present surface stream disappears underground for 27 m at one place - but that is under a lava surface and probably via a shallow "drained lobe" lava cave.

It seems possible that the lava flow along the valley floor diverted the surface stream laterally to the valley side where it either entered an existing cave system, or enlarged an incipient underground channel to travel underground and re-emerge at the springs. Thus there is potential for a significant stream cave parallel to the valley. The known cave is off the line and at right angles to this hypothetical cave, but might connect at its inner squeeze.