

THE TOMEENS OF TULLA, CO CLARE, IRELAND

by

C.A. SELF

O.S. 1:10560, Clare Sheet 27, E12.7 cm, N0.0 cm

Townlands: Milltown and Kiltanon

Altitude 37 m AOD

Length 700 m

ABSTRACT

The Tomeens of Tulla comprise a series of short river caves located in a limestone inlier in the drift-covered lowlands of eastern County Clare. There are ten caves spanning a 500 m long section of a tributary of the Hell River. The caves are separated from each other by surface collapses which leave 30% of the river course open to the sky. Two stream oxbows and a complex of dry oxbows and side passages add to the overall length of the system.

INTRODUCTION

The Tomeens are located in the limestone lowlands of east Clare, some 14 km east of Ennis and 2.8 km north-west of Tulla (Figure 1). The caves form part of the boundary between the townlands of Kiltanon and Milltown.

The Tomeens were far more popular in the early part of this century and in previous centuries than they are today. They were the best known of the Clare caves and possibly the most famous caves in all Ireland. J. Lloyd, in his book *A Short Tour in the County Clare 1780* (1986) gives them such lavish praise that he bids the "Literati and Curious, after taking the Continental Tour of Europe . . . (to) View and touch upon the truly Subterraneous and really Un-artificial Curiosities of the To-mines." The rich and influential Molony family, who owned Kiltanon House, received many visitors to the Tomeens and in the last century are said to have held music concerts at the caves. Such social gatherings have passed into folklore and Kiltanon House has become a ruin. The picnickers who used to cycle from Limerick now go elsewhere by car.

The Victorian geologist Kinahan also gave exaggerated praise to the Tomeens but their "unforgettable magnificence" was put brusquely into perspective by the great French caver E.A. Martel, who visited the area as part of his subterranean campaign of 1895. Martel includes two very fine sketches of the Tomeens in his book *Irlande et cavernes anglaises* (1897) and berates the Baddeley Guide for its failure to mention the splendid Kiltanon estate. His opinion of the caves was less flattering, comparing them unfavourably with those of his homeland. Most modern cavers would agree with Martel that the Tomeens are pleasant but quite modest caves, the pleasure of a visit owing more to the peacefulness and beauty of the natural surroundings than to the sporting aspect of the caves. Lloyd (1986)

commented on the abundant wildlife that frequented the estate and it is still possible today to see otters.

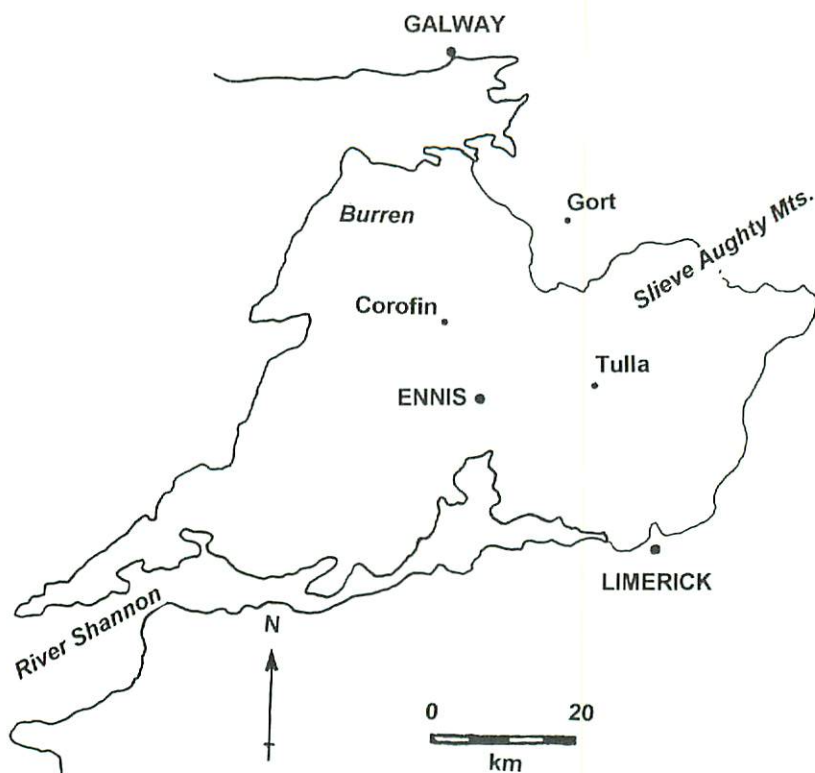


Figure 1. County Clare, The Tomeens are 2.8 km north west of Tulla.

The most convenient access to the Tomeens is no longer through the Kiltannon estate, but from a farmhouse on the Milltown side of the river. An easy walk of 400 m across fields leads to a narrow ribbon of woodland that marks the course of the underground stream. Two possible sources have been given for the name "Tomeens". Coleman (1965) believed it to be a corruption of "Polleens" (small holes) and refers to a very similar series of small river caves in Co. Donegal called "Pullans". This derivation is the most widely quoted, but Spellissy and O'Brien (1987) suggested "tomhaidhm" (a bursting forth of water).

THE TOMEEN RIVER

The Tomeen River is known by many names: the Kiltannon River (Spellissy and O'Brien, 1987; Halpin 1990), the Kiltannan and Milltown River (Lloyd, 1986) and the River Ardsollus (Martel, 1897, quoting the geologist Kinahan).

On the 1:10560 series map (1914 revision) it is called the Tomeen River and this name is used here. The map also gives the correct spelling for the townland Kiltanon, through which the river flows.

The Tomeen River rises on the south side of Maghera (Knockannis) Hill, the most southerly and at almost 400 m, the highest of the Slieve Aughty mountains. The Slieve Aughty mountains are an anticlinal dome of impervious Lower Palaeozoic and Old Red Sandstone rocks, but the geology is largely masked by heather and peat bog. Tributaries gather from a large area of the southern flank of Maghera Hill and become a substantial small river before reaching the limestone lowlands to the south. The limestone here is Tournaisian in age (the lower part of the Carboniferous Limestone Series) and therefore older than the Viséan rocks of the Burren. The Burren is a classic karst landscape, but the lowland limestones of east Clare are largely covered by a layer of glacial drift, providing rich farmland.

The topography of the limestone lowlands is gentle and the streams flow on the surface in shallow valleys. The few caves that are known are found where streams have exposed the flanks of small limestone bluffs protruding through the drift. The Tomeen River is a typical example, with the dry valley of the original river course skirting the limestone bluff on its northern side. The Tomeens can therefore be regarded as an underground meander of the Tomeen River, and the dry valley as a surface oxbow.

Beyond the limestone bluff the Tomeen River joins in quick succession the Hell River, the Rine River and then the lower Fergus River as it becomes estuarine and enters the Shannon.

THE CAVES

On the southern boundary of the Kiltanon estate, the swiftly-flowing Tomeen River enters a low limestone bluff, the top of which is level with the fields that lie to the south. The stream passage is six metres high and the same in width, but less than three metres of limestone separate the cave roof from the ground surface. This first tomeen is 45 m in length, but within a few metres of the stream going underground the left wall of the cave is breached by a surface run-in (Figure 2). At this run-in, a dry crawling passage to the left provides an unpleasant oxbow to the stream route while to the right, opposite the run-in there is a handsomely sculpted oxbow of much roomier proportions. The right-hand oxbows of the first tomeen are the most interesting of all the tomeen dry passages and provide a variety of routes to a ledge above the stream and to several dry entrances.

At the end of the first tomeen, the stream emerges into a much larger window in the limestone and turns abruptly to the west. Exactly above this bend in the stream a small dry passage can be seen in the left bank, but this passage soon becomes very low. The stream immediately enters the second tomeen, 30 m long and with a distinct bedding cave ledge on its right bank. At the back of this ledge a low oxbow can be found from which a very low and smelly passage leads to the north. This oxbow would appear to be popular with otters.

At the end of the second tomeen the stream emerges briefly into daylight before

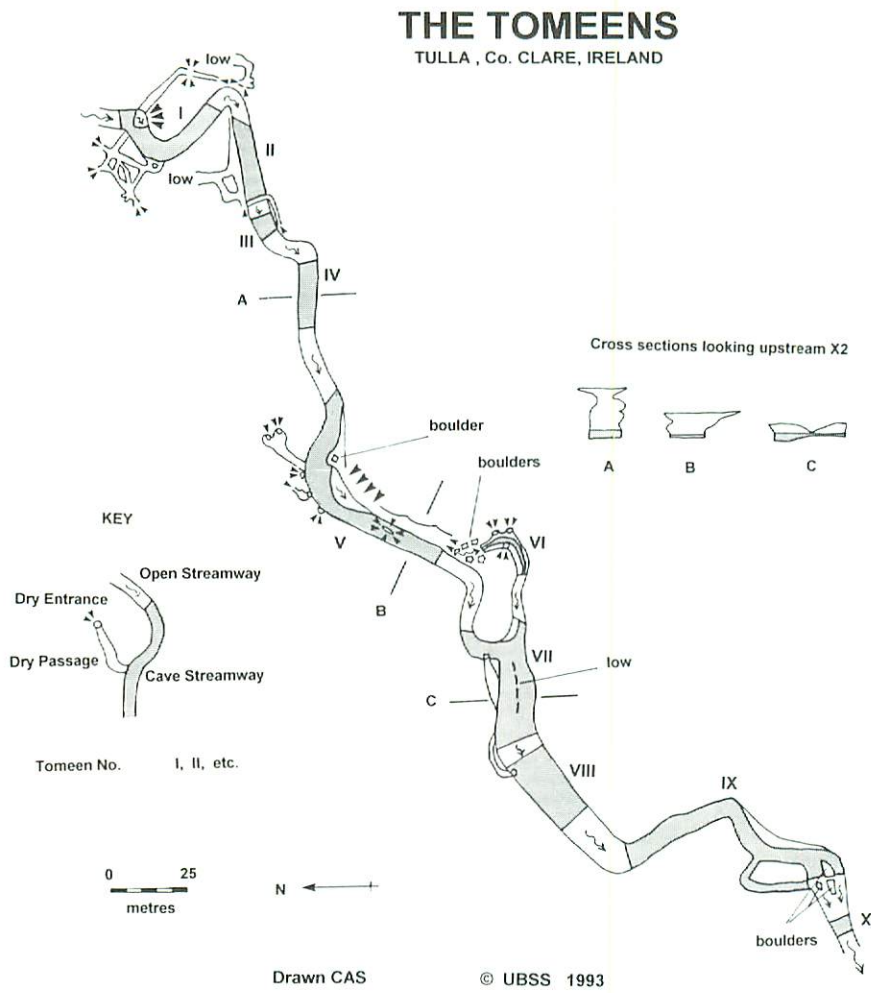


Figure 2. *Plan Survey of the Tomeens*

passing under a 7 m long rock arch, richly festooned with ivy. A high oxbow on the left links the second and third tomeens. The fourth tomeen has an elegant cross-section, with protruding tongues of rock and undercut ledges (Figure 3). It is 23 m long and has deep water.

The fifth tomeen is 78 m long but there has been a substantial collapse of the left wall which now almost divides the tomeen in two. Daylight floods through the cave from both ends and from the middle. The passage height is a little lower than the upstream tomeens, around 4 m, but the cave is correspondingly wider. Most of this width is due to a roof-level bedding cave on the stream left and in the region of collapse the passage may have been 15 m wide. Most of this collapsed

material has been removed by the river, but a distinctive boulder sits on a projecting ledge at the start of the collapse "window" (Figure 4). On the stream right, opposite this boulder, a dry inlet passage may be followed to a bouldery surface opening. A series of daylight openings in the right wall of the streamway characterise the middle part of this tomeen. The left wall of the cave reappears, again with a substantial bedding cave at roof level and with a small daylight opening above the stream.

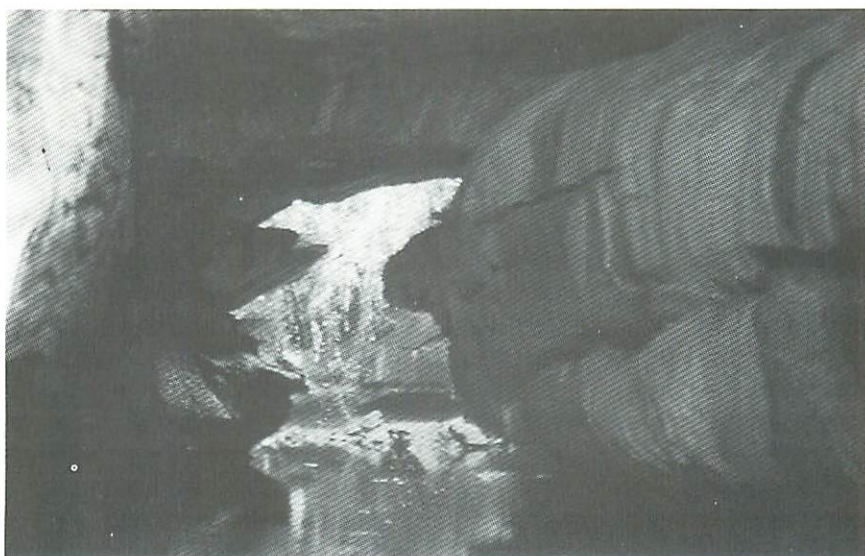


Figure 3. *Tongues of rock project from the walls of the fourth Tomeen.*

At the end of the fifth tomeen the river channel leads west to the seventh tomeen. A small proportion of the stream does not take this route, but leaks between boulders in a southerly direction and enters a stream oxbow cave, the sixth tomeen. This 24 m long cave is of much smaller dimension than the other tomeens, being 2 m to 4 m wide and less than 2 m high. At the start it seems a little taller, but this is due to bouldery breakdown. Three large entrances through the roof mark a change in direction to the west and the small stream meanders between foul-smelling mudbanks to reach the exit.

The 46 m long seventh tomeen begins on the main stream course of the river and at its start is of similar dimensions to the upstream tomeens. The left wall has foundered and some daylight leaks through into the cave. At a sharp bend to the west, an inlet stream enters from the left across a gravel bank. This inlet stream can be followed for 12 m to daylight and leads quickly back to the sixth tomeen, the stream oxbow. The recombined streamway is now very wide, about 13 m, and much lower. The roof has a pronounced dip in the middle which brings the rock close to the surface of the river, effectively dividing the passage in two. The left-hand route is normally chosen as it is 2 m tall and avoids the deep water,

but on this route it is easy to overlook the dry oxbows that can be found on the right wall. One oxbow leads back to a roof hole above the stream near the start of the tomeen, the second bypasses the daylight exit and emerges above the stream just inside the eighth tomeen. Both oxbows are of crawling dimensions.

The eighth tomeen quickly follows the seventh and is an impressive 12 m wide by 2 m high. The passage is straight and stony-floored, 26 m long, with the stream spreading across most of its width. The eighth tomeen and the open streamway which follows are popular with the cattle, which come down to the water via an easy ramp on the stream right at the start of tomeen nine. Near the head of this ramp there is a remnant of small, high-level cave which can be followed for 7 m, exiting through boulders (not shown on the survey).

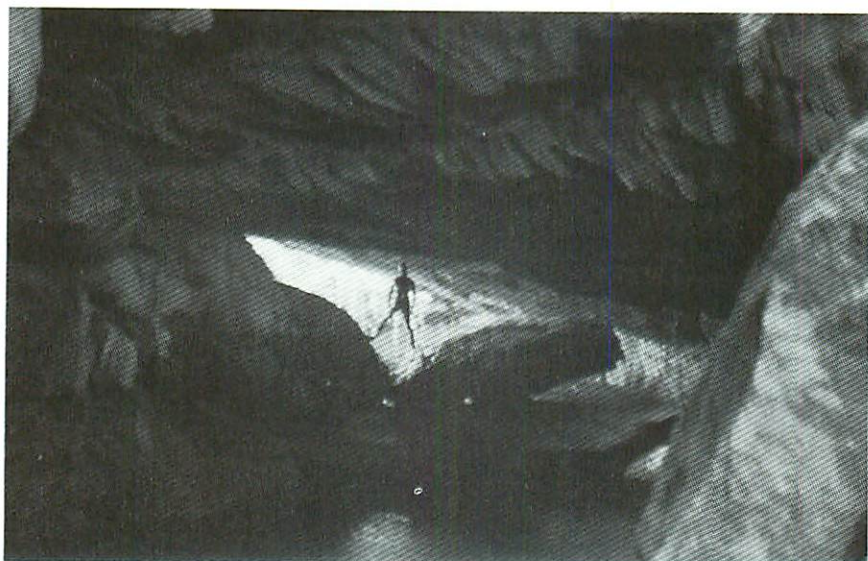


Figure 4. *Perched boulder silhouetted against the window of the fifth Tomeen.*

The ninth tomeen has a quite different character to the preceding ones, and is much longer. The river passage extends for 80 m, with bends that prevent any glimmer of daylight reaching the middle section. From the start, the water is deep and normally swimming is necessary. There are no dry passages or accessible dry ledges. In wet conditions it is an intimidating sight and should be avoided as there are usually barriers of tangled tree branches across the stream at a point about 20 m from the exit, from where a bedding cave ledge can be seen but not reached at roof level on the stream left. Despite its forbidding appearance, this is a very fine tomeen of ample proportions, 4 m high and 6 m wide. If there is a barrier of branches near the exit, an alternative route may be taken via a stream oxbow on the right. This 30 m long oxbow has less deep water than the main passage, is of similar height but only half the width, and ends in daylight just to the right of the main exit. An apparent stream oxbow of 12 m to the left of

the main exit has been caused by collapse. These three distributaries recombine in daylight among a litter of fallen boulders and flow into the tenth and final tomeen, a rock arch 5 m long. The limestone outcrop is now left behind and the river flows away between fields that slope gently down to the water's edge.

DISCUSSION

The ten short caves that comprise the Tomeens are separated from each other by unroofed sections of stream canyon, so that the entire sequence of caves can be regarded as a single stream passage 500 m long disrupted by surface collapse. Further collapses threaten to divide the caves even more and in a few millennia the entire streamway may be open to the surface.

In the region of the caves the limestone is massive and is essentially flat-bedded. The separation between cave roof and ground surface is seldom more than two or three metres and in places there are bedding caves of ten or fifteen metres width spanning the roof of the stream canyon. The roof beds are further weakened by oxbows and dry inlet passages, many of which connect to the surface. Some of these oxbows are at a slightly higher altitude than the roof of the cave streamway and have therefore degenerated much further through bouldery collapse, normally providing less than five metres of accessible cave. Where they have no direct connection to the cave streamway these small cave fragments have been omitted from the survey for the sake of clarity.

The development sequence for the Tomeens is relatively simple and may well apply to other Irish caves located in the drift-covered limestone lowlands. The lowlands of Co. Clare are an excellent example of covered karst, the limestone having been reduced to an unevenly planed surface by karstic action during the middle and late Tertiary. During the cold stages of the Pleistocene the limestone was covered by successive layers of moraine and fluvioglacial outwash, the last during the Devensian (Midlandian) stage. Following deposition of these drift deposits, fluvial action created a system of shallow valleys draining the area.

At Kiltanon a limestone knoll protruded through the drift and the Temeen River cut its channel through the soft sediments alongside the limestone. Over time, river water was lost into the limestone and a network of cave passages developed. These are the small, high-level passages now largely destroyed by breakdown.

As the surface river cut a deeper channel in the drift, the network of old passages was abandoned in favour of new cave passages developing at the upstream end of the limestone inlier. A complex of water routes from these inlet points soon coalesced into one trunk passage which resurged at the point where the surface river had removed the drift from the downstream end of the inlier. The underground route developed quickly and soon captured the entire flow of the river. Further downcutting within the limestone isolated all but one of the inlet points, leaving one main stream passage and a complex of dry oxbows at the upstream end of the system. The two stream oxbows within the Tomeens are successful variants to the main streamway, which remains essentially a single trunk passage.

With so little limestone above the cave roof, the mature cave passage has degenerated relatively quickly. Tree roots are forcing open the joints in the rock and the abundance of rotting vegetation produces humic acids to dissolve the limestone. The cave is becoming fragmented and will eventually become an open canyon with the river downcutting its limestone bed.

An alternative theory of development, deserving consideration, views the Tomeens as a cave remnant from an earlier cycle of erosion re-invaded by the present Tomeen River. The large dimensions of the cave passages seem inappropriate for a cave of late-Pleistocene or Holocene age, particularly since the Tomeen River flows for much of its course over limestone drifts. However, the Tomeen River is itself substantial. The water must have some aggressive potential from the breakdown of peat solutes and other vegetable matter picked up in its early course, and often the river is coloured a rich brown from the suspended load of abrasive sediments. In flood the downstream tomeens are all but filled with water, so the Tomeen River cannot be considered a misfit.

The dry passages, concentrated at the upstream end of the system, are typical of the entrance complexes of many modern swallets and seem appropriate for the abandoned initiating channels of a minor underground loop of a surface river. They are too concentrated to be cave remnants truncated by the present topography, so a putative ancient Tomeens cannot have been more extensive than the modern cave. However, the presence of a well-developed dry valley around the northern edge of the limestone bluff suggests that there was no pre-existing cave route through the limestone.

The limestone lowlands of east Clare have not received much attention from spelaeologists and few other caves are known. Boycott *et al.* (1991) report that the Moyree River flows underground through a limestone bluff some 7 km east of Corofin. As at the Tomeens, a dry valley can be followed around the bluff from sink to resurgence, but the cave is almost entirely underwater and has not been explored. The cave appears to be recent and actively developing. By contrast, the complex of dry caves at Edenvale near Ennis have yielded a wealth of archaeological material and clearly belong to an earlier cycle of erosion. Other sites in this part of Co. Clare have not been visited by the author.

North of Corofin, the limestone lowlands of the Kinvarra-Gort region were never covered by glacial drift and substantial river caves have been active since Tertiary times. The drainage of the area has been and still is essentially underground. The slow regional reduction of the limestone surface by rainfall has now fragmented these old river caves, but the process is quite different from that of the Tomeens. The rivers are seen at the surface only in the regions where the limestone has been eroded to the level of the water table. There are some collapse windows within the limestone, but dry valleys are absent. Drift-choked remnants of similar old major conduits may lie within the limestone of south-east Clare, but none have so far been discovered.

D.P. Drew (*pers comm*) states that fragmented stream caves such as the Tomeens are common in Ireland, with examples in counties Tipperary, Monaghan, Fermanagh, Kerry and Donegal. Whether these are contemporary caves or

rejuvenated cave remnants has yet to be determined. The presence of dry valleys or misfit streams may help provide an answer.

THE SURVEY

The caves were surveyed during two visits: the first during a winter flood and the second, five years later, in normal springtime water conditions. The streamway and the major dry passages were surveyed with tape and compass, with measurements taken to the nearest ten centimetres and the nearest one degree. Where the survey stations were in deep water, the compass readings were taken with less accuracy. A standard corresponding to BCRA Grade 3 is claimed. Minor dry passages and oxbows were not surveyed and have been sketched onto the map at Grade 1 standard.

ACKNOWLEDGEMENTS

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