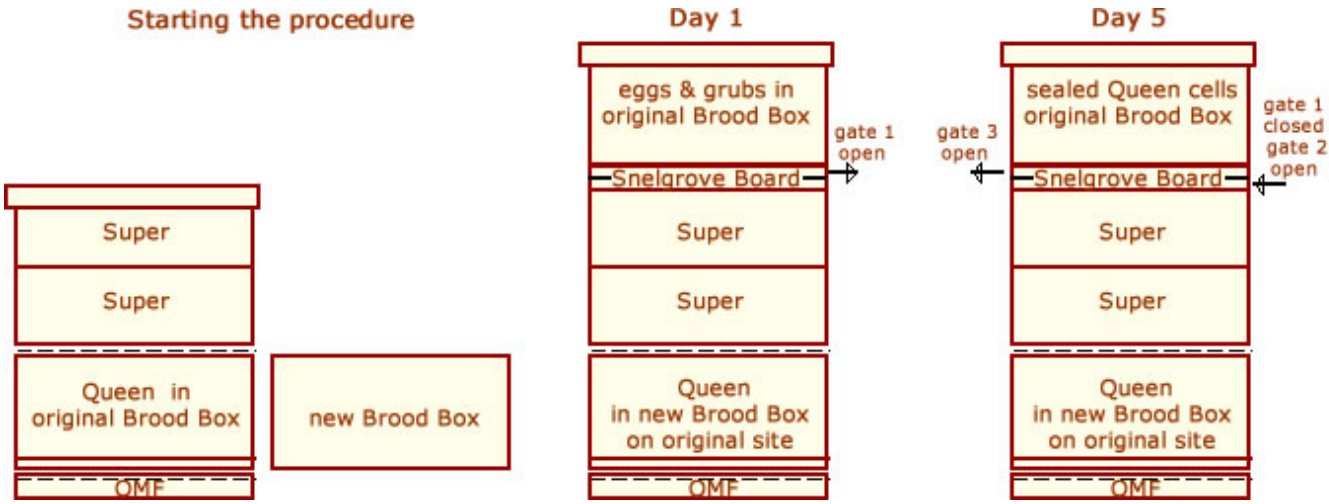
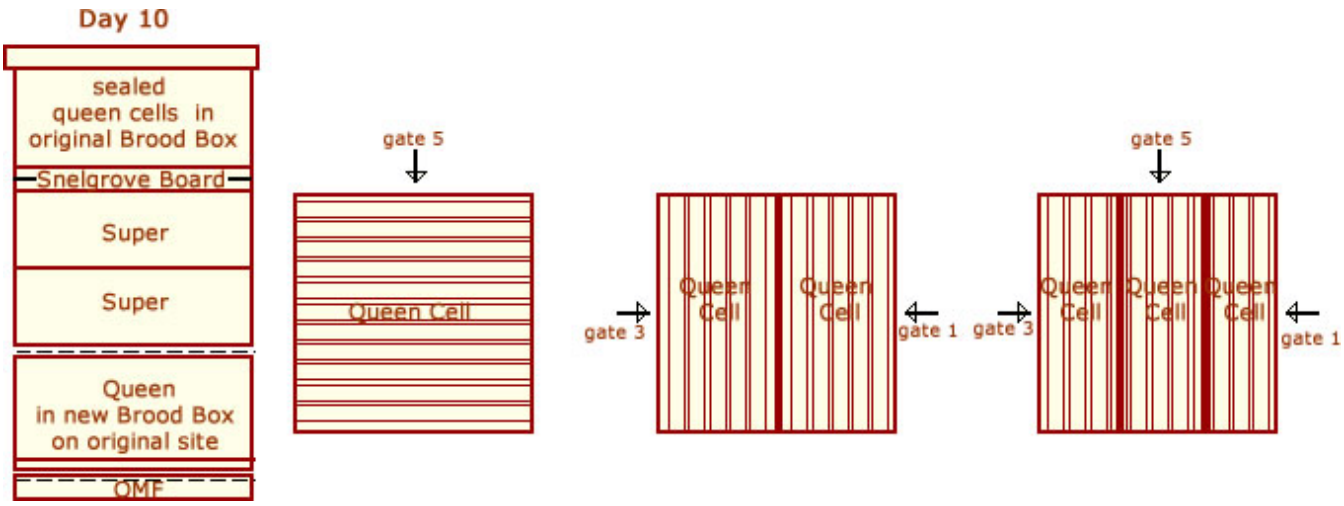
KIllowen.com : Swarm Control 1

Swarm Prevention with or without Increase - Snelgrove's Method I

Essentially the colony is made up of 3 parts: i) the queen, ii) the brood and house bees, and iii) the foraging bees. Effective swarm control then entails the separation of one of these parts from the other two.
In this method the queen and foraging bees are separated from the brood and house bees. Whenever a frame of eggs are raised above the brood box in a separate box, as in the Ben Harden method, it is likely that the bees with raise queen cells on the frame. This knowledge provides a method of swarm prevention with the opportunity to increase the stock by making one, two, or three nucs.
The best time to do this is at the start of the swarming season - from the second week of May and the month of June.
The only requirements are a new brood box with drawn frames and a Snelgrove Board using one, two, or three entrances
depending on how many nucs are required.
The procedure is illustrated below on the assumption that the colony is strong and there are no queen cells in the brood box:



1. Place the original brood box with queen to one side and put a new brood box with drawn frames in its place. Leave space for two frames.
2. Go through the original brood box and find the queen.
3. Place the queen and the frame she is on in the centre of the new brood box. Add another frame of sealed brood.
4. Replace the queen excluder, the supers, and place a Snelgrove Board on these and the original brood box on the top. In the top box move the frames together and add two more frames to make up the full compliment. Make sure that there is sufficient stores and pollen in the top box.
5. Open gate 1 (top). The foragers will leave this exit and return to the queen. Foraging will continue and the bees will continue to work on the supers.
6. On day 5 close gate 1 (top) and open gate 2 (lower). Bees which in the meanwhile have learnt to use gate 1 will return but on finding gate 1 closed will use gate 2 and join the queen. At the same time open gate 3 (top); new bees will learnt to use this exit/entrance. Close gate 2 in late evening when all foragers have returned.
7. On day 10 a second gate change can be performed as above allowing still more new forages to join the queen. Close gate 3 (top) and open gate 4 (lower).
8. Ideally queen cells should be formed from grubs which are only one day old; the cell being sealed on the 8th day after the egg is laid. So the first sealed queen cells would be expected on day 5. If sealed queen cells are found before day 5 it would mean that these cells have been formed from grubs over 2 days old. These cells would produce inferior queen and thus should be destroyed. So an inspection is made on day 4 to ensure that there are no sealed queen cells. The position of unsealed queen cells can be marked at this time.



9. The procedure next depends on how many nucs are wanted; 1, 2, or 3 nicely formed queen cells are chosen respectively.
On day 10 when all queens cells will have been sealed, the top box should be divided accordingly ensuring that each nuc is bee proof as described under the Pagden Method (Swarm Control 3).
New queens emerge on day 16 after the egg is laid, and mating should be completed after the first week. New brood should be seen shortly afterwards.
10. If no increase is required, only one queen cell is left in the top box. This colony is left over the season to develop and then united with the bottom box by the newspaper method after the old queen is either destroyed or removed.

Swarm Control 2

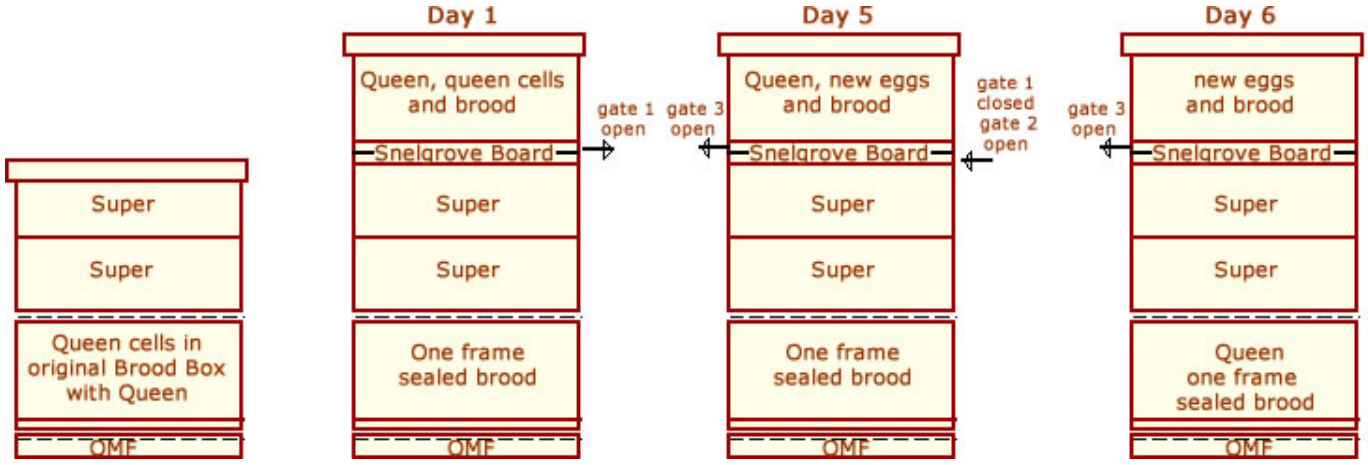
Strategy when unsealed queen cells are found during a routine inspection

Snelgrove's Method II – Procedure when the queen can be found.

Snelgrove discovered his Method II by accident. He found unsealed queen cells before the colony had swarmed. He put the box with the brood and queen cells above the supers intending to do a conventional swarm control procedure, leaving the queen in the box below. However, in some cases he found that the queen had forced herself through the queen excluder and joined the brood and bees in the top box. Surprisingly he
discovered that the bees started to destroy the queen cells on their own volition.

The Method essentially separates the queen and brood and house bees from the foragers so that the colony loses the ability to swarm.

In the final part of the procedure after the queen is returned to the box below a choice can be made as what to do with the bees in the top box.
Queen cells might be constructed in the top box from the newly laid eggs. It could be that these might produce inferior queens owing to the lack of nurse bees. In this case these queen cells should be destroyed. However, a queen cell from a breeder queen could be introduced with a view to requeening the colony in August.
If no increase is required, further gates changes can be make say at 5 day intervals to put the new foragers into the box below. When all the brood has emerged the top box can be removed.



Unsealed queen cells are
seen and the queen found.

Into a new brood box place the queen, all the brood frames with their bees, and all frames with queen cells. Make up the box with spare frames.
In the original box place the combs without brood with their bees, and one comb of sealed brood (no grubs or eggs).
Rebuild the hive with the Snelgrove board below the top box with gate 1 open to allow the foragers to return to the lower box.
The bees in the top box loose their foragers and start to destroy the queen cells.

The queen in the top box starts to lay eggs.

On day 5 closing gate 1 and opening gate 2 ensures foragers augment the colony in the lower box. Open gate 3; new foragers learn to use this entrance. Close gate 2 in the late evening.

On day 6 or 7 the queen is found; she and the frame she is on are returned to the lower box.
The bees in the top box will now start to make new queen cells. If it is judged that there might not be sufficient bees to provide enough royal jelly, these cells may be destroyed. Or used to make nucs as described on the
previous page.

Alternatively all queen cells can be destroyed and a queen cell from a breeder queen introduced with a view to requeen-ing the colony below later in the season.

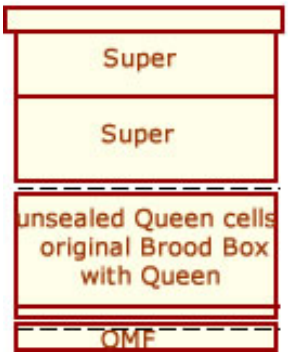
Snelgrove's Method II - Procedure when the queen cannot be found

This is not necessarily a problem. Provided it can be ensured that the queen is not on the frames of sealed brood that remains in the lower box. It can be assumed she is in the top box where she is meant to be.
On day 6 when the queen is returned to the lower box it will be much easier to find her especially if she is marked as the top box will be depleted of bees.

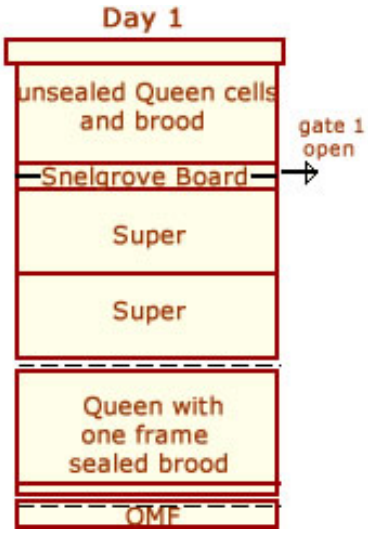
Conventional Artificial Swarm Method

The Snelgrove board can also be used when it is desired to carry out the Artificial Swarm Method when unsealed queen cells are found during a routine inspection. In this case the queen cells are used to produce one, two or, three nucs.

If the queen cells are close to sealing, then it is important that the procedure is carried out at once and not to chance waiting for the following day when a queen cell might in the meanwhile have been sealed. Once this happens the bees go into swarm mode and will swarm even though the sealed queen cell is removed.



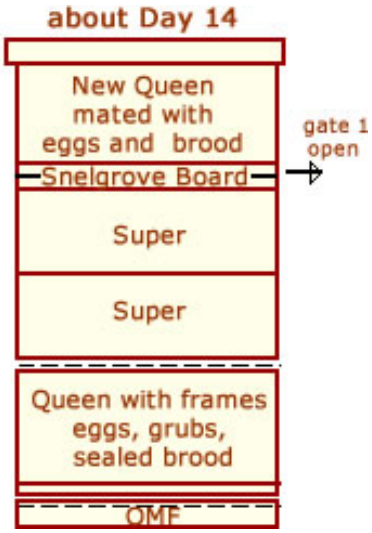
Unsealed queen cells are seen and the queen found.



The queen and the frame of brood she is on is put into a new brood box. The box is filled with drawn frames with some stores.

The original box containing the frames with the queen cells is put over a Snelgrove board above the supers. A gate to the side is left open. Foraging bees will leave the top box and join the queen in the box below.

Depending on how many new queens are wanted, the top box can be divided to form 1, 2, or 3 nucs.



If only one new queen is required the top box is left undivided. After the new queen has mated, eggs might be seen after about 14 days.

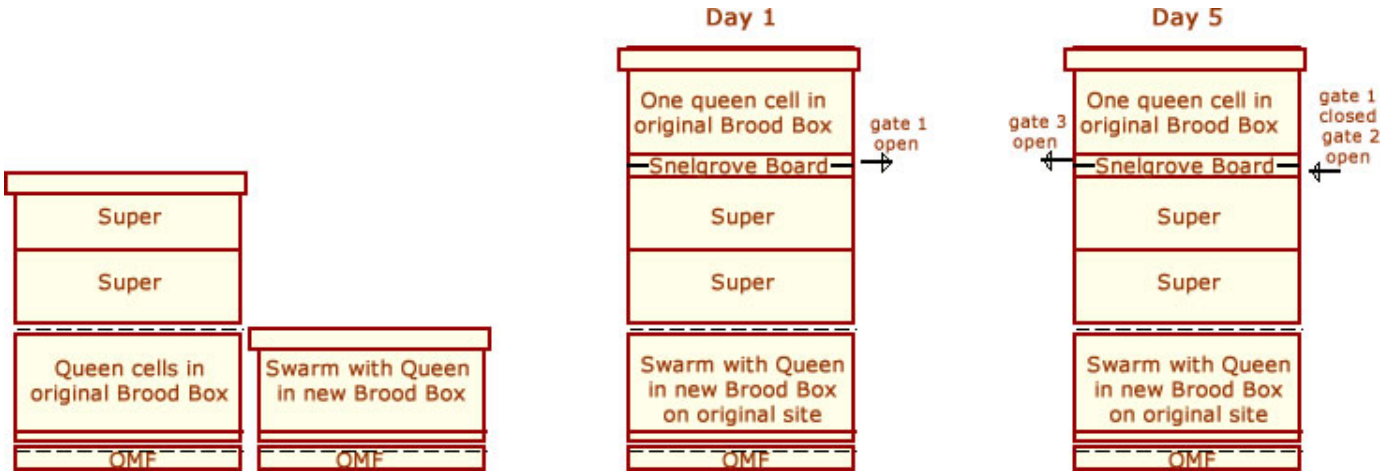
This colony can now be left to build up. It can be used to replace the old queen below or separated later in the season as a new colony.

Swarm Control 3

Swarm seen to emerge

In this case the swarm is caught and put into a new brood box. A variation of Snelgrove's Method can be used or the Pagden method. The method can be varied depending on how many if any queen cell are left. If one queen cell is left then the colony can be requeened at the end of the season. Or up to three nucs can be made from the queen cells..

Snelgrove's Method

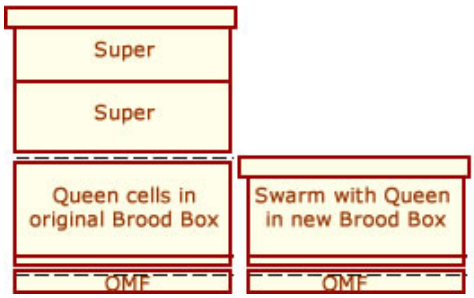


The swarm with the original queen is caught and put into a new box on a new stand with OMF and roof.
The original brood box now contains all the brood with queen cells.

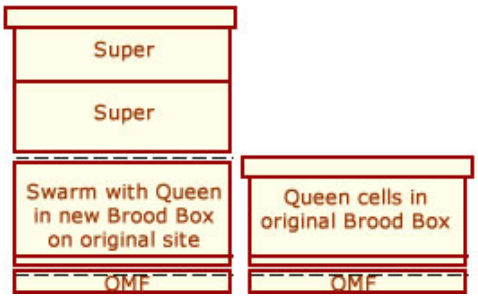
One queen cell in this case is left in the top box with a view to requeening the colony.
Gate 1 is opened allowing foragers to join the queen below.

Gate 1 is closed and gate 2 opened allowing new foragers to supplement the swarm.
Gate 3 or 5 is opened from which the new queen will mate. (Gate 2 is closed late evening).
The new colony is allowed to build up over the season before requeening.

Pagden method with no increase



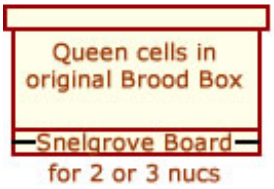
Stage 1
The swarm with the original queen is caught and put into a new box on a new stand with OMF and roof.
The original brood box now contains all the brood with queen cells.

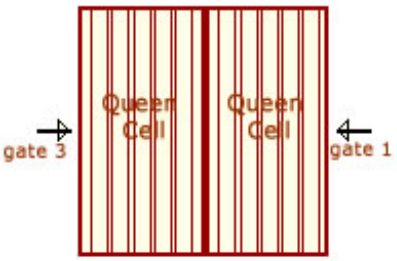


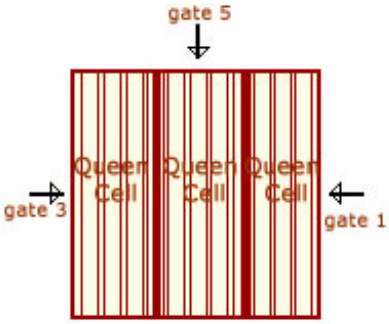
Stage 2
After allowing the swarm to settle in the box, this new brood box is exchanged for the original brood box containing the queen cells.
All the foraging bees on leaving the latter return to the original site and augment the swarm.

Stage 3
When no increase is wanted the brood box with the queen cells is left until all brood has been sealed.
All queen cells are now destroyed and the box placed above the supers and left for 2 weeks until all brood has emerged. It is likely that the bees will use the top brood box as a super so the box is left until the honey harvest.
Every few days the crown board should be removed for a few minutes to allow the newly emerged drones to escape,

Pagden method with increase







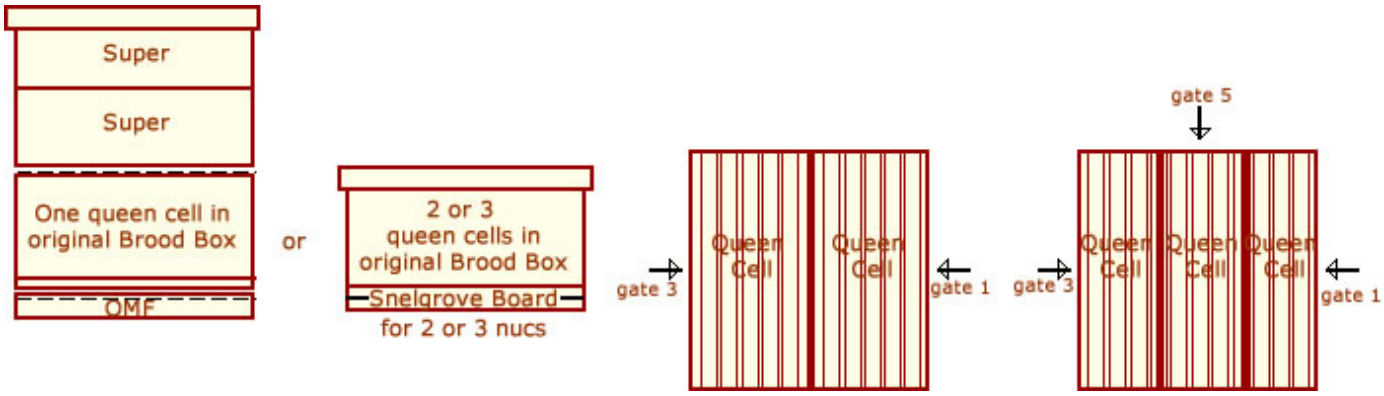
If an increase in the number of colonies is required, then a choice can be made after all the brood has been sealed.
If only one new colony is required then all queen cells should be destroyed except one. The brood box can be left on its stand and the new queen allowed to emerge and mate. New brood should be seen about two week after emergence.

If, however, more than one colony is required then the brood box can be divided in 2 or 3 nucs. For this a Snelgrove board is required with gates 1, 3, and 5 open; also 2 or 3 made-to-measure crown boards are needed. 10 frames from the colony are divided accordingly (5 : 5 for 2 nucs or 3 : 4 : 3 for 3 nucs) with a well formed queen cell in each nuc. In these two cases it is necessary to ensure that there is no bee space on the underside of the brood box, and that a divider is accurately made so that no bees can pass from one nuc to its neighbour.

Swarm Control 4

Strategy when sealed queen cells are found during a routine inspection

This is probably the worse case scenario. It can be assumed that the colony has swarmed. As a result perhaps a favourite queen, and also the honey harvest has been lost. At least all is not lost; a decision can be made whether or not an increase in colonies is wanted. The procedure is similar to the Pagden method as described on the previous page.



If no increase is required, then all queen cells should be destroyed except one. The brood box is left on its stand and the new queen allowed to emerge and mate. New brood should be seen two to three weeks after emergence. The supers can remain in place, however, in view of the fact that it will take 6 weeks for new foragers to appear, it might be best to transfer any supers to other hives.

If, however, more than one colony is required then the brood box can be divided into 2 or 3 nucs. For this a Snelgrove board is used with gates 1, 3 and 5 as entrances () ; also 2 or 3 made-to-measure crown boards are needed. 10 frames from the colony are divided accordingly (i.e. 5 : 5 for 2 nucs or 3 : 4 : 3 for 3 nucs) with a well formed queen cell in each nuc. In these two cases it is necessary to ensure that there is no bee space on the underside of the brood box, and that a divider is accurately made so that no bees can pass from one nuc to its neighbour. The supers are given to other colonies.

Casts

If a colony swarms and the remaining queen cells not dealt with, then virgin queens will emerge in a series of casts. These can be very successfully taken and each treated as a nuc. The cast will built up during the season to a full colony. It is relatively simple to find the virgin queen if the cast is sprayed with water and gently poked apart with the finger.
The cast should be fed if necessary and the first eggs can be expected between 2 to 3 weeks after the cast is taken.

Strategy when a Queen is accidentally lost

It is sometimes the case no matter how careful one is when handling a queen or colony that the queen is lost.
For example the bees themselves have killed the queen when she has been held in a Jenter cage !, and a queen has been damaged when held in a queen catcher (clip). It also always pays to look under the crownboard when removing from the brood box during an inspection in case the queen is there.
What to do?
The answer is not to panic but to let the colony produce new queen cells. The situation is rather like that which occurs in the colony when a swarm has departed and left sealed queen cell behind as described above.
Hopefully in this scenario the new queen cells will be formed from one day old grubs or eggs. If the colony is examined on the 4th day after the accident and sealed queen cells are found, then these should be destroyed; the grubs which the bees chose must have been more than one day old.
The situation now becomes similar to that described above. A decision has to be made before the new queens emerge as how many queen cells are to be used. It is imperative that action is taken. Doing nothing will just result in a series of casts emerging so decimating the colony.