The Australian bee bulletin. Vol. 17, no. 9 December 31, 1908

West Maitland, N.S.W.: E. Tipper, December 31, 1908

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THE AUSTRALIAN Bee Bulletin.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.
Edited and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W
Circulated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

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NOTICE.

SHOULD any beekeeper have a doubt of the genuineness of any honey sold in his neighbourhood, send a sample to the Chairman Board of Health, Sydney, who will cause it to be analysed, and take proceedings if necessary.

Printed and Published by E. TIPPER, Proprietor, High Street, West Maitland, N.S.W.

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"The Australian Bee Bulletin."

A Monthly Journal devoted to Beekeeping.

Circulated throughout the Commonwealth of Australia,—New Zealand & Cape of Good Hope.

Editor & Publisher: E. TIPPER, West Maitland, N.S.W. Aus.

MAITLAND, N.S.W.—DEC. 31, 1908.

SEASONABLE.

Although it is now the height of summer, things are not encouraging. The New South Wales Government has, by its policy of enabling settlers to dispose of their land in small quantities; in fact, abolished closer settlement, the result being, land is being cut up and honey raising is much interfered with. For ourselves, we have limited ourselves to our farm, and shall do so for a time. It is much the same with many others.

Does it Pay to Import Queens?

It often crosses my mind is it worth the candle to import queen bees. If other countries are better suited for breeding bees and the bee-masters of other lands are further advanced than we are, well, then it must pay us to import. If Australia is equal in every respect to other countries where does importing come in? My first bee-farm was established in 1862. I do not claim to be the first bee-farmer, not even in my own district, as the first bee-farm was evidently established in 1840, eight years before I was born, 68 years ago. Since 1862 I have been watching the black bees, where they have their own sweet will, and if there is any difference in them to-day it is for the better. True the wax moth and so many dry seasons

may have improved this race of bees by culling out the weaker class, and if this is true, I believe it is, can we not very much improve our present race of bees, which are undoubtedly an improvement in many ways to the black race, and if the black bees can hold their own why not the better races? It has been said that parts of Australia has produced 3 cwt. of honey per hive in one season; can any other part of the world do better? It is a doubtful matter if any other part of the world can produce better bee masters than Australia. We are not confined to one or two, we can raise quite a little army of forward bee-men, and quite a number of them as writers equal to any other part of the world; and having many privileges, we can help each other, and can produce bees second to none in the world. This being so there can be no advantage further then to introduce new races of bees for experimental purposes, which I think we should practise more where circumstances will permit. Could not our bee-men, well at least, try and help themselves where disease prevails, such as paralysis. Probably no bees will resist foul brood. Has anyone thoroughly tested the Holy Land bees for that trouble paralysis, and by selecting for a number of years. I believe a lot can done by selecting, and doing it in a locality where the trouble exists. I have had no experience with paralysis, never saw it. I would not have a queen, if I knew it, from an apiary where paralysis existed at any price. On the other hand, if I was in trouble with that disease, why, then I would send direct where the owner had either partly or fully mastered the disease. What I mean is, cannot this trouble be at least mastered in part or whole, bred out by selection. True there are places, and good ones at that. I know where first-class sheep cannot be kept up without importing, and, if this is true, the same may apply to bees, whether our locality be suitable or not to keep up a useful class of bees. We must either import or carefully select the heads of our hives, the queens, if we leave the bees to themselves they will annoy us by swarming before they have their hives full of honey, play up many other pranks such as stinging, &c.

The Lester and South Down sheep are said to be children of the same parents. After many years selection, note the difference, the Lester's long white wool and face, the South Down's short wool, black face and legs. We could take a bright Golden Italian queen and mate her to a Black drone. Result: if raising queens from her like the workers would be some black queens. Now divide the apiary equally in every respect, so that no other bees could mix with them in the case of one apiary. Select the brightest, the other the blackest. Keep this going in two localities only a few years and you will have two distinct races of bees, two breeds from the same great grand-parents. Can we not do very much the same to improve the working abilities in our bees honey-producing qualities? True, we may be situated in some locality where an inferior race of bees will thrive better than the better strains. If so, we will have to content ourselves with them. I do not think many bee-men keep large apiaries for the love of being stung by their bees, but rather for the amount of cash they can make out of them. The bee that can bring me the most honey is my bee every time. I say to my fellow bee-men try various strains and try each one well, and stick to the one that pays best. Thomson's strain of bees may be the best for New Zealand, and Johnson's strain of bees best for hot Queensland; in any case select the strongest queens and hives to breed from, not from every one swarming out. To conclude, if we are to succeed, we must help ourselves by using the knowledge given us.

W. REID, sen.
Honeyvale, Paupong,
via Dalgety, N.S.W.

Simple Records and Indications of Work to be Done.

Leslie Burr in "Beekeepers' Review.

In every kind of business, if it be carried on extensively, to obtain the best results everything must be reduced to a system.

In a shop, for instance, every man, as he enters, takes a card from a rack and has the day, hour and minute stamped upon it by the automatic machine for that purpose. That card stands as a record as to the time that individual workman entered the shop. Then each workman keeps a record of the time spent upon each piece of work. All through the shop everything is systemized, there is no guess work. The exact cost and time it took to do every piece of work is known.

The shop with its hundreds of toilers is not unlike a large apiary, and the benefits that the manufacturer obtains by having everything systemized is no greater than a beekeeper can gain by making use of a system of hive-records.

There are two ways of keeping apiary-records, in a book and on the hives themselves. The first is of no value to the practical beekeeper, in the actual hive-work. Book records are all right when confined to weather conditions and honey flows. The second, "records on the hives," is the only practical method, as the record is there right before the operator, and a glance shows if the colony needs working or not, and if so, what the conditions of the colony should be.

As to the manner of keeping records, much depends on the style and conditions of the hives. If the hives are new and well painted, the written records can be kept with a carpenter's pencil on the top of the covers.

As to a system of hive records, the following will cover all normal conditions of the hives. In going over an apiary the first time in the spring, the condition of each colony should be recorded. A good way to do this, is to put down the numbers of frames of brood. For example, if a colony were worked on May 25th and had four frames of brood, the record would be written thus: (5-25—4). When the yard is again worked, say, ten days later, and this colony is found to have two more frames of brood, the record should be placed directly under the preceding one and written thus: (6-4—6). If at the same time the bees were short of stores the record would be written 6-4—6x8.

In keeping records of the queens, it is only necessary to put down what kind of a queen she is and the date when she is first found laying. When a queen is being reared by a colony, the records of this are best kept by placing a stone on the hive cover in such a way as to indicate at just what stage the colony had arrived at when they were worked. An easy and simple way to indicate the condition is to place the stone on the front to indicate that the colony is queenless; if there are cells, place it in the center; if a virgin is in the hive, place the stone on the back. This system of the three positions of the stone is about the best, as each position back indicates a step in the course of the natural events in the process of rearing a queen. The stones also have the advantage of being easily seen, and when the apiarist desires to know how many colonies are queenless, or wishes a cell for some queenless colony, a glance over the apiary shows what is desired.

As to keeping records of the honey produced by each individual colony, it scarcely pays when the bees are run for the extracted honey, unless the colony is above or below the average of the yard. The reason being that the advantage gained would be over balanced by the trouble it would be to mark down the number of frames taken from each hive while taking off honey during extracting.

Comb honey is a different proposition, as a record has to be kept, of the number of supers finished if one is to know what a colony is doing. A simple way to keep track of the comb honey is, when the first super is placed on the hive, put down the date on the cover and follow it with a perpendicular mark, and for each super added later, follow it with another perpendicular mark, and for each super finished check off a cross mark.

In keeping records, the idea should always be to accomplish two things: First, to know just what the queens are, as it does not pay to keep poor queens. I think it safe to say that the man who never re-queens could increase his honey crop from one-third to one-half by properly re-queening.

Second, it reduces the amount of labor for the apiarist, and also saves the bees from being molested when there is no need of doing so.

[I kept book records one year—that was enough for me. It was simply so much time wasted. In queen rearing I kept a large calendar on the wall, and marked the dates when batches of cells were to be removed. I used the queen-registering cards on the nuclei; and recorded conditions and dates simply by turning pins on dials—could not do without them. In producing comb honey the progress in each super was recorded and the dates indicated by the use of cards and pin-dials. Their use many times saved opening the hives. In the production of extracted honey, as we now do the work, giving a great amount of empty comb, and not removing the super until the end of the harvest, there is little use for such methods. There are, however, many little things about the work in an apiary, and particularly in regard to queens, that may be recorded or indicated in some such manner as described by friend Burr. Some use a brick instead of a stone, and are able to give added meaning by laying the brick upon its side, or turning it up on edge. The memory can not be depended upon for all of these things, and the less the busy beekeeper has to use his pencil the better—any plan that is simple, quick, and accurate is all right.—Ed.]

CORRESPONDENCE.

Trunkey.

The Editor "A.B.B."

Dear Sir,—I attach herewith clipping taken from the "Herald" (S. M.) of 12th inst. It might be of some interest to your readers. I'd like to see Mr. Abrams' opinion about it. I also attach clipping from Bathurst Argus. You will be glad, I'm sure, to note that the Department have at least acknowledged that there are bees and bee-farmers.

I am,

Yours truly,

E. F. HUNTER.

"Referring to the petition from Trunkey Bee-farmers' Association presented by you herein asking that the matter of ringbarking on the proposed improvement leases within Mulgunnia Goldfield be reconsidered, I have the honour to inform you that the Minister for Lands has, in view of further report and after very careful consideration, decided that an area of about 13,820 acres be divided into five blocks and offered for improvement leases under conditions which provide among others for the protection of bee-farmers, viz., the preservation of all straight sound box and stringy bark of six inches or over in diameter measured at three feet from the ground, which are useful or likely to be useful for fencing or building purposes or for railway sleepers subject to the provision that the lessee may cut and use any timber for fencing or other improvements within the leased area; also of one tree to every square chain for shade and honey purposes in those parts where well-grown

timber does not exist and preference shall be given in the following order in selecting which trees to leave, namely, Bundi (or grey box), apple, red box, red gum, stringy bark, brittle jack, also all green oak trees. Referring to your letter respecting the proposed improvement leases within Mulgunnia Goldfield, land district of Carcoar, I have the honor to inform you that the Minister for Lands has, in view of further reports and after very careful consideration decided that an area of 13,820 instead of 17,200 as previously notified you on the 15th July 1901, be offered by tender for improvement lease as blocks K of 3,120, block L of 1,860, block M of 3050 acres. block N of 2990 acres and block O of 2800 acres. I have further to inform you that an area of 80 acres which includes improvements viz., of Mr. J. Stiff, viz., hut and apiary has been taken from block K and added to block J thus making the area of latter block 3,380 acres and which the Minister has decided shall be made available in small area under some form of tenure." Mr. J. Miller, M.L.A., has also forwarded correspondence bearing upon this subdivision similar to the above.

MORTALITY AMONG BEES.

Considerable mortality among bees is reported by apiarists of the Dubbo district, fully 60 per cent having been lost. The season has been a failure as far as honey is concerned. The mortality was brought about by what is known as dwindling, or paralysis, the cause of the disease being gathering honey from ironbark trees, more commonly known as muggar. This tree blooms profusely in the winter every four years, and secretes a good deal of nectar, the bees gathering it all through a mild winter. The honey gathered contains more moisture than in the summer, and evaporation is retarded on account of the cold. Moisture is added to the honey stored by the bees, causing fermentation in warmer weather. The bees, in removing is as unfit for their use, take in a microbe which causes their death.

———

Bulli.

Dear Sir,—I have been having a little excitement with two chinamen, who have a garden joining my property, so I thought I would like to relate my experience to you. The fact is this that they wanted to go in for bee-farming at my expense. They have taken three of my swarms this year that settled in the garden, but this particular swarm that the trouble is over I followed from home. I am enclosing cuttings out of paper with court report in. The case lasted best part of two days, and, of course, was very interesting. No doubt they think now that they have paid dear for the bees. The fine was only 10s, but they had to pay all costs which amounted to about £12. I had a doctor for a witness and they had one to give medical evidence that was £1/1/- for each of them. Then the lawyer and interpreter, and they don't work for nothing, besides the other witnesses, so you see it soon amounts up. You will notice the point I got out of their doctor. The old chow said I hit him with a brick and raised a lump on his arm (but it was a bee sting). I am thinking of having another dig at them for the destruction of the bees. He completely destroyed the bees with a big stick when he saw I wouldn't let him have them. The wonder is that he never got stung to death; the only reason I can account for it is that the bees were havy-laden with honey. We are having a flow just now, and they would be sure to fill their sacks before leaving. I would have taken out a summons in the first place for the loss of the bees, but the sergeant here couldn't give me a section to summons under, so I will have to consult a lawyer. I have served a notice of demand for the bees they are detaining, but they don't seem inclined to part with them. We are having a good flow just now off the leather jacket and if it will only last

another two or three weeks we will have a fair crop. I have 54 colonies now and it takes up all my spare time in looking after them. There is not much time left for recreation. I hope your bees are doing well up your way, and that your bees are in for a good season.

Yours sincerely,
JOHN CAVILL, jun.

BULLI POLICE COURT.

Before the P.M. Colonel Chisholm and Councillor Youll, J.P.

What must have been somewhat of a comedy on the 22nd inst. was heard in the Bulli Police Court recently when John Cavill, jun., sought recompence from Ah Yup for assault, and the Chinaman preferred a counter charge against Cavill for assault.

John Cavill, jun., miner, residing at Bulli, said, noticed on Sunday morning a hive of bees from box No. 32, swarm, and after flying around a few times went across the Chinamen's gardens into Mr. Myles' paddock and alighted on a tree. Two Chinamen saw me following them and they also gave chase. The bees settled on a tree in the said paddock. I took my veil from my hat and was about to put the bees into the veil when defendant made a rush at me and prevented me. Said to him "They are my property." He said "Belongs to the sky property, N. S. Wales." I went to the bees again and he picked up a big stick and rushed at me and hit me with it, he then commenced to swarm the bees by hiting them with a stick. I went near the bees again and he made another rush at me and I shoved him over He picked up stones and threw them at me. I then ran up the hill to Dr. O'Connor and his man, who was sitting in the sulky, watching the proceeding. I said something to him and he replied to me. I went down again to get the bees. When I got near them Ah Hup commenced throwing half bricks and stones again.

Dr. O'Connor, deposed, on Sunday morning saw Cavill and defendant. Prosecutor ran up the hill. Defendant then jumped up and threw half a brick at the prosecutor. I shouted out to the defendant "What are you throwing stones for?" Then prosecutor came up and spoke to me. The defendant then picked up a stick and commenced beating the bees. Prosecutor then said "Look at him killing all my bees" Prosecutor then walked down towards to bush where Chinaman was beating the bees, when defendant stopped beating the bush and walked into the middle of the road and picked up a large stone. I then called out to him again and climbed out of my sulky when he climbed over the fence into his own garden. After a few minutes he walked away. Did not see Cavill throw stones or hit the Chinaman. Both were very excited.

Other witnesses were called and duly cross-examined, the case being then adjourned till next Court day, December 9.

The adjourned cases Ah Hup v Cavill and Cavill v Ah Hup for assault were continued.

Dr. J. L. B. Dixon deposed Ah Hup attended his surgery on 24th November; he had a painful swelling just below the elbow on right arm; could be attributed to many causes—by a fall or blow from a stone.

To Cavill: Bee sting would cause similar swelling; there was no bruise.

Constable Gibbons deposed he went to Chinaman's garden with Cavill on 24th November, and got Ah Hup's name; asked who the bees belonged to, and Sing Won said they belonged to him, but after further conversation Sing Won said "Belong sky property."

Ah Hup deposed, per medium of an interpreter, that they had two hives of bees at the garden; one hive swarmed on November 22; followed them with a box; they flew toward hospital and settled in a shrub by the hospital road; first saw Cavill behind the tree. Cavill said the bees belonged to him, and I said

"Belong me." When I went to take bees Cavill hit me on the jaw and knocked me over. Could not understand what cavill said, When I got up Cavill picked up a stone and hit me on the arm with it; picked up the stone and went home.

To Cavill: Saw you crossing the garden; had bees nine or ten days; got them in the garden.

Evidence was also given by Tommy Pong.

In the case against Ah Hup, defendant was fined 10s., cost of Court 6s., two witnesses 6s. each, and one witness £1 1s.

The case against Cavill was dismissed.

Trunkey.

The Editor "A.B.B."

Dear Sir,—I notice a bee-farmer out west is making an irresponsible loud howl about marketing his honey, the tare taken off by the Commission Agent, the loss of his tins, cases, &c. Certainly there is room to howl, but is it not the bee-farmers own fault that he has not the slightest control over the state of his produce.

The estimate Root's idea of keeping bees for "pin money" is all right from a view taken from the top of one of his smoke stacks, but it's all wrong from a legitimate beekeeper's point of vision.

The Government should tax every colony of bees in the Commonwealth. This would compel the "pin money" waster to turn his attraction to honey or drop it. Then we would have no honey being shoved on the market at any price.

The average beekeeper is a niggerdly person who won't subscribe to any journals published in his interests, or support any organisation, which has the bee industry at heart. Whether he is too superior or too hanged mean is a debatable question. Of course, should any benefit accrue through the efforts of any union, he falls in and grabs his share, with as much complacency as though he had been instrumental in bringing about the benefit.

As secretary of Trunkey B.F. Assn., I have written to the secretary of Victoria Beekeepers Association for copy of their rules. Up to present no reply; at least I got sample copy of a Journal which intimated in cold clear type that the subscription was so much per annum. Victoria is a pretty small place after all, and as nothing grows there only antagonism to N.S.W., I see now that I should have sent a reply paid envelope, which is another beautiful illustration of how beemen pull together. The honey crop will be practically a failure in this lacality, unless the autumn bloom is good.

Yours truly,
E. F. HUNTER.

J.J.P., Erina, Gosford writes:—The bees are doing fairly well, and can get rid of all the honey I get locally. The blackbutt is coming out, and the peppermint will be out just after Xmas, which is a real good honey for the coast. Every good wish for a merry Christmas and a prosperous new year for yourself and family.

LARVAE FOR QUEEN REARING.

DO THE BEES EVER CHOOSE THAT WHICH IS TOO OLD?

When a queen is removed from a colony, and the bees allowed to go ahead and requeen the colony in their own way, some of the queens thus produced are very inferior, as I have learned from many, many trials. I have argued that, in their haste to replace their lost mother, they choose larvae that are too old. In proof of this, when the first batch of cells has been removed and another comb of just-hatched eggs given, eggs that do not vary more than 24 hours in their age, so that there is no opportunity to choose old larvae, all of the queens are first-class. Dr. C. C. Miller is the chief champion of the superior intelligence of the bees that will not allow them to choose larvae that

is too old, and I have repeatedly asked him to explain why some of the queens were inferior when the bees were given larvae of all ages to choose from, and why the queens were all excellent when the bees had only just hatched larvae from which to make a choice, and he has never attempted a reply. Instead he asks me to make a colony queenless and then look in 24 hours and see how old the larvae were in the queen cells. I couldn't tell how old they were if I did look. I don't know how large a larva is at one day old, nor at two days, nor at three. Perhaps it is to my shame that I don't, but I don't. I do know when a queen does not come up to the mark, but I don't know how large is a two-day-old larva

The doctor has two columns or more in July 15 "Gleanings" on this subject, and his closing paragraph reads as follows:

I doubt if there's any ground for the error except prejudice. Prejudice, however, takes a powerful grip on one. There Editor Hutchinson, a man who has sometimes shown himself the personification of unprejudiced fairness, who holds tenaciously to this error, with no inclination to set himself right, and to do justice to the bees. I have coaxed him, I have defied him, to make a very simple experiment that I think would convince him—simply to unqueen a colony, and then look 24 hours later and say how old were the larvae he found in queen-cells Then he could return the queen. The experiment would cost him little; but, no! he falls back upon his old experience, real or supposed, and says he has tried it; and he reared poor queens. Well, I've tried it, and I've reared good queens. But neither of those two things is exactly to the point. Let Mr. Hutchinson give us something in the way of clear proof that bees made queenless are in such haste to rear a successor that they use bad judgment in their selection, or else stop maligning the bees.

I thank the doctor for his flattering references to my fairmindness, and, in return, I can truthfully say that I believe that he intends to be fair, and has a sincere desire to arrive at the truth, but there are one or two points in this paragraph in which he does not do me justice. He says that I fall back on my experience, "real or supposed." Surely, the doctor does not intend to intimate that I would bring forward "supposed experience" to sustain my position. He then says that I report having tried this plan and "reared poor queens." This is only half the story. I have repeatedly stated that some of them were poor and some of them were *good*. This latter point our friend entirely ignores, and it is the chit of the whole matter. It is hard for me to believe that Dr. Miller would resort to such tactics in order to carry his point, and I still believe that there must be some explanation.—"Bee-keepers' Review."

AFTER WILD HONEY.

By Wanda.

From now onwards, until the end of February, there is great activity amongst the bees, and the hunter of wild honey is hard at work. Around the victoria, Serra, and Grampian Ranges, west of Stawell and Ararat, there is an enormous belt of heavily-timbered country, the timber consisting largely of varieties of flowering eucalyptus, such as the redgum, yellow-box, and grey-box. These forests are the home both of the wild and the domesticated bee. It is difficult to travel far in this district without coming across a group of the familiar little frame hives —set, perhaps, in a corner of a forest, and miles distant from a habitation. At the foot of the Grampians, near Stawell, there is quite a colony of bee-farmers.

All of the bees in this district get their honey from the flowers of the eucalptus trees, which are now at their best. The apiary bees are, of course, the well-known, handsome, Italian variety, which are in every way superior to the native or black bee. But, scattered all through these great forests, there are hundreds of hives of the wild bees, living side by side with the imported bees. Naturally scores of hives of the Italian bees are to be found wild. They have swarmed and got away from the box hives of the apiaries, and they have taken possession of the first suitable hollow tree in their path. For there is no lack of hollow trees. In these great forests there are thousands of giant redgums and yellow box-trees, whose hollow boles and spouts seem to be expressly made for bee-hives. There is no enmity between the Italian bees and the native bees; and they very often cross with each other, and so produce a race of hybrids.

A few days ago I wandered over some 30 miles of these forests to the west of the Serra Ranges. All the while I was amongst heavy timber, some of it, the white gums, already in blossom, the rest, the red gum and the box, just ready to burst into bloom. And there were bees everywhere. The apiary bees were busy filling their frame hives, from which the extractors would presently begin to take a weekly toll of honey. But easily the most interesting feoture of bee-life is the swarming, which was in full swing, and for the time being this operation occupied everybody's attention. The apiarists were hard at work watching their own hives, from one to three hundred in number, and securing the swarms as fast as they appeared out of the boxes. The apiarist, of course, is an expert at this process. He can easily pick out the queen bee and secure her, and the rest is easy. Still, as I have said, swarms are continually escaping, and the forests are full of wild hives. The old style of securing wild honey was both primitive and wasteful. Perhaps the tree was cut down and the combs taken out, and roughly strained through muslin. The bees were knocked about, and if the operation took place, as is usually did, well on towards the end of summer, the bees were left to starve. Sometimes the tree was climbed and the hive cut out in situ, a piece of moleskin being lit and the smoke use the stupify the bees. All the same, the honey-robbers were usually stung, sometimes badly.

The bee-farmer, however, has altered all that. I saw several bee-hunters at work, though this has not been a good season for them. The winter was a very bad one, both for the wild hives and the apiaries. Bees have died off everywhere, and the losses are estimated at fully 30 per cent. Even those hives that have survived have been badly weakened. The bee-farmers, therefore, have been unusually keen after new swarms. But the wild bees having suffered also, there are fewer wild hives than usual. The bee-hunter, having located his hive, sets to work at once with the object, not of securing honey, but of capturing the swarm of hive. Sometimes a swarm is found hanging quite close to the ground.

In this case the bee-hunter just shakes it into an ordinary bag, and takes it home to his apiary. I met one bee-farmer with two hives, in separate bags, calmly riding home on a bicycle. He had the bulk of the swarms in the bags, but there were hundreds of bees clustered on his back and on his hat, and they stayed there until he got home. Not one of them stung him, and the fact that the bees were crawling all over him didn't seem to concern him in the slightest.

Once the wild bees are got into a box they stay there. That is, of course, if there is a queen bee with them. Otherwise, they are out and off again at the first opportunity. But the bee-hunter sees to it that the queen is one of his captives, and if, as sometimes happens, he cannot find the queen, he supplies one. Once the swarm is boxed it begins to make honey on the frames. The old style of smashing up the comb to get at the honey, which is necessary if the bee is allowed to work in the tree, is wasteful in the extreme. The bees can then only be robbed once in the season, and even then care must be taken, or the hive will die of starvation. In the box or frame hives, however, the honey can be removed by means of the extractor without the comb being in any way damaged. The beekeeper just takes out the frames one by one, uncaps each side of the comb with a long, hot knife, and places them, two at a time, in the extractor. A few minutes' turning of a handle sends the honey flying out of the combs—it is exactly the same principle as the cream separator—which are then replaced, empty, in the hives. The bees set to work once more to fill them with honey, and so the process goes on, so long as the blossoms continue and the weather is favourable. The bee-hunter, however, has to be a good tree-climber. All through the forest one comes across great giants of trees, towering 100ft. and 150ft. into the sky, which wear the tell-tale notches of the hive-hunter on their huge boles. Sometimes a rope is used, but more often the climber does his work with the aid of only a small axe. I saw trees climbed by a famous hunter which made me dizzy just to contemplate. This man had a blackfellow as an assistant. The black was himself a good climber, but the white man was easily his superior. The steps cut are so small that it would seem impossible for a man to get a decent foothold. All the climbing, however is done with bare or stockinged feet. The safest way is to have a rope circling both the tree and the climber, which is moved up at each step. In this way, if the climber slips, he has the rope to catch him. But, as this makes the process so much slower, it is very often discarded.

In dealing with bees, whether swarms or hives, the almost invariable custom is to use a "smoker." This is a small, toy-like bellows, in the nozzle of which a piece of lighted hessian or bagging is placed. A few puffs of this reduces the bees to a state of half-stupid somnolence, so that they can be easily handled. The tree-climber always takes one of these smokers with him, or else he would have a very bad time. He gets stung as it is by stray bees; but if he did not have a smoker he would soon have the whole hive on to him. And there are between 20,000 and 30,000 bees in a hive! The bee very quickly resents any interference with its home, and the first chop of the axe, if smoker has not been used, brings out several inquirers from within the tree, whose angry buzz is very easily interpreted.

I saw a tree being felled for a hive one afternoon. The day was very warm, the bees were particularly lively, so the hunter had his smoker ready, and, when the tree crashed to the ground he ran up with the smoker instantly. But an unforseen hitch occurred. The tree, when it fell, split open, and liberated all the bees at once. The hunter also found that his smoker was not quite instantan-

eous in its action. Moreover the bees were keen and angry. As soon as he reached the hive the bees stung him.

He struggled with the smoker, but bee after bee dashed at him, until at last, with a yell of rage, he dropped the smoker and ran. His companion, who had withdrawn to the stump of a tree 200 yards away, urged him to "battle in at them." A sheep dog who had, when the tree fell, rushed in apparently to look for o'possums, got a sting on the nose and fled for home. The bee-hunter carefully extracted 13 stings from his face and neck and hands. Then he lit his pipe, and, nerving himself up, rushed in again to the attack. This time the smoker, after he got it going, poured out quite a volume of smoke, and he eventually subdued the hive. One constant trouble with the bee-hunter is "foul brood." This is an infectious disease that attacks the young bees, and once it gets into a hive that hive is doomed. In a healthy hive during the summer there is a steady and constant birth and maturity of young bees, thousands being developed in each hive in a few weeks. The life of a working bee is only six or eight weeks, during this season, so that unless there is a constant supply of young bees the hive soon dies out. Foul brood, which is a bacillus, spreads, not only over the whole hive, but from one hive to another; so that one infected hive may ruin a whole apiary. As may be thought, foul brood is often rampant amongst the wild hives, as there is no supervision over them, and some apiarists refuse to take wild hives amongst their own clean colonies. Most of the beekeepers, however, act carefully, and secure only clean wild hives.

Beekeeping is a precarious occupation, as good seasons can only be expected every second year. This is expected to be a good season. When I was in the forest the trees gave every promise of having an abundance of blossom, and all that is required now is fine, clear, warm summer weather.

BRITISH BEEKEEPERS' ASSOCIATION.

Conversazione.

At a late British Beekeepers' Association Conversazione Colonel Walker introduced the second subject for discussion, viz., "Stings!"

"There is something peculiarly exasperating in the way wasps coolly walk in and out of bee-hives in the autumn. Bees seldom have the courage to tackle them in earnest; and if they do they always come off badly; their stings fail to act on the wasp, who, on the other hand, kills bee after bee with little trouble. The rings of the bees abdomen seem to fit more loosely, perhaps owing to spaces being required between them for wax secretion. The wasp's fit very closely. I have occasionally introduced a decapitated wasp into the passage of my glass hive, and seen two or three bees stung to death in trying to carry it outside. This has even happened when a second cut with the scissors left only an abdomen to deal with. The experiment seems a cruel one, but I believe that the head once off little feeling of pain remains.

"The wasp has one enormous advantage—it can sting repeatedly. The peculiar shape and greater development of the barbs on the bee's lancets give a very firm hold, which, although it may compensate for a comparative deficiency in driving power when the wound is being made, retains the sting, and generally makes it impossible for the bee to escape without incurring a vital injury.

"It is probable that in diverging from some ancestral type common to both of them, bees and wasps underwent the special physical development most suitable to the conditions each had to encounter, and especially with regard to the position in the insect world they found themselves compelled to take up. The facts harmonise fairly well with this view. The methodical, and as a rule

perfectly inoffensive, honey-bee gathers its stores from plants and flowers; the wasp, a gaudy bandit, lives by preying on other insects, which form not only its own chief sustenance but that of its young, so that a sharp weapon always at hand, and ready for use is a paramount necessity.

"Again the individual worker-bee is but a unit, in a perennial colony capable at need of indefinite expansion; but each spring the mother-wasp has to found a new colony by laboriously building the cells in which she rears the workers without whose assistance the work could not be continued. On their existence depends the success of her enterprise; she will not find the strength to begin all over again. It is not too much to say that were the worker-wasp under the same disabilities as the worker-bee the continuance of the race would be seriously endangered.

"The sting of the queen-wasp is straight, like that of the worker, and quite as efficient. The queen-bee's is curved, and the lancet barbs not highly developed. Major Munn, a prominent beekeeper in his day, suggested that she killed her rivals by inserting her sting through the openings of their spiracles. Cheshire found that as the queens grew older, the fluid in their poison-bags became too thick to allow of its flowing through the sheath. It seems to have arranged that the queen-bee's sting shall not be a source of danger to herself; her life is too valuable.

"The exact constituents of the poison injected by bees and wasps have never yet, I believe, been ascertained, though both are said to contain formic acid. There is certainly a distinct difference between them both in odour and effect, the wasp's poison being probably the more virulent, and in my own case it produces an itching which lasts three or four days, and closely resembles that caused by a nettle, the glands of which are also said to contain formic acid. The pain caused by a bee's sting, though sometimes acute, is with me only momentary.

"Curiosity has often tempted me to get stung by a hornet, but at the critical moment my courage has failed me. This spring the chance of my lifetime presented itself, for a queen-hornet came into the house, and was captured. But even then I was able to restrain myself, and this formidable insect went off to Mr. Herrod, who, as his advertisement tells me, cheerfully takes all risks in the interests of science.

"There is much difference in the way in which various bees, perhaps various races of bees, do their stinging. Some dash at you, and are gone in a second, leaving their sting broken off at the root. Others are more leisurely, and wander about before they find a suitable place. These, I think, are the more objectionable, and of one in particular I retain a painful memory. At a certain agricultural show I had found my way, an innocent spectator, to the bee-tent, when the expert, recognising me, asked if I would take his place and do a little talking while he went away for a few minutes. So I stepped inside, and began. He had just finished driving a skep, and a few bees were circling dreamily around the tent. Presently two settled on the back of my neck, with the usual results. I took no notice. Then one stung me on the ear—a tender spot—and I could not help raising my hand to it. Some silly fellow chuckled; but I talked on, till another bee, alighting on my mastache, left its sting in the partition that divide the nostrils. The pain was excruciating.

I looked straight before me, but my eyes filled with water, and I began to sneeze; my friend on the other side of the netting was enjoying himself enormously. Fortunately, when almost in despair, I caught a glimpse through my tears of a nice new veil laid out with other appliances on a small table. Promptly I took up the topic on 'Veils, How and when to use them,' and, as soon

as decency permitted, this particular one was tucked comfortably under my coat collar. My friend the expert then came back and relieved me. I bade my audience adieu, and for some reason or other I took the veil away with me.

"The best advice I can give for the avoidance of bee-stings is: Never be in a hurry; try not to be nervous. Rough or timid handling makes bees aggressive. As to what to do when stung innumerable recipes have been suggested, and not one of them is always effectual. In as far as most of them consist in rubbing or smearing some substance over the wound, and thus keeping the air from it, they accord with Nature's remedy, the child sucks a sore spot; dogs and other animals lick one. If this does good—and it seems to do so—it cannot well be the brief fermentation but rather the covering of saliva that eases the smart, just as when the glutinous matter of a young shoot of dock—another of Nature's remedies—relieves the itching of a nettle sting. Acting on this hint, I have found vaseline a soothing remedy for trouble from wasps and nettles; for a badly-inflamed sting of any kind I should try Pond's Extract applied on a soaked rag. Sydserff, a bee-master of Leigh-on-Mendip, who published a small book in 1792, was persuaded that a sting could be cured by another in the same place. The best plan is to take them cheerfully and try to believe that, as some hopeful people say, they will keep off rheumatism.

"In our degenerate days bee-stings are (to those who escape them) a subject for ribald mirth. It was not always so. Poets have often used the honey-bee as a symbol of the sweets and smarts of love. Kama, the Hindu god of love, was depicted as armed with bow and arrows; the bow a sugar-cane, and the bowstring a chain of bees. Theocritus, the Greek poet, about 265 B.C., has a pretty tale of Cupid being stung by a bee, and how he ran to his mother Venus for consolation. Amongst others, our own poet Herrick tried to imitate this idyll, and his quant seventeenth-century lines have such a charm that, with your permission, I will conclude by repeating them:—

"Cupid as he lay among
Roses, by a Bee was stung.
Whereupon in anger flying
To his mother, said thus crying;
'Help! O help! your boy's a-dying'
'And why, my pretty lad?' said she.
Then blubbering, replied he,
'A winged snake has bitten me
Which country people call a bee.'
At which she smiled; then with her hairs
And kisses drying up his tears:
'Alas!' said she, 'my Wag! if this
Such a pernicious torment is,
Come tell me, then, how great's the smart
Of those thou woundest with thy dart?'"

Mr. Crawshaw said he was extremely interested in Colonel Walker's remarks about headless wasps. He had made somewhat similar experiments with bees, flies, and wasps, and was surprised to see what a long time the insects stood still after decapitation, apparently conscious and quite content. If touched they gave immediate evidence of life. The headless bee would defend herself and put up her leg—in fact, although her actions were probably reflex, they were somewhat the same as if the creature were entire. This was no doubt due to the fact that there were ganglia in her body. The wasp was, no doubt, conscious in some way, and exercised its minor thinking powers sufficiently to repel attack. With regard to poison, the question was, "Did the queen contain poison?" He thought the queen must contain some poison. Sometimes stings hardly seemed to effect the victim at all, but he thought they were generally much worse during the honey-flow. There was, no doubt, greater intensity in the intentional bee-sting than in an unpremeditated one. When a bee came with force and gave full thrust to her weapon, the results were more serious. He quite endorsed Colonel Walker's experience of the painfulness of a sting on the nose. When he (the speaker) first began to keep bees he

bought a hive from a neighbour, and in trying to shake out a large swarm into it he went through an ordeal that he would never forget.—"British Bee Journal."

SLEEPLESSNESS.

One of the most distressing among the minor afflictions of humanity is the want of a good night's sleep; and as society gets busier in its habits and more active in its enterprises, the complaint is more likely to increase than otherwise.

When the trouble becomes frequent and extends over a few weeks or months, things begin to look serious for the non-sleeper. He or she is worn out as if by excessive toil. The face begins to look haggard and anxious, and the general health suffers greatly. The causes of undue wakefulness are numerous; but a very common one is the mind's excessive occupation over a past or present misfortune or the apprehension of a calamity to come. The effect of this continual brooding cannot easily be laid aside at bedtime; in fact, the quiet and darkness of night, with freedom from all the usual bustle and activities of day engagements, commonly give but fuller opportunity to the already distracted mind to dwell upon that which hands it. Any excess of emotion of this sort catches and holds on to afflicted persons with a persistant grip, and a tossing and turning time is spent in bed in the vain attempt to get to sleep. The clock will be heard to strike hour after hour till the gray of the morning, after the sufferer has been fairly exhausted. Of course medical advice readily suggests itself when the case assumes a serious aspect; but most people endure the evil a considerable time before they approach the doctor on the matter. His advice, however, should not be too long delayed. It is only sensible to cast about for a cause when insomnia occurs, and in the generality of cases it will not be very far to seek.

A very common cause of a sleepless night, for instance, is the attendance at some meeting or gathering where a lively and exciting time has been spent. An animated dispute or discussion in the evening may be followed by much want of sleep. These are very evident causes, and the person concerned does not always do just the best thing to help his night's rest. Instead of endeavouring to put aside all reflection for the time being on what may have keenly engaged his mind in the earlier part of the evening, he continues to go over the points discussed, and in imagination makes good hits and capital replies to his opponent, or else continues to smart under defeat till he discovers it is long past time he should be asleep, and then turns himself about with an impatient jerk as if to say, 'I am done with that for to-night, and must drop off to rest'; but the probability is that he cannot do anything of the sort. The brain has had a busy time of it, and has had such way upon it that a sudden stoppage of thought is out of the question. In a case where the excitement has been pretty high, it is curious how persistently, in spite of all attempts not to have any more of it, this or that point will obtrude itself upon the attention. This is an instance where the cause is perfectly apparent—the incident of an evening—and is different from the previous examples which were supposed to have had a long-continued and more aggressive foundation. No doubt in severe and critical cases the use of sleeping-draughts—opium and similar means for procuring repose—is necessary, when administered under proper and responsible hands; but all artificial expedients of this kind are in themselves in some degree harmful. They by no means perform the same office for tired nature as nature's own 'sweet restorer,' a dreamless s und sleep, in which there is no restlessness, audible mutterings, or startings.

Notwithstanding all that has been written upon sleep and the phenomena

attached to it, there is wonderfully little known of the mysteries. We see their outside manifestations; but admission to view the work of the inner chambers of the brain is all but denied us. Favoured by rest and quiet in midnight darkness, we can feel that the 'palace of the soul' is distinctly found in the head; not only so, but we can locate the place of thought with an approach to accuracy. No one feels that he is thinking with any other part of the body than his head; there unmistakably is the seat of mind. We can feel the throb of pleasure or pain at our hearts; but they do not think. Not only is the , power-station' of thought in the head, but we can also feel that we do not think with the whole head. The back part, for instance is seemingly almost passive, but there is a most distinct sensation of energy felt in the region just behind the forehead; there without a doubt, the most delicate machinery of the human frame is placed.

Now, the question is how best, in the wakerife circumstances, indicated, gently to put untimely activity of the mind to rest. There is an unusual quantity of blood operating in the brain, and this somehow should be got to subside There have been many suggestions to effect this end; but in this, as in some other things, what is efficacious with one has no efficacy with another. A physician recommends rising from bed and walking about in the cool air of the room for a little. Another, Mr. Alfred Smee, found that the application of a cold, wet handkerchief upon the brow succeeded when all else failed. The writer may say he has tried this and found great relief from it. To project the feet for a time from under the bedclothes is thought to be helpful; but certainly is not very comfortable. A great many expedients recommended rather tend to keep the subject awake than otherwise, such as counting from one up to any number, &c. A friend once told me he induced drowsiness by shutting his eyes and gazing as it were into an imaginery thick fog in which no distinct forms were presented to the mind.

Among external remedies, one which has had a good deal said for it on partly scientific grounds is to seek sleep with the head laid as nearly due north as possible. Several eminent physicians have spoken favourably of this, such as Dr. Gregory of Edinburgh, and Dr. Von der Fischweiler of Madgeburg, who lived to the great age of one hundred and nine years. He ascribed his longevity to his constant habit of sleeping with his head towards the north and his feet due south.

It has been declared by a Scotch doctor of repute that children are particularly benefited by making them sleep with their heads turned to the north. He goes the length of saying that in the case of invalid children it never failed to procure them sleep.

People of a nervous temperament should be careful of what they eat and drink for supper with a view to a good night's rest. Some persons, for instance, could not sleep at all if they drank a late cup of tea; and, indeed, neither tea nor coffee, in troublesome cases, should be used at all.

The effect was most marked in one case of a lady unable to sleep, who suddenly dropped the use of every kind of stimulating beverage, and found, to her great happiness, that she soon could sleep like most other people.

Those who are not in the habit of going much from home often complain that they do not sleep well in a strange bed. Whether this is due to the impression which novelty of surroundings makes upon their waking senses, and so is communicated to their sleeping minds, or to a different position of the bed to that they have been accustomed with, or to some other occult cause, it would be difficult to say. Perhaps the cold, wet handkerchief might be useful in such cases. It is strange how habit and environment affect sleep. A gentleman

whose house closely adjoins a railway embankment, and past which a large number of trains travel during the night, has become so insensible to the thunder of their passage that he actually does not sleep so well when away from home. On the other hand, the writer when on a visit to him, spent a most disturbed night under his roof, being awakened every little while both by the noise and vibration, which seemed to make the whole house tremble.

It is common enough on seeing a friend to his bedroom to wish him a good-night and pleasant dreams; but to desire him a good sound sleep is a much better wish. Pleasant dreams are certainly much preferable to their opposite but none at all is best. Then body and brain favourably recuperate the wear and tear of the past day. Besides, some dreamers take to abnormal action which is a serious cause of anxiety both to themselves and friends. A few years ago a young lady known to the writer, of a most retiring disposition, left her bed in a somnambulistic state one night, undid the front door, and reaching the street, proceeded quite a long way till a policeman fortunately observed the unwonted spectacle, and, apprehending the situation, gently awoke her and accompanied her home. Such dreams may be pleasant, but their dangerous character is obvious.

Any one troubled with sleeplessness should carefully seek for the cause of it, and, having either found or suspected it, take immediate steps towards a cure. It is much better to deny ourselves whatever is likely to rob us of the blessing of refreshing sleep than to burn life's candle all too quickly away.—"Gardener's Magazine."

BEAUTY POINTERS.

Sleeping with the eyes buried in the pillow will bring wrinkles all around them, and will produce that look of very old age that wrinkles bring into the face. Even a baby who sleeps with its face in the pillow will wake up with a thousand wrinkles.

If very exhausted considerable relief will be afforded by using a fan on which a little toilet vinegar has been sprinkled. Aromatic spirits of ammonia is also most beneficial in this connection, and does much to revive the nervous system in cases of fainting or exhaustion.

The use of anything that tends to dry the skin should be carefully avoided, such as bay rum, alcohol, borax, or ammonia. If used in great moderation these are all good and cleansing, but use too freely or of too great a strength they will break down the vitality of the tissues by robbing them of the nutriment on which they exist.

To keep the nails in good condition, the scarf skin round the nail should be pushed back daily with a proper instrument for the purpose. Before cutting the nails it is a good plan always to hold them for a few moments in soapy water to which a little tincture of bezion has been added. This softens the nail and greatly facilitates the operation, besides rendering more easy the subsequent smoothing and polishing.

All women should learn how to laugh. There is no better antidote to the petty worries and disagreeables of life than laughter, and it is good, healthy, lung-developing exercise as well. The cultivation of humour does not necessarily cause any abatement of the dignity, modesty, and charm of womanhood. The saving humour that looks at the world with a twinkle of the eye, and sees its absurdities, its smallness, and its sin should be a part of every woman's mental equipment, for it enables her to rise triumphantly above small annoyances as well as greater troubles.—"Calcutta Gardener's Magazine."

FIFTY STING "CURES."

The most simple and efficacious of all remedies is an immediate application of cold spring water. A piece of linen soaked in water will quickly assuage the pain and diminish the inflammation. No, says a second authority, use warm water; a soft moist warmth aids circulation and quickly eliminates the poison or disseminates it, toning it down to nothingness. Laudanum with some persons will afford immediate relief. Oil of olives is said to be a sovereign remedy, and even cures the bite of a serpent. A cloth soaked in vinegar and quickly applied to the wound cures as nothing else will. The juice of certain plants, generally near at hand in every bee-garden, such as dandelion and dock, rubbed in as soon as the weapon is withdrawn, is an infallable remedy for a bee-sting. Modern gardeners will have to buy in a stock! An hon. member of the Society of Arts, &c., and a very learned man, includes urine in a long list given in his book on bees. A Prussian recipe reads: Beat an onion on a hard substance to extract the juice, to which add a pinch of salt, and the pain and inflammation will instantly cease. Saliva is a prime remedy. I did but spit on the place stung and at once felt the pain assuaged. Throughout a great part of the North it is confidently credited that if the place stung is quickly covered with a copper coin first covered with saliva, the poison will be neutralised and only a minimum of pain or swelling will be experienced. Numerous authorities say: Extract the sting *instanter*, and you never afterwards experience the slightest inconvenience. Pressure with the hollow end of a key is practised by some unfortunates, and is said to check the circulation of the poison. Common salt rubbed on the stung part, or laid on as a plaster, allays the pain. The juice of the plaintain is said to be a specific, and an American poet says this plant followed the white man and his bees to that continent. An old lady whose bees stung a passing pedestrian ran to her cottage and produced a bottle of hair-oil, and an application of which cured the pain as if by magic. Many believe in tobacco as the one cure for a sting, but a difference exists as to whether it should be applied in a dry or a moist state. Either may do, for great is the power of faith. Somewhat similarly, quite a host of beekeepers believe whisky is the one infallible panacea, but a division exists as to whether it should be applied on the wound or—inside! Chalk dusted over the point punctured is as good a cure as exists, and common whiting is just as efficacious. Neutralise the acid poison of the sting by the application of any alkali. In preference to anything I would recommend the immediate application of liquor potassæ to kill the power of the acid in the sting and make it of no effect. In the absence of this pure liquid, ammonia is said on good authority to succeed if properly applied. Even the blue-bag has a beneficial alkaline powder. Baking-soda is often applied, and washing-soda is often substituted with no fear of any ill effect following. At different times "Apifuge" has been advertised as a remedy, and so has "Resa." I think I have seen caution and confidence named, and neatness and gentleness in manipulation may also be given as sting-preventers, if not actual cures. Smoke we all know is a pacifier, and so a sting-preventive. Carbolic acid, and a host of other preparations of the same kind, may also be named in the same category. A veil may also be included. A little honey, says a high authority, stops the irritation. Some maintain that the juice of the bee, pressed on the sore, gives speedy relief. All know the peasant's ready cure, quick application and always at hand—a little moist earth pressed on; some prefer black earth, others vote for clay. I have seen two cures mentioned that I am not familiar with, viz., goulard water and extract of Saturn, but perhaps it is immaterial that

I cannot give the address of any vendors. Linseed oil, generally near at hand when we are preparing our paint, is strongly recommended as something worth trying. Neatsfoot oil, whatever it may be, can be substituted, and reckoned on to cure. Butter has been strongly championed, and hog's lard cures the pain like a charm, counteracting the evill effects of the acid poison.

"Rub with the juice of a sage leaf" is the sage advice of a sage of ancient times. Soap has been tried with some success. A prominent dealer advertises a sting remedy, name unknown—so are the ingredients – guaranteed to give almost instant relief, and he has also a sting-preventer certain to ward off the attacks of the most savage bees. I cannot certify if he uses it himself. Few cures are used in America, but amongst them is kerosene oil. Bruised parsley is recommended by some. Bonner had not much saith in any kind of remedy, and Huish records of him that he has seen his bald pate literally covered with stings during a bee-tent demonstration, so it is no wonder, he says that "in general he does not try any cure but pulling out the stings, when he knows time and a little patience will afford an infallable cure. Yet he at times takes a blade of kail, or almost any green leaf nearest him, and rubs in the juice." One writer rather boldly advises to suck out the sting with the mouth. As the weapon is capable of making a second penetration for a considerable time after being withdrawn from a wound, I would rather it went into somebody else's tongue, so I will leave the experiment to others.

All the foregoing remedies or "cures" (none personally guaranteed, remember, are gleaned from authoritative sources. They can be taken in the conglomerate as given, because assorting them in batches would be lost labour. My own favourite cure is to take out the sting with the thumb-nail rubbed at an angle, or by striking the hand obliquely against the clothing, and then grin and bear it. In ten minutes the sharpest eye cannot detect the part stung.—D. M. M., Banff, in "British Bee Journal."

INVERELL, N.S.W.

We have received a postal note for 5/- from Inverell, with no signature to letter. Will the writer please communicate with us so that we can credit the proper person.

Blacks Running Out Italian Bees.

No doubt many a beekeeper has been puzzled to understand how it is that there is a tendency toward black blood, even in localities where Italians are specially favoured. Light is given upon this point, as well as upon some other points in the following extract from a conversation with F. R. Beuhne, given in "Gleanings":

"How do you succeed, Mr. Beuhne, in getting early drones from a select breeder in sufficient numbers so that all young queens in the early spring will mate with these selected drones?"

"The only satisfactory way I know of is to introduce those queens, from which we desire to rear drones, to strong colonies of black bees during the winter, having supplied such colonies with the necessary drone comb in the right position in the hive. As black bees will breed earlier in the spring than Italians, we obtain our choice drones much earlier than would be possible with even stimulative feeding."

"We find that our Caucasians will breed a hundred drones to the Italians one. Whether the Caucasians would be the equal of the black bees we could not say; but we believe that your suggestion of putting choice Italian breeders into stocks of bees of strains that will rear more drones than Italians, and earlier than Italians, is a good one. Now, Mr.

Beuhne, it has been observed by bee-keepers of both continents and both hemispheres, that, where Italians largely predominate through selection in breeding, if the bees are left to themselves, and if there is some black blood in the locality, all the bees in that locality will, sooner or later, degenerate back into hybrids or blacks. Do you account for this by the tendency in the blacks to rear drones in larger numbers, and earlier?"

"Yes, I do. In addition, we must bear in mind that blacks are usually allowed their own sweet will in the way of building drone-comb. There is also no check on the age of queens. Under these conditions, and the well-known fact that black bees can rear brood at a lower temperature, it is but natural that the race of bees in a given district should gravitate toward the black race. There is another thing in this connection; and that is, that the black bees (and that would include the drones), being less susceptible to cold, would be out in the air more than the yellow bees."—Gleanings."

More Light on Swarming of Bees.

Under this heading, in the "American Beekeeper," Allen Latham gives an interesting account of experiments made by him. He believes that the size of frames has much to do with the encouragement or discouragement of swarming. Not merely the superficial contents of a frame, but the proper length and the proper depth must be had, and a frame may be too large as well as too small to secure best results in trying to keep down swarming. In the course of his experiments, he says:

"I next made frames 17 x 13 inside measure. I constructed last season sixteen of these hives. Seven frames were allowed for the brood-chamber, and thirteen for the storage. Assuming not less than 10 pounds capacity per frame this hive allows a crop of 130 pounds to be stored in the absence of the beekeeper.

Into these 16 hives I put colonies of all strains, using several colonies of Carniolan origin. I surely thought that the Carniolan would find this hive to suit its swarming desires, especially as I placed 10 of these hives on the highest hill in this vicinity, a hill which gets the sweeping wind from Long Island Sound. Before the middle of May this year every one of the colonies with Carniolan blood swarmed or tried to swarm, though the brood-chamber was in no case taken full possession of. Two other colonies, I know, (and how many others I do not know) also swarmed. Two months have passed since I have visited the apiary and I cannot say what has happened. But this I know, colonies which I should never expect to swarm in the smaller hives did swarm in these large hives.

"It is thus easy to see that frames can be too large for security against swarming as well as too small. I am not prepared as yet to state just what the proper size is nor whether one size will suit all races of bees. I am inclined to think that for the usual run of Italians eight frames of the 14½ x 11 size just about for the bill."

Concluding he says: "To sum up the preceding paragraph—any size of frame which tends to distort the normal shape of a brood-nest or which tends to unoccupy space below the brood is likely to encourage swarming.

"It is obvious from what I have outlined above that the Langstroth frame is a swarm-producing frame, and that frames less than 10 inches or more than 12 inches in depth are likely to lead to swarming unless preventive measures are taken. My home apiary frame is 10 x 12 inside measure. Only one of the 50 regulars swarmed this season, and it has been a bad season for swarming. To be sure, I had to apply preventive measures in two or three cases.

"My observations led me to believe that swarm control can be looked for in the adoption of a frame of certain dimensions. Unless one does this he must adopt methods in his apiary to meet the swarming fever, methods which mean much labour and frequent loss of swarms, to say nothing of lessened honey-crop.

"Unless I now offer some reason why a certain size a frame tends to prevent swarming I fear that all which I have written may fail to convince. When a queen reaches the bottom and corners of a brood-frame simultaneously with the emergence of young bees in the centers of the frames she finds things to her own liking. The workers also are satisfied, for they will push right into the store-chamber instead of storing the first honey under the brood. With the 14½ x 11 frame mentioned above, I have repeatedly found the frames solid brood except an inch of honey above. With eight such frames the best queen is satisfied, and the bees once started in the store-chamber rarely acquire the swarming fever."

Secret of Longevity.

Here is a newspaper clipping sent me by a friend. I do not know what paper it came from. – Gleanings.

"Wu Ting-Fan, the famous Chinese diplomat, said he had recently discovered the secret of longevity, and averred that by his system of diet he could live 200 years—a term greatly exceeding the longest possible period as fixed by Prof. Metchnikoff, of the Paris Pasteur Institute. Naturally the Chinese minister's statement excited much curiosity, and a Boston man wrote to him for particulars, receiving the following plan as adopted and put in practice:

"In answer to your letter requesting my plan of diet I have to say: 1. I have given up my breakfast, taking two meals a day, lunch and dinner. 2. Abstain from all flesh food. My diet is rice, or when I go out to dinner, whole-wheat bread, fresh vegetables, nuts and fruit. 3. I avoid all coffee, cocoa, tea, liquors, condiments, and all rich foods. 4. I have given up salt also, because it is found that salt makes the bones stiff. 5. I masticate every mouthful thoroughly before it is swallowed. 6. I do not drink at meals, but between meals or one hour after meals. 7. I practice deep breathing. 1. I take moderate exercise."

Minister Wu Ting-fang's fifth rule aligns him with the followers of Fletcherism, though in other particulars he is a law to himself. Mr. Fletcher eats only when he is hungry, and does not eat meat, though not making this a rule for others.

The plan of the Chinese minister will commend itself to many practical experimenters in dietetics. It is sensible, and combines exercise and deep breathing with frugality—a wholesome scheme of living.

THE ALFALFA KING.

Not long ago a number of the agricultural journals of this country announced to the world that Mr. R. E. Smythe, of Sherman, Texas, was the alfalfa king of the world, with a total area of 1400 acres; but Mr. T. J. McKeon, of Argentina, in a letter to "Hoard's Dairyman," very effectually disposes of that claim. He instances the record of General Julio A. Roca, twice president of the Argentine Republic, who has 192,000 acres in alfalfa, or 300 square miles. Messrs. Salaberry, Labor, and Bercetche, of Cordoba, have nearly 100,000 acres more, and La Germania Estancio Land Co. about 110,000. There are also many who own large areas planted in alfalfa far exceeding the Texas man. Mr. McKeon himself claims to have ten times as much as Mr. Smythe, and is now putting down 4,800 acres additional. This looks great news for the beekeepers, for in South America the cattle are allowed to graze on the alfalfa almost the year round. In Chili and Peru there are

also vast areas set aside for alfalfa. As a matter of fact, the culture of alfalfa in this country is only in its infancy, and in time we shall see similar areas in this country, notably so in Texas and California.—"Gleanings."

ON BEE DISEASES.

As I have at all times interested myself in the study of bee diseases, paralysis in particular, I take the liberty to criticise statements which, in my opinion are contrary to facts.

In your November issue appears an extract from the Victorian bee expert, Mr. Beuhne, on bee-paralysis.

If his reply to the third question is correct, then paralysis is not a disease, nor attributable to food, such as pollen; but is due solely to the strain of bees. As a matter of fact, however, it is a disease, and once it gets a good hold in an apiary very few stocks can resist its ravage.

To question five he answers: "This strain of Italians can resist foul-brood better than black bees. That is new; but is it true? In proof of his assertion he refers to only one occasion; but one swallow does not make a summer. Bees of energy and stamina resist diseases better, no matter what race they belong to, but none are absolute disease-proof.

His reply to question six is on behalf of beekeepers generally. I differ from his view; also from his reply to question seven. He ought to be aware that bee-paralysis has spread all over the continent irrespective of regions, therefore his hypotheses are devoid of actual fads.

His sad experience as related in answer to question eight is not due to "fresh blood," but to lack of superior qualities, probably caused by in-breeding or select-breeding; or is the new stock more strongly attacked by disease germs, as I stated years ago?

Reply to question eleven is: "No. The yellow bees are kept principally by beginners." If that is a fact, then according to his view they ought to have had the losses, whereas actually it is the other way, at least far as the losses count.

To question twelve the reply is: The only cure is to re-queen with a different strain." Is that so? It is, to say the least of it, a most simple cure, and far different from what he used to theorise upon before. But what about his answer to question eight now? There he says, "With new blood came pre-disposition to paralysis." How, then, can a different strain be a cure—the only cure? That honey is preferable to other substitutes is an old fact, and I was the first to recommend feeding honey—lukewarm—as a remedy for paralysis

The answer of question sixteen is very premature, and I do not admit it in its entirety.

I would not advise anyone who wishes to get rid of the disease to carry into practice the answers to questions sixteen and seventeen, because it is a positive fact that where such interchange of combs has taken place that the disease has broken out, even a year or more after. Perhaps this interchange accounts for the bee-hive having so much and so lasting trouble.

The concluding answers show how easily deductions are made. I may mention, however, that no disease has destroyed all, therefore if some hives of bees remain unaffected, it is no exception to the rule, but they are not immune from diseases, nevertheless.

In conjunction with the above, I may cite what Mr. Beuhne writes in the "A.B.K." page 84—Bees disappearing. In 1900 he lost 200 stocks that way. Dr. Cherry visited him, and by a process of deduction, came to the conclusion, that the bees disappeared by succumbing from exhaustion when engaging in field work, the cause being low vitality, the result of improper nourishment in the larval stage.

With this weapon Mr. Beuhne undertook to demolish all and sundry who disagreed with him. But how can we prevent our bees from engaging in field work, assuming his view to be right—which it is not, and how prevent improper nourishment in the larval stage to be used? Do bees consume unsuited food? Where is the proof that improper food is the cause. And if the dry inland districts are favourable to the development of paralysis, why does it most harm in early spring when the weather is cool and the atmosphere moist?

Continuing, Mr. Beuhne says he is only giving a few points for beekeepers to reflect on. Is that it? If beekeepers will give public all they know, it would help the process of deduction. In my opinion it would be best to have his details first—"not later on."

Let me here re-affirm that I wish to see everyone express his views, but it is time wasted to continuously harp on the same string.

In the same letter Mr. B. tells how he guesses the size of virgin queens by the size of the opening in the cells. He has done it often—and was always wrong in his guess. He is wrong again. I prefer to see the queen, and I always do; it is the surest way. I do not guess.

Bees hanging out in hot weather I attribute to heat and bees enough to hang out, but Mr. Beuhne knows better and it pleases him to let you know that he knows.

In future all beekeepers will have to get their bees from Mr. B. as he has eliminated the "drawbacks."

He is right; everything can be overdone. So it can!—but because he never gives any top ventilation it does not follow that top ventilation is no good. The straw skeps in Germany, for instance, have their opening very near the top.

I may as well be hung for a sheep as for a lamb, and therefore will add a few more yards to the rope.

In another paper under "Water for Bees," one writer says he has seen bees drinking from filthy pools, which must have injurious effects on them. Probably this bad water may help to bring on that dreaded disease, paralysis. Another writer states: "Any man with ordinary sense must know that water from such places as manure heaps, etc., is almost sure to lead to disease among the bees."

Bees do visit what seem filthy places, but I have yet to learn that disease resulted. They go there for ingredients such as alkali and other substances requisite for their need and prosperity. What to human beings seems a rather dirty trick is a very clever one. Bees are excellent filterers, and models of cleanliness. Water, pollen, and honey alone do not constitute all the factors which force the bees to raise much brood. This can be observed often enough. There are other factors requisite, over which the beekeeper has no control, but which the bees seem to understand.

Wishing all a prosperous new year and the best of health.

W. ABRAM.

Dahlias for Honey and Pollen.

By W. A. Pryal.

An old-fashioned flower that has almost suddenly come into popular favor again is the Dahlia. We older folk well remember in our childhood days that our parents cherished those formal flowers; how stately they were and how profusely they bloomed! But the advent of the cactus-flowered varieties has added new interest to the flower, and to-day we have some gorgeous specimens flowers of large size and almost fantastic shapes. As a boy, I liked the old dahlias; to-day I like them better than ever, and I think the newer sorts vie with the rose in beauty. They are free

from disease and few insects prey upon them—and those only of the "chewing" kind, which can be easily destroyed.

The past season I have had quite an array of plants and colours galore growing in the garden. I am much pleased to notice that bees seek the flowers and work upon them the day through They gather both nectar and pollen. With us the plants usually begin to bloom in August and so continue until December, thereby adding to our bee-pasturage at a time when nectar-secreting flowers are much needed. Of course, I do not advocate the planting of these flowers for honey alone, but there is no reason why every beekeeper's garden should not contain a number of these pretty and showy flowers.—"Am. Bee Journal."

The Wide-Open Hive Dangerous.

BY W. A. PRYAL.

When visiting a beekeeper recently I was astonished to find that many of his colonies were in hives that were almost as open to the weather as a sawmill. When I remarked that such wide-open hives seemed to be a standing invitation for robber-bees to "just walk in and help yourselves," I was told that the robbers did not seem to discover the big openings. I suppose one reason such exhibitions of the contents of the interior of the hives did not cause serious trouble was owing to the fact that all the colonies in the apiary were well separated from each other. I know that where hives are near together it is almost impossible to open one hive without having the bees from an adjoining hives make an onslaught on the one undergoing manipulation. I believe that an "open apiary" is as demoralizing as an "open town." I would set it down as a motto for beekeepers that the secrets of the inside of each colony should be screened from view of the outside world as much as the secrets of one's household.—"Am. Bee Journal."

LIVING BAROMETERS.

Among the best of the living barometers are snails, which do not drink in the ordinary sense of the term, but absorb moisture dufing the wet weather, directly through the skin, and exudes it afterwards. As they are anxious not to have the moisture evaporate too quickly thus creating a premature thirst which cannot be conveniently satisfied, they keep, during dry weather, in strict seclusion, moving abroad only during or just before rain. Immediately before a downfall, they may be seen climbing the trunks of trees and busily getting in amongst the leaves. Gnats assemble in clouds under trees, and horses grow restless. Swans, where they are plentiful, may be seen flying against the wind Spiders on the walls; toads come out of their holes; ants rise up to the walls higher than their dwelling places; and pigeons may be seen going to the dovecotes earlier than usual.—"Gardener's Magazine."

There is a South African Poultry Journal published fortnightly at 6d a copy. Some good reading in it.

BRITISH HONEY AT 2½D. PER LB. IN CANADA.—Thus the "Canadian Bee Journal"—"20,510 lbs of honey came from Great Britain. There was paid for it 1,172.00 dols., a trifle over 5.7 cents. per lb. We do not believe that British honey can be sold for this price. What have our friends of the British and Irish bee journals to say about this? We await their comments with much interest." All that we have to say is, that if the article in question was genuine British or Irish honey, the sellers have qualified for admission to Bedlam.—"Irish Beekeeper."