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"How to"

How to Prevent Bee Stings

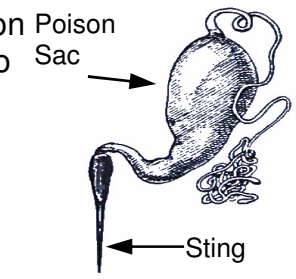
Before you open your hives, it is a good idea to have a shower, using an unscented soap and put on clean clothes which are light in colour.
Bees dislike:

1. Strong smells such as perspiration, and some types of soap, shampoo and hairoil. Your favourite sweaty, felt hat is really a problem.
2. Dark objects or clothing.
3. Woolly or furry clothing. If you wear thick, furry black socks, a pair of light coloured cotton ones over the top solves this problem.
4. Grease.

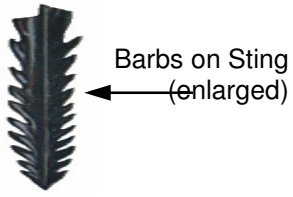
How to Take Out Bee Stings

Scratch the sting out with your fingernail immediately you feel it.

The makeup of the sting will explain why. The sting is like a hollow, barbed tube, attached to a poison sac. When the sting pierces your skin, the poison sac immediately pumps the poison down the hollow sting, and continues to do so until it is empty, so the sooner you get the sting out, the less poison passes into your body.
Even when out of your body, the poison sac will continue to pump, like a miniature heart.



Scratch the sting out with your fingernail. If you pick it out with your first finger and thumb, as you would a prickle, you squeeze the poison sac, send all the poison down the hollow stem of the sting, and give yourself the full dose.



So **scratch** and **speed** are the important factors.

Yes, the bee dies after it stings you. Because of the barbs on the sting, the bee cannot easily withdraw it from your skin. As the bee flies away, part of its insides is left attached to the sting, and the bee consequently dies.

2 How to Approach Your Bee Hive For The First Time

When handling bees, a smooth, unhurried approach is required. Do not bang the lid, or lift the frames jerkily, or make any swiping motions. Just smooth, smooth, smooth. If you can do this, and look and see, and interpret, you are already half way to becoming a beekeeper.
Choose a calm sunny time; put on your protective gear; light your smoker.

Pick up your hive tool and your smoker, and stand to the side of your hive. I sure do not mean this to sound like an Army Manual, but if I describe it rather fully, you will know better what to do and so feel much more confident.

Before you smoke the entrance, observe the bees' flight, because soon it will begin to tell you all sorts of things you'll want to know - if stores of honey, pollen and water are coming into the hive, and about the population of that hive.

Give a couple of light puffs in the entrance, wait a short time for the smoke to take effect, and lift the lid just a little or prise it up a little with the hive tool. Give a couple of gentle puffs under the lid, wait a few seconds, and then lift the lid right off and lean it up against the other side of the hive. Waft just a little more smoke across the top of the frames, then put your smoker down, but in a handy place. If it has a hook, hang it on the super.

Now if you look down you will see the bees clustered between the frames, and busy doing the things that bees are programmed to do. Use your hive tool and spread the frames so that you can remove one for a closer examination. I usually remove the third frame from the wall on the side of the hive nearest to me. This frame will probably be covered with bees. Handle the frame gently and most of the bees will stay there.

On this frame you may see brood cells in the middle area, and some honey towards the outside. The beeswax cap of each brood cell is well defined and raised, to make room for the growing bee. The brood area is quite bumpy and always a brownish colour. The beeswax cap of a honey cell is flat, so the area with honey is fairly smooth and often whitish in colour.
If, at any time during your inspection, the bees become agitated, just a couple of gentle puffs of smoke will calm them.

If you wish to look at another frame, lean the frame you are holding against the lid, so you can't accidentally kick it, but being careful not to squash too many bees.

The centre four frames are the main nursery because this is the warmest part of the hive. Here you are likely to see eggs and larvae in different stages. The bees' brood, just like birds' eggs, needs to be kept warm, so do not look for too long. When you are ready to replace the frames, arrange them back in the same order that they were before your visit. Carefully replace the lid.

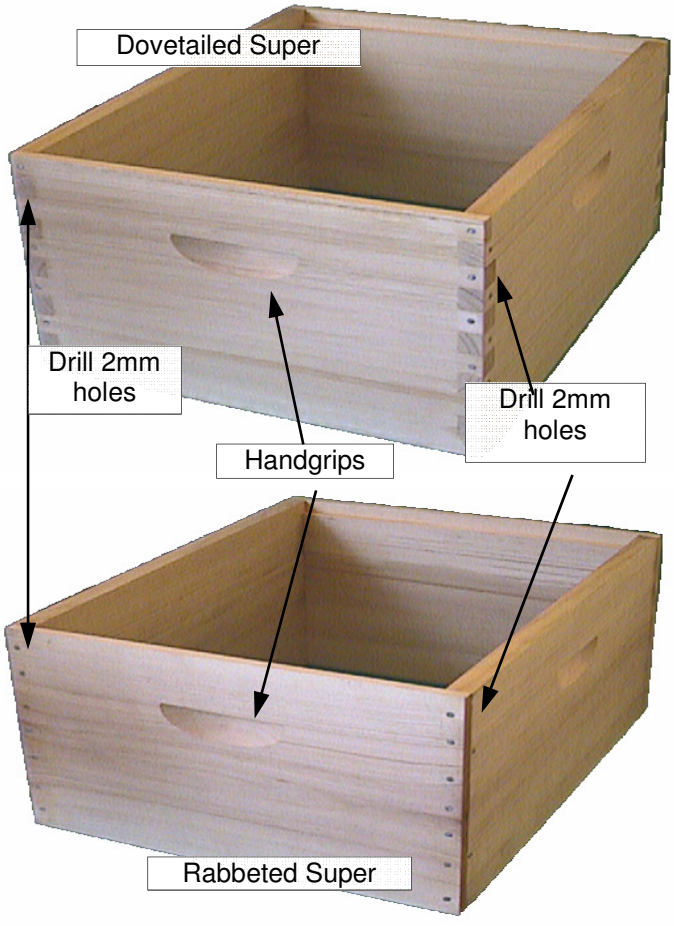
Careful and Correct Assembly of Material Doubles Both Its Life and Its Value.

Paint - Hoop pine is not really an outside timber, but we cannot use hard wood as it would be far too heavy. Therefore it has to be kept well painted to give you maximum service. We recommend 3 coats for the inside of the box and 4 coats for the outside. Choose a light colour as this reflects the heat. Any paint which is suitable for humans is suitable for bees.

We recommend that where possible you undercoat the joins and nail them together while the undercoat is still wet. Good quality undercoat dries into an effective glue and this helps to keep moisture out of the joins.

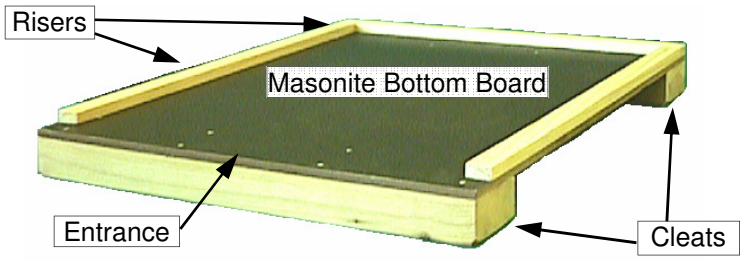
Nails - Cement-coated or galvanised. Sizes are suggested for the various items.

How to Assemble Supers



1 Drill a 2mm (1/8 inch) hole in the top of the super ends, that is in the thin part that has been rebated for the frames to sit on. (Some people drill all the holes before nailing.)
2 Using undercoat, paint the end grain areas and allow to dry.
3 **Warning** - ensure that the four handgrips are on the outside and facing up the right way ☺ (although you really are not a beekeeper until you have put at least one box together with the hand grips wrong).
4 Using undercoat paint these same places a second time. While this undercoat is still wet, nail together using 65 x 2.8 (2 1/2 x 12) nails or
60 x 2.8 (2 1/4 x 12) nails. For rabbeted supers we recommend 11 nails for each corner joint, and for dovetailed supers, one nail in each lug, giving a total of 11 nails per corner joint. This is a messy job, but by doing it while the undercoat is wet, it helps to form the perfect weatherproof seal.
5 Paint box inside and outside with undercoat.
6 Give the inside one coat of top coat and the outside two coats.

How to Assemble Bottom Boards

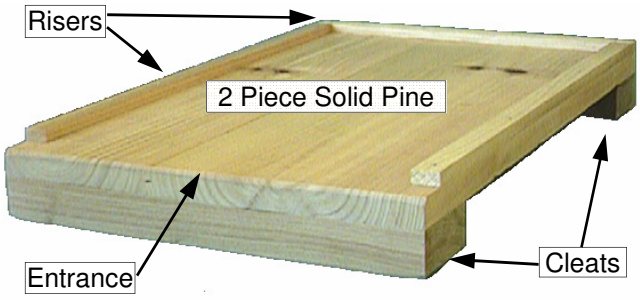


Masonite Bottom Board

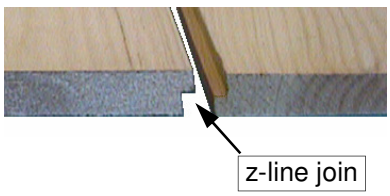
1 We suggest that you give everything a coat of undercoat.
2 Paint again any surfaces where two parts touch. Assemble while the undercoat is wet to help waterproof the joins. For fixing the Masonite to the cleats use 25 x 1.8 (1 x 15) nails. For nailing on the risers use 40 x 1.8 (1 1/2 x 15) nails.
3 It is a good idea to give the entire bottom board a coat of undercoat and 2 coats of top coat.

The assembly of a metal bottom board is the same as a Masonite bottom board, just substitute the Masonite for a sheet of galvanised iron.

2 Piece Solid Pine Bottom Board

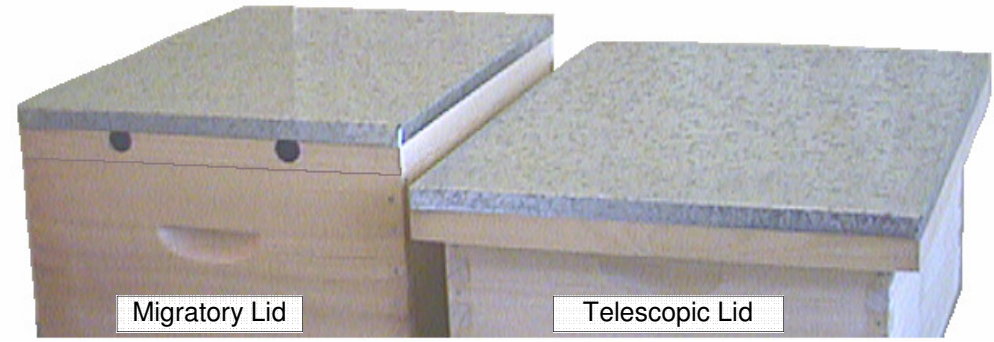


1 We suggest that you give everything a coat of undercoat.
2 Paint again any surfaces where two parts touch. An adequate amount of wet undercoat along the z-line join will act as a very effective glue - assemble while the undercoat is wet. Nail one piece of the pine using 40 x 1.8 (1 1/2 x 15) nails onto both cleats. Then push the other piece into the z-line join and nail into place. For nailing on the risers use 40 x 1.8 (1 1/2 x 15) nails.
3 It is a good idea to give the bottom board a coat of undercoat and 2 coats of top coat.



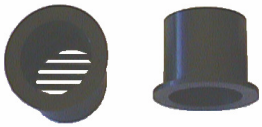
In extra hot weather, bees appreciate some shade. Put a large sheet of galvanised iron on your hive and hold it in place with some heavy stones.

How to Assemble Lids



Migratory Lid

1 Paint the ventilation holes in the lid rims, but be sure not to leave any blobs or runs in them. Insert the vent grids.

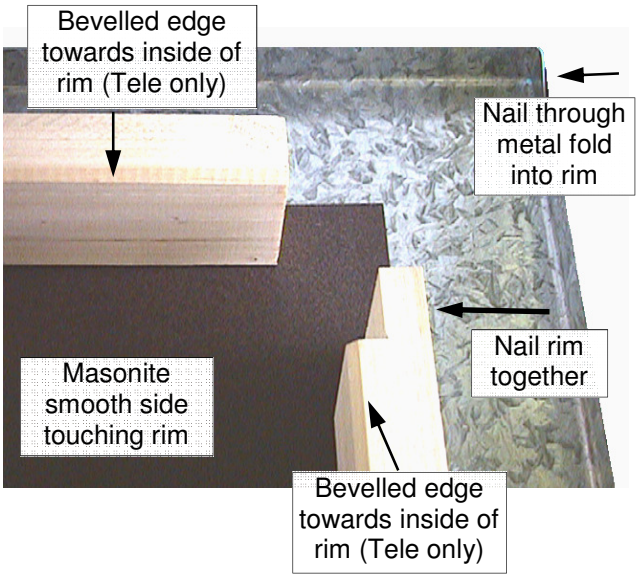


Ventilation Grids

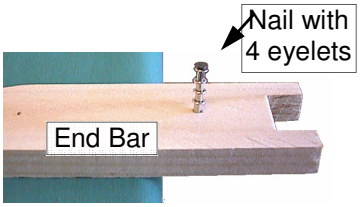
Telescopic Lid

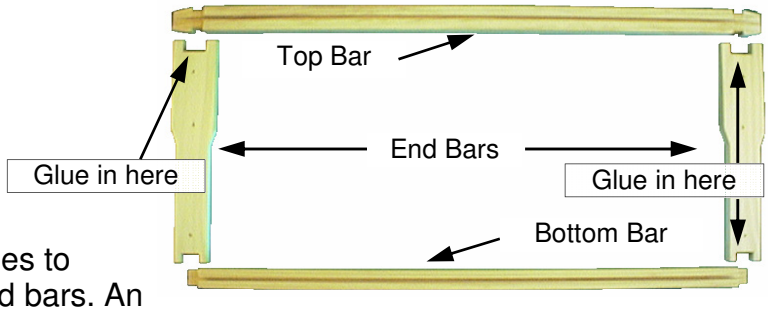
1 Look at the pieces of lid rim and you will see that one edge has been bevelled. This is to make it easier to put the lid on your super, so when you nail the rim together, make sure that this bevelled part comes on the inside of the rim. Continue with step 2.

2 Paint the join areas of the lid rim with undercoat and allow to dry.
3 Paint these same places again, and, with 50 x 2.5 (2 x 13) nails, nail together while wet, thus helping to seal the join. Then adequately paint the woodwork.
4 When dry, place the Tempered Masonite lining in position, smooth side downwards (towards the bees).
5 Then place on the galvanised iron. One nail, 25 x 1.8 (1 x 15) in each corner through the folded-over edge of the metal into the lid rim will hold the metal on securely. To make an even better job of it, run a line of solder down the joint.
6 If you want to you can give the galvanised iron one or two coats of paint.

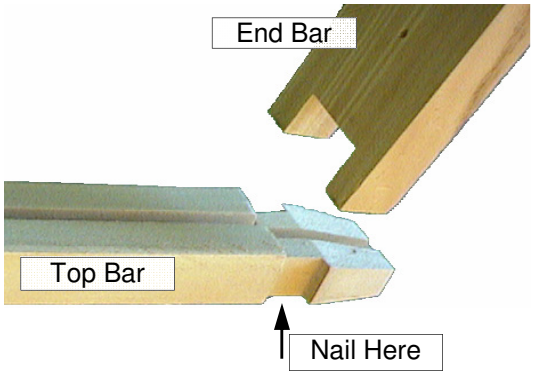


How to Make Up "All Wood" Frames

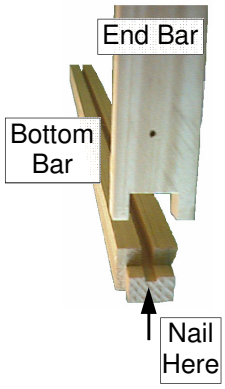




1 Insert the eyelets into the end bar holes to prevent the wires cutting into your end bars. An easy method is to thread 4 eyelets onto a fine nail; place the end bar on the table so the top hole is projecting over the edge; put the nail into the top hole, and give it a sharp tap to insert the eyelet. Move the end bar so the second hole is over the edge, put in the nail, and tap in the second eyelet. Turn the end bar around and insert the other two eyelets. You actually need only 6 eyelets in a full depth frame. One end bar needs 4 eyelets, but its mate needs only the 2 centre ones. The top and bottom holes, near where the tacks go in, have the wire going across the grain and will not cut in.



2 Place the top bar, with the groove facing up, on a bench.
3 Place a small amount of glue in the hollows at the top and bottom of the end bars. Use a P.V.A. glue. We recommend Aquadhere.
4 Push the end bars into position on the lugs of the top bar.
5 Put the bottom bar into position.
6 Drive one nail, size 30 x 1.4 (1 1/4 x 17) or size 25 x 1.25 (1 x 18) in each end of the bottom bar, using a nail punch to give it the last hit and drive it just under the surface of the wood.
7 Turn the frame right way up, and drive one nail , 30 x 1.4 (1 1/4 x 17), in each end of the top bar finishing off as for the bottom bar. I think a lot of lugs are partially fractured in this operation, and, after some use, eventually break. If the right amount of glue is used, one nail in each of the joins will prove sufficient.

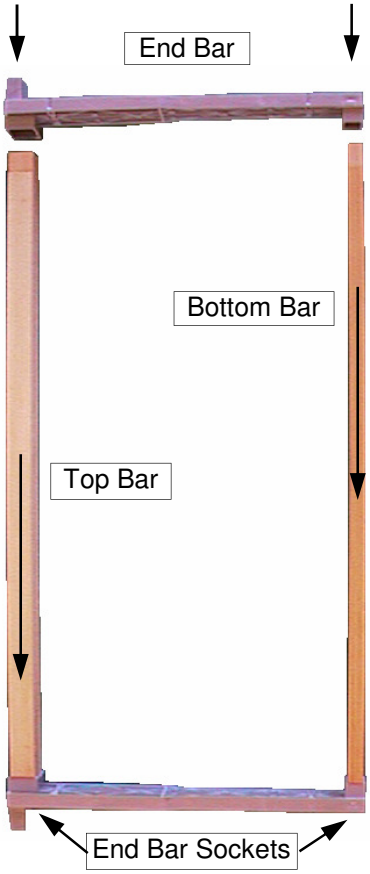


Alternative Method - If not using glue, it is necessary to use two nails at each corner of the frame, making a total of eight nails in each frame. Some beekeepers also drive a very fine nail, 20 x 1.1 (3/4 x 19), through the lugs at the top of the end bar.

How to Make Up Guilframes

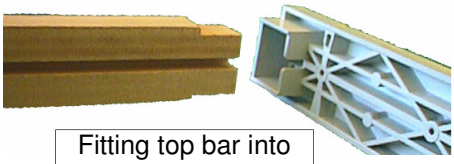
Extremely Easy!

1 Place one Guilframe end bar, with the sockets facing up, flat on the table with the lug over the table edge. Push the grooved top bar, with the groove facing into the frame, into the top bar socket, and push the bottom bar into the bottom bar socket.
2 Push the other end bar onto the ends of the top bar and bottom bar. Your frame is now ready for wiring.

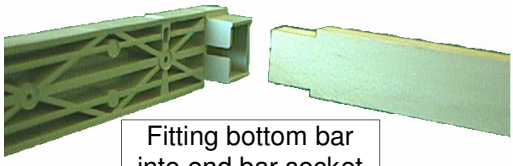


If you are using either Rigid Plastic foundation or Plasticore, and therefore not wiring the Guilframe, you can squeeze some Liquid Nails into each socket before you assemble the frame.

If you really wish to, you can nail the Guilframe together using the nail holes in the end bar. Use 40 x 1.8 (1 1/2 x 15) in the top bar, and 25 x 1.8 (1 x 15) in the bottom bar. The heads of the nails will go neatly into the recesses.



Fitting top bar into end bar socket



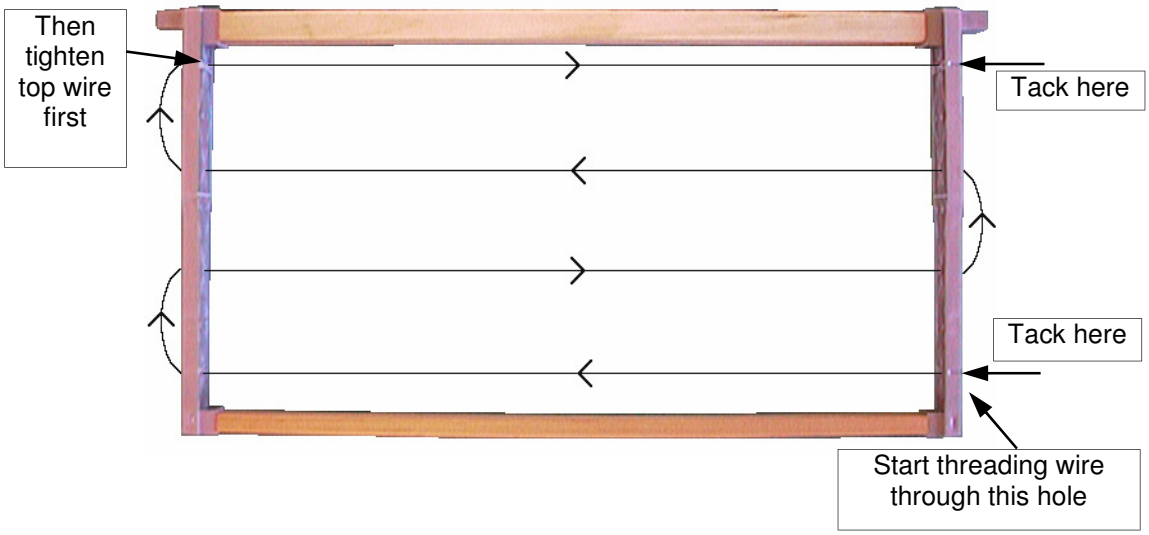
Fitting bottom bar into end bar socket

If you tilt your hives forward just a very little, any condensation which runs down the walls will flow outside, so helping to keep your bees dry.

Nothing is as good as the right tools, but try a screwdriver if you lose your hive tool, or a handful of grass instead of your mislaid bee brush.

Definition - An amateur beekeeper is one who eats more honey than he produces.

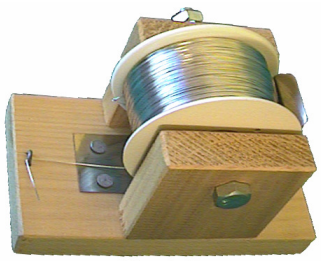
How to Wire Guilframes & “All Wood” Frames



1 Place the frame on the table with the top bar at the top. On the narrow edge of the right hand end bar, and about level with the top hole, drive a 10 mm (3/8 in) tack or a very small nail, 12 x 1.4, about half way in, and do the same near the bottom hole. If using Guilframes, there are grooves already there for you.
2 Thread the wire as shown, going through the bottom hole of the right hand end bar to start, and continue following the arrows.
3 Pull the wire through the top right hand hole for about 8 cm (3 in), wind it securely (4 times) around the tack, drive the tack right in, break the wire off flush. Tack head or wire left sticking out could catch on your uncapping knife.
4 Start to tighten the wires from the top wire down. To tighten the top wire, pull on the second top wire in the opposite direction to the arrow. Continue down each wire, tightening as you go. For the bottom wire you can wrap the wire outside the frame around a ball point pen to tighten.
5 Then bend the wire sharply upwards and fasten off around the bottom tack. Drive the tack right in and break off the wire. (Remember your uncapping knife.)

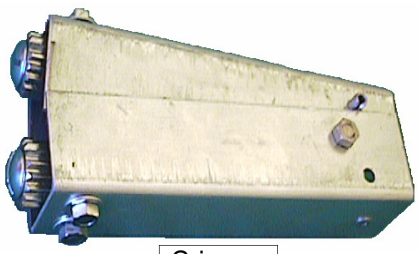
The correct tension for wiring frames ensures the wires are straight, but you are not stringing a guitar - they don’t have to be tight enough to play a tune.

A wire tamer will help you control your wire as you unwind it, and will prevent you losing “the end” when you cut the wire.



Wire Tamer

An alternative method of tightening your wires is to use a crimper. This ingenious device with special hardened-steel rollers can be used on frames that have just been wired, as well as old frames whose wires have loosened over time.



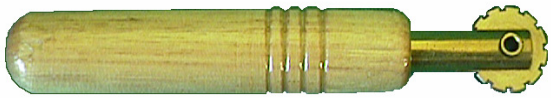
Crimper

How to Embed Ordinary Foundation

1 Stand the frame top bar down on the table, leaning it towards you.

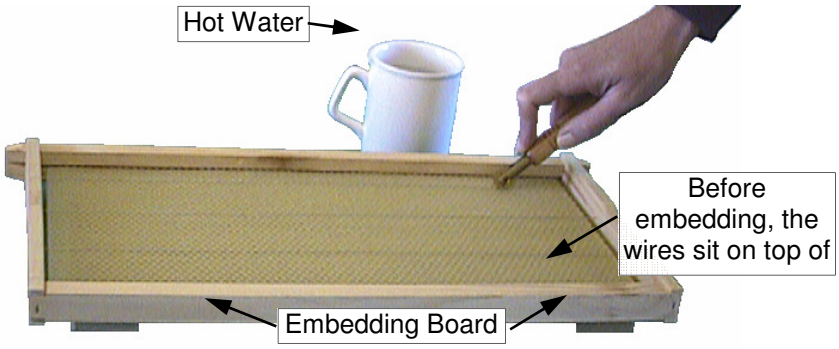
2 Place the sheet of foundation on the wires, and slide it right down into the groove in the top bar, and by bending it a little, insert it into the groove in the bottom bar. Be sure it is about an equal distance from each end bar. Lay the frame flat on the table with the foundation resting on the wires.

3 Place the flat side of the embedding board on top of the foundation, and grasping both the frame and embedding board together, turn upside down. You then have in order from the bottom, table, embedding board, sheet of foundation and wires.



4 If using a spur wheel embedder, heat it in hot water, and run it along the wires to insert them about half way into the foundation.

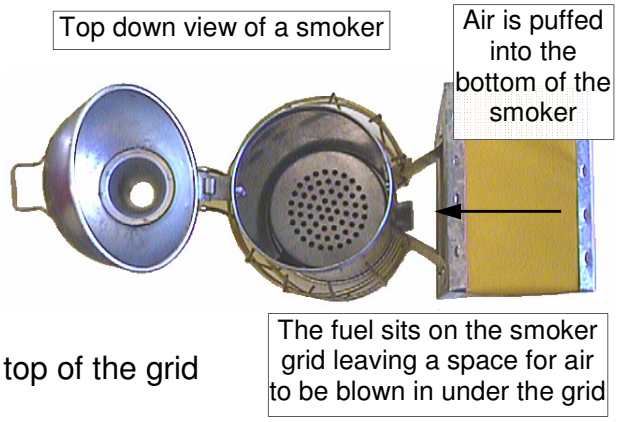
5 If using an electric embedder, place the contacts of the embedder on the top of a single wire, close the switch with your thumb, then release the switch as soon as the wire commences to sink into the foundation.



6 It is a good idea to embed your foundation no more than a few days before you put it in the hive. Otherwise it has a tendency to buckle, especially in hot weather.

Rigid Plastic foundation and Plasticore used with either Guilframes or All-wood frames with a grooved bottom bar do not need either wiring or embedding.

How to Light a Smoker



1 The best fuels are dried pine needles, dried tea tree bark, wood shavings (about half pine and half hard wood), or dried grass. Some beekeepers use old hessian bags, but although they will stay alight and burn for a long time, they often give out a strong smell which the bees dislike.
2 Using some flammable material, such as paper or very dry bark or leaves, light a fire on top of the grid which is in the bottom of your smoker.
3 Add fuel slowly, and puff the bellows a few times, being sure it is burning well, until the barrel is about 1/2 to 3/4 full.
4 Add more fuel and push down until it is fairly tight, till the smoker is nicely full. Jamming your smoker fairly tight means you exclude the air, so the fuel burns more slowly and creates smoke, not flame.
5 Close the lid. Remember, unless the smoker is well alight underneath it will go out. A well lit smoker should burn all day.
6 When you have finished with your hives, empty your smoker rather than let it burn itself out. This prolongs the life of the barrel.

How to Use a Smoker

Your smoker is undoubtedly your best weapon in keeping your bees calm when you are looking at them. A few light puffs frequently is the secret.

When you open your hive, a few light puffs will quieten the bees. Then as you work, the occasional puff will keep them calm. The bees' level of activity and humming indicate when smoke is necessary and experience will soon teach you this. If the bees do not respond to your first few light puffs, wait for 20 seconds or so, and give them a few more light puffs, rather than double the dose first time.

We do not know why smoke calms bees. There are many and varied theories such as the presence of smoke causes bees to sense the hive is being threatened by fire, so the bees fill up with honey. It is more difficult to be angry when your tummy is full. Another theory is that smoke entering the bees' breathing holes quietens them down.

Those beekeepers who attend to their bees in singlet, shorts and thongs always have a lighted smoker with them.

Remember, go easy with the smoke. A few light puffs often does the trick.
Puffing-billy tactics will only infuriate the bees.

About Swarms

Swarms

Let's face it. Most people are afraid of even one bee, and they are terrified and do not know what to do when they see thousands of bees either swarming in the air or hanging from a branch.

If you want to increase your number of hives by picking up swarms, it is a good idea to give your name and phone number to the council offices and the police stations in your area. People often ring the police or the council for assistance with swarms. Our offices in Brisbane, Sydney and Adelaide also have swarm lists and would be only too happy to add your name to them.

Warnings From The Voice Of Experience

When you get a swarm call take the time to get some details and also to calm the person down a bit. (You might score a honey customer.) See if you can get them to understand that, if they leave the bees alone, the bees will leave them alone. As you know bees gorge themselves with honey before they swarm, so bees in a swarm are feeling somewhat the same as you do after Christmas dinner. But, if an adventurous child digs at the swarm with a stick, the bees will win.

Often people do not bother to differentiate between 20 or 30 small wasps hovering around their nest and a swarm of bees. Sometimes the swarm is at the top of a very tall tree. Sometimes the "swarm" is a hive long established between the walls of a brick home. Unless you are skilled enough and prepared to spend a lot of time, these are generally a pest control job. Much as we hate to kill bees, there is usually no quick, magic way of getting them out.

Tips When Extracting

When extracting, it is a good idea to extract about half of the first side, reverse the combs and extract all of the second side; then reverse the combs back as at the start and extract the rest of the first side. Sounds like a bit of messing around, but it helps to prevent breaking combs.

Honey and water are not a good mixture. Honey alone left in your extractor will not damage it, but a mixture of honey and water, or honey and moist air can be quite corrosive. When washing out the extractor, make sure you wash away all the honey, then turn the extractor upside down, preferably in the sun, to drain and dry quickly.

For easy uncapping your knife needs to be both sharp and very hot. If you have only a few frames to uncap, it sometimes does not warrant the expenditure of a bought uncapping knife. Try it this way. Collect three or four knives, such as old fashioned butcher's knives or carving knives. Thick ones hold the heat better, but make sure they are quite sharp. Nearly fill your frypan with water and set it so that it is just simmering and put the knives in to heat. Pick up one knife, shake it to remove the surplus water and quickly dry it with some towelling. Use it until it is too cold, replace it in the simmering water and, using another knife, repeat the process.

“How To” Contents

How to Prevent Bee Stings 1
How to Take Out Bee Stings 1
How to Approach Your Bee Hive For The First Time 2
General Assembly Instructions 3
How to Assemble Supers 3
How to Assemble Bottom Boards 4
How to Assemble Lids 5
How to Make Up “All Wood” Frames 6
How to Make Up Guilframes 7
How to Wire Guilframes & “All Wood” Frames 8
How to Embed Ordinary Foundation 9
How to Light a Smoker 10
How to Use a Smoker 10
About Swarms 11
Tips When Extracting 11

Books For Beginners

Beekeeping (Department of Agriculture,Victoria) At present out of print.
How to Keep Bees & Sell Honey (Kelley)
The New Starting Right With Bees (Root)
First Lessons in Beekeeping (Dadant)

(Please see page 38 on our price list for other books, and prices)

We Guarantee

our goods to be entirely satisfactory, both in material and workmanship. Examine your equipment as soon as you receive it. If you are not satisfied with it please return it immediately, and we will either replace the goods or refund your money in full.

John L. Gwyle

You don’t have to be mad to keep bees, but it helps.