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## Cover photographs:

Unusually though not uniquely, the Front and Back Cover illustrations relate to the same topic. All are provided by **Phil Wolstenholme** and were photographed in the Krypton Series, part of Peak Cavern, at Castleton in the White Peak of Derbyshire, UK. Peak Cavern, is a resurgence cave, perhaps most-widely known for a showcave section with the largest natural entrance (30m × 10m) of any inland cave in Britain, whence a chamber (The Vestibule) extends c.75m. It is part of the c.25km-long Peak–Speedwell cave/mine system, with many relict passages, but the active lower levels discharge water from a c.13.5km<sup>2</sup> catchment.

The Krypton Series, where c.280m of known passage has developed in fossiliferous Viséan foreereef limestone, is one of several vertical developments in the ceiling of The Vestibule. Steeply sloping relict phreatic passages extend up c.45m, with a horizontal range of 60m, containing many calcite speleothems, most of them relict. Only two sections carry tiny percolation-fed inlet streams, still depositing flowstone, with small gour pools. Some speleothems, notably stalagmites, were “removed”, for sale or as “trophies”, during historical times. Alongside the calcite speleothems are extensive globular masses of moonmilk — aggregates of microcrystalline calcite — as also seen elsewhere in The Vestibule. Historical use of the cave is evidenced by extensive soot-staining from the smoke of cave-fires and lanterns, in some cases coating the stumps of sawn-off stalagmites. There is a smoke connection between the highest point in the Series and a small cave on the side of the Cave Dale dry valley, but morphology suggests passage formation by upward-flowing water. Nevertheless, clastic sediments lying beneath flowstone must have been washed in from the surface. Other areas of upwards development in The Vestibule ceiling include a rift adjacent to the Krypton Series that terminates upwardly in two chokes, one of which formerly connected to the surface in Cave Dale.

The captions below provide brief details of some of the features

**Front cover:** Ann Soulsby and Wayne Sheldon in the moonmilk-festooned lower passage of the Krypton Series, 20m above the showcave floor.

**Back cover:** a collage comprising six images, all showing aspects of the Krypton Series, as described below:

<b>a</b>	<b>b</b>	Image a	Alastair Gott (L) and Luke Brownbridge in the high aven at the top of the Krypton Series, lying roughly beneath the ruins of the 11 <sup>th</sup> -Century Peveril Castle, with a choke of rocks within an open hole at the top, and a river of flowstone formed on top of the steeply-sloping cave sediments, which presumably once poured in through an ancient swallet on a former land surface.
	<b>c</b>	Image b	Lisa Wootton in the high-level phreatic passage, with a large cluster of moonmilk formed on the wall. Moonmilk is probably the most common form of mineral deposition in this part of Peak Cavern, because there is now very little percolation water entering these passages.
		Image c	Alastair Gott in the high-level phreatic passage, with one of several sawn-off stalagmite stumps, completely blackened with soot. Most of the accessible speleothems in the Krypton Series have been removed (probably for sale rather than science), presumably by early cave residents/explorers or even by local lead miners, though no evidence of lead mining is evident hereabouts.
<b>d</b>	<b>f</b>	Image d	Lisa Wootton in a steeply-dipping section of the high-level passage, with moonmilk clusters adorning the ceiling. A narrow vertical rift system at the camera position connects these largely horizontal passages downwards to the ceiling of The Vestibule in the showcave.
<b>e</b>		Image e	Luke Brownbridge in the high-level phreatic passage at the lip of a downward pitch in the rift, with “robbed” stalactite stumps in the ceiling. The floor is mostly made-up of sediment, covered in places with soot, and then further overgrown with moonmilk deposits.
		Image f	Alastair Gott (L) and Luke Brownbridge in the high aven looking downslope toward the rifts, with a floor of sediment, soot-blackened walls, and stumps of more “robbed” stalactites on the ceiling.

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