

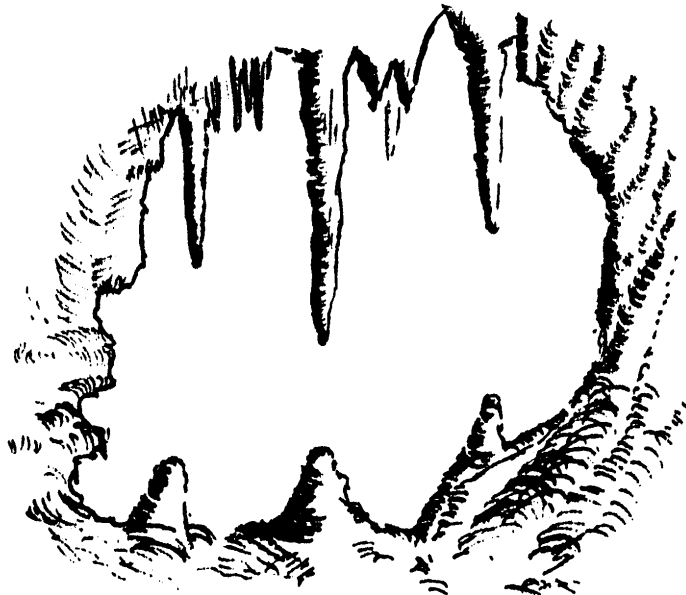
**GLOUCESTER  
SPELEOLOGICAL  
SOCIETY**

NEWSLETTER

2001, No. 2 - MAY



**The Journal**





## **Editorial**

The unfortunate re-occurrence of foot and mouth disease in the UK has halted most of the caving activity (and virtually every other recreational activity in the countryside) for far too long. The GSS, in common with most other clubs in the country, has cancelled all its caving programme and hung up its helmets. However, as of this month, there is an improvement in the situation, and we may well be able to get underground again soon. It is important to remember that the final decision on whether caving is allowed in any particular spot rests with the landowner. Even if livestock movement, and all other aspects of animal husbandry, are back to normal, you will understand if the landowner remains sensitive to outsiders traipsing across his land, and prohibits access. Contact the local clubs for up-to-date information, but even if they give you the go-ahead, don't be surprised if the farmer still refuses you right of entry.

On that happy note, we have a lot of darkness to catch up on! So dust off your gear (which of course has been thoroughly overhauled while you've been unable to use it!) and get grovelling!

Joe Duxbury

*I'm obliged to acknowledge the source of the graphics used at the top of the page. It comes from <http://www.umn.edu/~sherrill/entrance.html>*

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*It's well-known that Americans have different names for things than the ones we use. This article is about what is properly called "faffing about".*

## **The Milling-Around Theory of Speleogenesis**

**by Arnie Weisbrot (Gangsta Mappers, NSS 39982, PSC 595)**

Before going caving, every experienced caver conducts a ritual that is as old as caving or speleology. At some point between home and the cave, individual cavers assemble into groups and perform a dance-like ritual known as "milling-around." This ceremony is clearly an essential part of the caving experience. It is the thesis of this article that milling-around is not only an essential part of caving, but in fact generates the caves themselves.

In order to understand the linkage between the strange rite of milling-around and speleogenesis, one must first examine the way that milling-around is accomplished. There are a few variations on this theme, but generally, milling-around involves two or more cavers. Typically, they will assemble on the side of a back country road. Almost always, they will arrive by car separately. Milling-around usually

commences when the cavers get out of their cars and greet one another. Conversations invariably accompany this initial milling-around activity, often taking the form of friendly salutations. Sometimes, the conversations evolve into some friendly insults such as "Do you ever wash that old bucket of bolts?" After the initial pleasantries, the true milling-around starts in earnest. Generally a small subgroup of cavers will walk back to the car they arrived in, talking the entire time. The conversations often involve adventure stories about other caves. These war stories are usually sufficiently interesting that other subgroups will wander over to see what is so interesting. That in turn spawns other war stories, accompanied by other subgroups splitting off and wandering away to other cars. To the detached observer, this appears to be aimless meandering, but is actually just initial milling-around being done deliberately by the experienced

cavers. It is clear that the experienced cavers are performing a deliberate milling-around rite primarily because novice cavers rarely participate in this phase of milling-around.

The next step in the milling-around ritual involves sorting out caving gear and preparing it for use. Again experienced cavers are best at this deliberate behavior. Usually, the experienced caver will dump an assorted pile of apparent trash onto the road, and go on to transform it into a semblance of caving gear. Old filthy rags will be pounded upon the road and then donned as outer protective wear. Mud-caked lumps will be beaten into shape as boots. Scratched helmets are fitted with various forms of lighting. All the while, an incessant stream of banter with other cavers continues. This ritual is interspersed by occasional wanderings to speak to others, and sometimes to borrow items that have been discovered to be unserviceable or left behind. Less experienced cavers generally make only a slight contribution to this phase of milling around. Their equipment is usually fairly new, and they have not yet developed the knack of storing gear in the same used, dirty condition, trip after trip. Nonetheless, they do join the continuing story-telling and certainly wander from car to car. Novice cavers unconsciously generate a lot of the milling-around dance action. Virtually always, they have no idea what to wear or how to put it on. Furthermore, they will often borrow gear from other cavers. This, of course, creates a large amount of milling-around while all the more experienced cavers assemble to advise the novices and to loan gear. The net result is a period of intensive milling-around commencing when the first caver starts to assemble gear, and culminating when the last caver (often the most experienced in the group) is finally fully dressed.

The usual last stage of milling-around is often called "picking teams." This is a very formalized ritual in which all the cavers assemble near the cars and decide who is going with whom or who is carrying what. This stage of milling-around is most intensive on survey trips in that the entire group is split into sub-teams of three or four. However, it also exists in photo trips or vertical trips by virtue of the inordinate amount of extra gear that must be carried. Even casual tourist trips include this final milling-around since the leaders must make certain that everyone is equipped and ready to go. The picking teams phase of milling-around usually manifests itself as the leaders argue among themselves, while all the other group members do most of the active milling-around, complaining bitterly the whole time. This intensive final stage is quite vital to the completion of milling-around since it climaxes with the walk to the cave proper.

It is clear that milling-around generates caves. This is proven by the fact that a sufficiently intense period of milling-around always results in a trip into a cave.

Whenever enough cavers perform a good enough ritual of milling-around, a cave exists nearby. In fact, it can be argued that the intensity and duration of the milling around are often proportional to the size of the cave generated. Two or three cavers milling-around for a short period of time generally result in only a small cave. On the other hand, a large group of twenty or more, augmented by the efforts of novices, will usually create a significant cave.

One may argue that caves exist even without milling-around. Most people have seen cave entrances while driving along a road with no apparent milling-around. The explanation is simple. Those entrances are simply the remnants of earlier very intense milling-around ceremonies. After all, such large holes in the ground would not simply snap closed when the last of the milling-around group departs. They were the result of significant milling-around, so it follows that significant time must elapse in the absence of milling-around for the cave to disappear.

In fact, some frequently visited caves never close because the duration between milling-around rituals is sufficiently short. Even caves that are ostensibly new discoveries result from the extremely formalized, often solo milling-around known as ridge walking. Such solo milling-around invariably must be done over a very long duration in arduous conditions and even then usually results in only the small caves known as FRO's. Digs are another type of formalized or stylized milling-around. In a dig, generally only one person is actually digging (in itself a formalized dance) while all the others in the group are madly milling-around in the hopes that a new portion of the cave will be created. Clearly, milling around is the primary, possibly the exclusive, method of speleogenesis.

The Gangsta Mappers on the New River Cave survey project provided a very good example of the milling-around ceremony. There were no less than 10 formal, distinctly separate stages of milling-around on that project. All 10 stages in all their completeness were vital since it was a survey project and it would not do to generate different cave on each trip. The 10 stages are defined below as an example of the extent of milling-around that is essential to create a very significant cave.

1. Obscenely early in the morning, all the group (often more than 20, including some novices) is brutally awoken by the cruel homeowner, herself a caver, who has given permission to use her house as a base of operations. Milling-around starts immediately with the sleepy wanderings of virtually all cavers. This initial stage involves very little conversation, but a lot of meandering walks. Stage 1 ends when everyone moves outside to start the 20 minute drive to breakfast.

2. Milling-around intensifies while the cavers try to decide which cars to take. This is usually very complex since it involves knowing who will be going on which trip, and which cars have room. The problem is that the "picking-teams" stage of milling-around will happen much later, so of course no one knows which trip they will be on. Stage 2 milling-around sometimes includes mad dashes from one car to another when plans not yet made are changed before they form. Stage 2 also includes a unique automotive form of milling-around in that there is usually a traffic jam associated with the traffic exiting the narrow driveway. Getting on the road ends stage 2.
3. Stage 3 takes place at the breakfast restaurant, usually a Shoney's "eat till you bust" breakfast bar. All the cavers want to sit in proximity so they can carry on the verbal part of the milling-around during breakfast. Accordingly, there is a period of milling-around while waiting to be seated. This is very non-directed milling-around, usually just aimless wandering. The coffee addicts make a very significant contribution to the overall milling-around in this stage since they manage to walk, but not talk, while in an almost catatonic state. Clearly, stage 3 ends when all are seated and eating.
4. Stage 4 is a short, relatively minor milling-around after breakfast. This stage includes bill paying and the obligatory toilet session. Even the milling-around while getting into the cars for the hour-long drive to the cave is fairly simple because all the car-related milling around was accomplished in stage 2. Stage 4 ends when all cars are on the way to the potential cave location.
5. Stage 5 milling-around is the classic initial milling-around practised by all cavers. At a standard parking location where previous milling-around was known to generate a good cave (New River Cave by name), all the Gangsta Mappers dismount and commence the greetings form of milling-around. Stage 5 is sometimes augmented by the arrival of other cavers who did not participate in the earlier stages. This is a very fortuitous situation since it intensifies the classic greeting stage of milling-around, and will almost always result in a good cave being created.
6. The separation between stages 5 and 6 is not always clear. Someone will commence organizing gear and getting dressed, often a moderately experienced caver. This usually precipitates stage 6 milling-around which is very similar to the typical second step in any speleogenesis activity. However, stage 6 is usually quite intensive in that there are almost always at least 20 cavers involved. The end of stage 6 is delineated when a group leader starts to pick teams.
7. Stage 7 milling-around for the Gangsta Mappers trying to incite development of New River Cave is particularly intensive. This arises partly from the sheer numbers. Usually there will be six or eight teams to pick. The intensity mostly arises from the types of trips and the need to balance skills. Clearly, each team needs a sketcher and skilled instrument readers. However, the novices have to go on some team. In addition, if the teams are chosen correctly with adequate milling-around, there will be deep (or long) trips and shallow (or short) trips. To complicate matters even more, the deep trips (if the milling-around is done exactly correctly) will involve a tight squeeze that filters out all the old, fat, lazy folks. As a final complication, it is necessary to divide up the survey instruments in an equitable fashion. Clearly, stage 7 is a very intense quite formalized ritual of milling-around. It is finally complete when the last cavers head up the hill in the hope that their milling-around has created a cave.
8. Stage 8 milling-around takes place at the newly created cave entrance. The hike up the hill usually exhausts most cavers, so they rest for a bit and adjust lights. Sometimes, stage 8 milling-around is intensified by a search for cavers who have become lost on the hike up the hill. During the resting time, the Gangsta Mappers make an extra effort to do more milling-around in order to ensure that the same cave is created as the last trip. After all, the objective is to survey the cave, and it would be foolish to do varying amounts of milling-around since that would create a cave of different dimensions than the previous trips. In order to ensure that there is a fixed amount of milling-around, the owner of the land that the cave is generated on has set up a compass test right at the point where the entrance is created. Doing this test every time makes the amount of milling-around fairly constant, particularly when it is done in such close proximity to the incipient cave. Stage 8 milling-around concludes when everyone has entered the cave.
9. Milling-around is by no means over! The Gangsta Mappers are truly dedicated to good speleogenesis. They always stop for more milling-around just inside the entrance. The excuse is that the air is cooler (in summer) or warmer (in winter), or that caver's eyes need time to adjust. In reality, this is simply insurance that the milling-around ritual is being effective. The Gangsta Mappers have found over the years that the most effective milling-around is done in close contact with the cave, ideally inside the incipient cave. Stage 9 milling-around usually involves little physical movement, but instead is more metaphysical. The conversations during stage 9 are nonstop, often with ten or more going on

concurrently. Stage 9 ends when someone, usually a leader, decides that the cave has been sufficiently opened, and the groups begin the trek to the survey points.

10. The last stage of milling-around is done about one-half hour travel into the cave. The entire group stops in the Lunch Room for another intensive very effective session of milling-around. The purpose of stage 10 is to ensure that the effects of the milling-around have sufficiently propagated back beyond the tight part of the cave (known as Tuxedo Junction). Since Stage 10 milling-around is conducted about 15 minutes travel from Tuxedo Junction, the effects are particularly powerful. Sometimes, stage 10 has gone on too long, and virgin cave has been generated beyond Tuxedo Junction. This is a grave error since it tends to invalidate the mapping efforts. Nonetheless, stage 10 is still considered to be a vital final touch in the overall milling-around ceremony.

This example of the extensive milling-around associated with a fairly large survey project shows the linkage between speleogenesis and milling around. If none of this milling around were done, then the cave would almost certainly not be there. As additional proof, there are frequent tourist trips to New River Cave. It is very clear that those trips do not involve anywhere close to the amount of milling-around done by the Gangsta Mappers. After all, those trips only sporadically generate cave beyond Tuxedo Junction, rarely create passage beyond the stream crawl, and almost never create virgin cave. Clearly, speleogenesis is the result of milling-around.

The Gangsta Mappers have done some recent research into the physics of the real mechanism that underlies this connection between milling-around and speleogenesis. A new basic particle has been discovered that carries the force to create caves. The particle is created by the personal interactions of cavers. It is massless, has zero charge and spin of  $9/16$ . The particle is called a mill-ion, and is represented by the symbol \$. All cavers have an infinite supply of incipient mill-ions. This may be the root cause for their disposition to caving. Close interaction among cavers causes the incipient mill-ions to materialize and immediately flee from the cavers. After all, what caver can hold onto \$? Materialized mill-ions have an affinity for small dark places (just like cavers), so they flee toward whatever miniscule crevices they can find, especially joints, faults and bedding planes in rock. Many mill-ions

accumulate in these places and there undergo another transformation. The mill-ions interact with the rock and become nothing, which is of course the void that we call a cave. The combined particles are now called rock-millions. The rock-millions are stable for a quite a while, generally measured in hours, thus allowing the newly created cave to stay open for some time. Moreover, the milling-around theory of speleogenesis has one more aspect. The Gangsta Mappers have discovered another speleogenesis mechanism at work after the cave trip. Clearly, there is substantial milling-around when the group exits from the cave. At minimum, changing from cave gear into normal clothing is really just more milling-around which creates mill-ions which flee into the nearby cave and reinforce the older rock-millions which are starting to de-compose. The most interesting new discovery is the existence of a facilitator for those mill-ions. It turns out that beer consumed by cavers after a cave trip attaches to the mill-ions and creates new particles called beerbucks. The beerbucks act just like regular mill-ions, but with one exception. When beerbucks combine with rock, the resultant rock-millions are much more stable and last far longer, thus keeping the cave open for extended periods of time.

The milling-around theory of speleogenesis is by no means complete yet. There are some areas for possible future research. It is not known what happens to the mill-ions that re-form from the decomposition of rock-millions. Similarly, it is not known why beer consumed before a cave trip does not create beerbucks or even mill-ions. We are quite certain that this does not happen, though. Furthermore, there are strong indications that an antiparticle to the mill-ion exists. That antiparticle seems to annihilate mill-ions and thereby prevents the formation of caves. It appears that the antiparticle is generated by caver disputes and underhanded speleopolitics. The postulated antiparticle corresponding to the mill-ion is called a non-cents. Clearly, much added research is needed and would greatly benefit the caving community.

As cavers, you now know how to ensure that you have a good, extensive trip. First, be certain that you interact very extensively with your fellow cavers. Create more mill-ions! Second, don't even try to hold onto your \$ - let them flow into the cave. Third, enjoy a beer or two after a cave trip to create those beerbucks. Finally, avoid the non-cents generated by disputes and speleopolitics.

Happy caving!

## THE 2001 NAMHO CONFERENCE

Held by the Mining Heritage Society of Ireland (Cumann Oidhreachta na Mianadoireachta)

The main event is being held on Sat/Sun. 22nd-23rd September 2001, with associated events the following week, Monday 24th to Friday 28th September.

NAMHO 2001 will be located at Avondale, Co. Wicklow, about 50km south of Dublin. There is some limited accommodation and camping facilities on the site, plus excellent accommodation in a newly renovated Youth Hostel (rooms from 4 beds upwards). Space will also be available in the nearby hotel and local B&B's.

A wide variety of events is planned including surface and underground trips as well as underground visits to working mines. A one-day lecture programme is planned for the Saturday, with a meal on the Saturday evening. Because of the remoteness of some of the mine sites in Ireland, we plan to offer more extended visits to other parts of Ireland (eg. Silvermines, Bunmahon, Allihies, Sligo, N. Ireland) during the week after the main event.

One of the highlights will be the trip to Tara Mine, Navan on Tuesday 25th. This is the largest working lead-zinc mine in Europe and involves a driven underground tour of the mine. We can only take 15 persons on this trip and space is reserved for overseas visitors who have not previously visited the mine.

The provisional programme for trips is:

Saturday and Sunday: Avoca, Glendalough, Glendasan, Ballycorus, Glenmalure, Ballyknockan, Bohernabreens (gold panning). Both surface and underground trips are planned. Saturday night evening event with Irish music (and Guinness)

Monday 24th: Castlecomer (Kilkenny), Bunmahon (Waterford), Avoca  
Northern Loop (Tues 25th- Friday 28th): Tara Mine, Newtonards (N Ireland), Antrim, Benbullin (Sligo)

Western Loop (Tues 25th - Friday 28th): Glengowla (Galway), Clements & Sheffry (Mayo), East Clare, Burren (Clare)

Southern Loop (Tues 25th - Friday 28th): Silvermines (Tipperary), Ballycummisk/Cosheen(Cork), Allihies (Cork)

A booking form will be available in late March and further details will be posted on the Mining Heritage Society of Ireland's web site: [www.gsi.ie/mhsi](http://www.gsi.ie/mhsi)

or contact: Dr. Matthew Parkes, Mining Heritage Society of Ireland, c/o Geological Survey of Ireland, Beggars Bush, Haddington Road, Dublin 4, IRELAND. Tel. +353-1-6041493, Fax. +353-1-6681782. Email: [matthewparkes@gsi.ie](mailto:matthewparkes@gsi.ie)

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As you all know this years conference is being held in Ireland in September it occurs me that the cost of Ferries can be quite high unless Car sharing takes place.

I am the NAMHO conference coordinator and offer my services to act as a signpost and put people in touch with one another to share transport.

If you are interested in doing this please contact me direct at [Mike@moorebooks.co.uk](mailto:Mike@moorebooks.co.uk)

Please indicate if you are willing to drive, how much space in your vehicle and where you are travelling from i.e. and which is you favoured port of departure i.e. Holyhead, Fishguard, Stranrath. If you are looking for a lift please provide details of where you are travelling from

You can also fly easily to Dublin and again car sharing can be coordinated,

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*Can you identify this "notorious" Cheltenham  
caver?  
Do the "shifty eyes" give him away?  
How about some captions?*

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>From Mike Margeson  
MRC Equipment Officer

Lifespan of ropes - new info/guidance from the MRC equip sub committee.

We now have, in writing from the UK importers of Edelrid Ropes, new PPE guidance notes regarding durability of ropes, ie. lifespan.

With low stretch ropes, as long as not subject to mis-use, and if stored correctly and regularly inspected, the manufacturer's recommendation is that the ropes should be retired no more than 6 years from the purchase date regardless of actual usage.

This is an excellent development. Prior to this, we have been working on a three year replacement programme and advice from the MRC. It would therefore be reasonable, as the full 6 years is for light use, to certainly advise that five years is a reasonable and realistic time scale to audit and plan for in a rolling replacement programme of team semi-static rope. This is a great move to a more real life span and will make major savings. It is not to say, however, that a rope might need replacing after its first time out.

Checking and monitoring systems, and knowing what damage to look for, are vital. However this is good news.

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## **The Daren Cilau Rescue 25 – 26 Feb 2001**

### **Joe Duxbury**

Sunday evening and I know that Maurice Febry's phone call brings no joy: standby for a rescue in Daren Cilau, of all places. Half an hour later he confirms the GCRG is needed to help the Gwent CRO. Jon and Dudge come round and we move their gear into my car and we set off. On the way past Monmouth we pass police road blocks on the entrance roads into the town: very mysterious. Are they there to stop recalcitrant cave rescuers trying to turn round?

At Whitewalls we see Arthur Millett and John Stevens in a team just going in. Liz and Jon F. were already in the hut, together with other familiar faces from the RFDC. Other GSS people start to appear: Steve T, Paul T, Dave W, Trev P, Jo and Gareth.

A team to take food and stoves to the Big Chamber Nowhere Near the Entrance, to feed the rescue teams as well as the casualty, is called for. Steve and I are the only ones to have been in the cave recently (although for me it was over 15 years ago, and for Steve, at least 10. I think other people were keeping quiet!) so we get roped in. The rest of the team is PT, JM, John Elliott, Andy Clark, Ladi B, and 2 other blokes. But there's no food to take in! Catering at the Crickhowell Community Centre inform us that it'll take hours to get anything ready, so the call goes out for sandwiches, chocolate, anything anyone can spare. So there go my wonderful chicken and pickle sandwiches that Sue had lovingly made for me. Daren drums and tackle sacks are pulled from the rescue store and filled with a motley collection of food, Coleman stoves, and fuel. Bin liners, cutlery sets, Mars Bars, biscuits, and soup. About 11 pm we were all ready, so we set off. Steve and one of the unknown cavers went in first, and we never saw them again! Steve spent a long, cold and tedious night in the cave, though arguably a more useful one than myself. He might even write about it! I was behind Jon, with John Elliott behind me, and we manhandled a couple of tackle sacks between us. It was much wetter than I'd ever known it, evidence of all the rain we'd had. Somewhere along the line we let John and several others overtake, leaving only Paul and Andy Clark behind us. At last, the end of the entrance series. It now appeared that Paul had been given the job of setting up communications, and proceeded to pull a large reel of wire from a tackle bag. From there to the Big Chamber NNtE we laid the wire, stopping now and then to check the link back to Whitewalls. Without an axle for the reel, it was not easy to lay the wire; it came off twisted. But it worked.

Along Jigsaw Passage we were caught up by another party with more wire. At the Big Chamber, Paul, John Elliott, Andy Clark, Jon and myself stopped, while the rest, stocked up with 4 drums of food, continued to the front. Andy tried to light one of the stoves, but it had a leak and merely flared up. He got the other to work, and we had a cup of soup each. I managed to find my own, my very own chicken sandwiches, and ate a couple. I was astonished when we were told it was 5 am – I thought it was only about 2. Control told us that the casualty would be hours getting to us, so Jon being the coldest, and me the wimpiest, we started back out.

It was a strange trip back. Every time I stopped in a convenient aven to wait for Jon, I would doze off, and wake from surreal dreams with a start. Somewhere near the entrance we met a party with a crowbar, one of the party being Dave Steer. An excellent turnout by GSS. As we reached daylight, we were caught up by Paul and the other 2, and we came out to light snow. It was about 8:30 am.

After changing at Whitewalls, and getting an hour or so's sleep upstairs (tip: always bring a sleeping-bag), there was nothing more we could do, so when Dudge re-appeared, we went home.

The details of the accident and subsequent rescue have been well-published already, so you all know it had a happy ending.

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**You should be aware that the club  
has an excellent website,  
<http://www.gloucester-speleo.org>.  
It has a Bulletin Board, the purpose  
of which is to allow you to announce  
trips, make proposals for opinion,**



Gareth decides to closely inspect the last  
in a line of shallow shakeholes.  
Holding his Maglite in his mouth frees his  
hands for digging.

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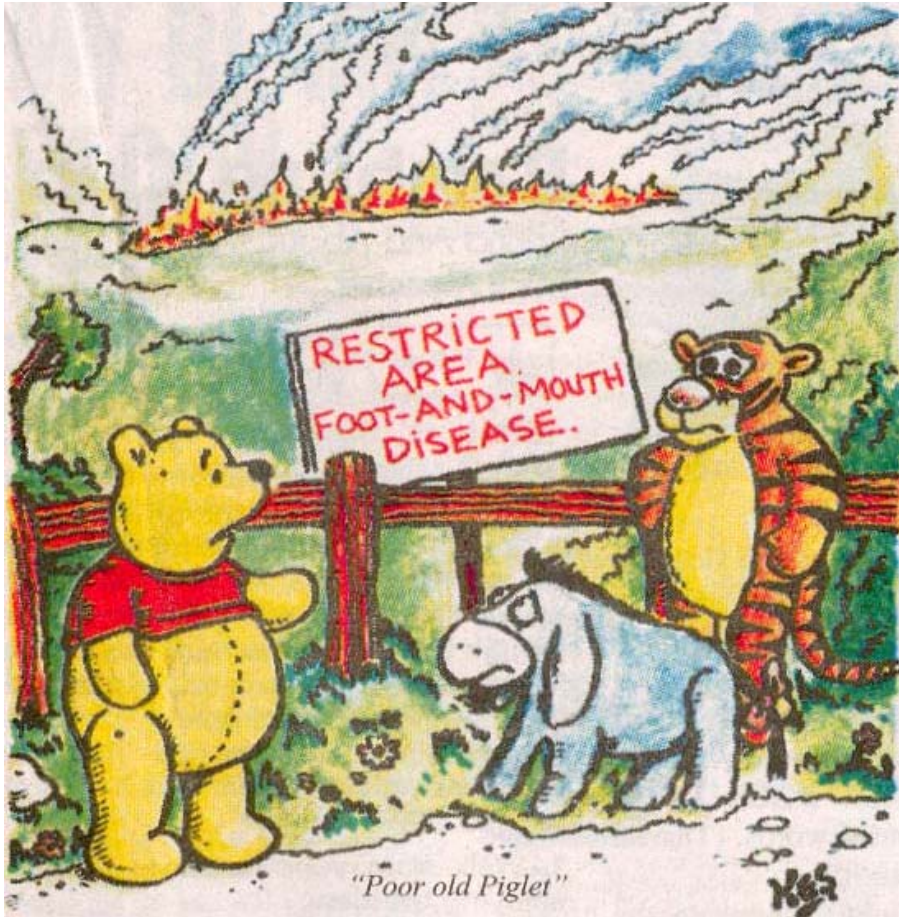
*Here is an extract from a short story by Woody Allen. Provide your own ending.*

- Allen: "... a little parable.  
"A group of men live in a dark cave. They are unaware that outside the sun shines. The only light they know is the flickering flame of a few small candles which they use to move around."
- B: "Where'd they get the candles?"
- Allen: "Well, let's just say they have them."
- B: "They live in a cave and have candles? It doesn't ring true."
- Allen: "Can't you just buy it for now?"
- B: "O.K., O.K., but get to the point."
- Allen: "And then one day, one of the cave dwellers wanders out of the cave and sees the outside world."
- C: "In all its clarity."
- Allen: "Precisely. In all its clarity."
- B: "When he tries to tell the others they don't believe him."
- Allen: "Well..."

*Well, what do you think **ought** to happen?*

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Supplied by: Jo Clark