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## AN AMERICAN BEE JOURNEY

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### INTRODUCTION

This article is not an authoritative report on American beekeeping, but a series of impressions of what I found in the Eastern States and the Middle West, and in Ontario in Canada, during my six weeks' visit there last summer. Owing to currency and other restrictions, few European beekeepers have had first-hand experience of American beekeeping since 1939 ; moreover although many of its recent developments are of importance to beekeepers in other countries, not all of them are widely known. In order to save space I have not described in detail either research work or beekeeping methods which have been published, but have instead given references to the publications. Many of the things mentioned here are in themselves of less importance than some which have been omitted, but I have tried to include the impressions which were new to me although I was fairly conversant with American beekeeping literature.

My visit was made possible financially by a number of Beekeepers' Associations and Universities where I lectured, by the companies owned by two distinguished American beekeeping families — Dadant and Root — and by the great kindness and organizing ability of Mr. R. B. Willson of New York. I should like to express here my special thanks to these 'hosts' — for what was in all senses of the term a great experience — and besides them, to the many beekeepers who helped me on my way with transport, beds and meals.

### NEW ENGLAND

I landed in New York by air on July 23rd, and went almost immediately into Connecticut and then Massachusetts. In Connecticut I saw my first American bees, in an apiary surrounded by lucerne, Ladino clover and sweet clover. I had been under the impression that large Dadant hives were at least as common as Langstroth hives, but New Englanders were very amused at this idea, and said that only a superman could lift Dadant hive bodies. Certainly all I saw in New England were Langstroths (a 10-frame Langstroth brood body has the same comb area as 12 British Standard brood frames ; an M.D. brood body (11 frames) is equivalent to nearly 18 British Standard frames). I saw my first box hive at Mr. MacCarter's in Springfield a few days later ; they are still in use in some of the southern States. In the early beekeeping days in North America, wood was so much more convenient and common a material than straw that virtually all hives were made of wood, and straw skeps were unknown in many parts. Pellett (1938) is rather reticent on this point.

The wealth of new bee plants wherever I travelled showed very clearly that I had come to another continent : sumac trees were plentiful in the woods, and milkweed in the meadows, and in one locality the hillsides were covered with mountain laurel, whose poisonous honey had disastrous effects on some of the Confederate soldiers in the Shenandoah Valley : their Surgeon, Dr. Grammer, related in 1875 that they were 'entirely overpowered by it, and their appearance was exactly as if they were dead drunk, and I should certainly have pronounced them so, had not their messmates assured me to the contrary . . .'. In Massachusetts few seemed to know the plant as one which produces poisonous honey, and I presume that the bees do not work it there as they do in Virginia.

I called to see Mr. Allen Latham at Norwichtown, Conn. At one time he operated on a very large scale — rearing 3500 queens in a single season — but it was clear that his active beekeeping days were now over. There, as elsewhere in the United States, equipment was abandoned when it was no longer used and not, as in European countries disciplined by wartime shortages, sold or turned to some other use. I heard several times of apiaries of a thousand colonies or more being abandoned (bees and all) when their owners gave up beekeeping. I never ceased to be shocked at the wastage of other materials too, especially food and paper.

Bee hunting is an art which has survived in the woods of New England longer than in most parts of Europe, and I was fortunate to be able to visit two of the few remaining bee hunters there. The first, Mr. Albert Allen, lives in Prospect, one of the many lovely villages of white wooden houses spread out round a white wooden church — they say that wherever you go in New England you can see a white church spire rising above the woods somewhere in the landscape. Mr. Allen had set up his bee boxes in the garden, and demonstrated how he 'lines the bees' to find the direction in which their bee tree lies. He very kindly gave me one of his bee boxes for the National Beekeeping Museum ; it has played its part in achieving Mr. Allen's total score of 250 trees — he has hunted bees for over fifty years — and will now serve to let others see how the hunting is done. The procedure is described clearly in a book written by the other bee hunter I visited, Mr. G. H. Edgell, Director of the Museum of Fine Arts in Boston ; he has also hunted bees from his boyhood, in the woods of New Hampshire.

My primary reason for visiting Mr. Edgell was actually to see two treasures in the Museum of Fine Arts which are far older than any bee boxes. They are two large pin heads wrought in gold about 2500 years ago, and found in a grave in the north-west Peloponnesos in Greece. The workmanship is perfect ; and as part of the ornamentation each has four bees on it, exquisite and accurate in every detail. On one the bees are life-size and are all foraging on a thistle-type flower which forms the head of the pin ; on the other they are slightly smaller, and each is foraging on a separate floret. It gave me great pleasure to hold these pins in my hands, and I could not help wondering what craftsman had studied his bees so carefully, two thousand years before there was a microscope to help him, that he could reproduce them in such perfection.

From Boston I also visited the Botanical Museum of Harvard University, to see the Ware Collection of glass models of plants. These models — there are some thousands of them — were made by two brothers, Leopold and Rudolph Blaschka, and their story is a fascinating

one (Ames, 1951). No one alive now can make models like them ; they are completely lifelike, and the long series designed to show insect pollination has probably not been surpassed in any medium.

#### THE MIDDLE WEST

On July 31st I flew from Boston to Chicago, and was met at the airport by Mr. Roy Grout, known to many readers as the Editor of *The hive and the honeybee*. With him were Dr. and Mrs. Morgenthaler from Switzerland, with whom I had already spent some time in New York, and with whom I travelled a great deal in the next few weeks. Dr. Jamieson, the Dominion Apiarist from Canada, had just arrived by air from Ottawa, and Mr. Grout had come 'across Illinois' (some 350 miles) to take us all back to Hamilton on the Mississippi, for a big two-day meeting there.

I shall not easily forget Mr. Grout's greeting to me — 'How is it that *you* spell honeybee in one word and foul brood in two words, whereas *we* spell honey bee in two words, and foulbrood in one?' This led to a lively inter-national discussion on spelling and nomenclature, which lasted for at least the first hundred miles.

At Hamilton we found a garden party in progress, and here I met many whom I had known only by name — G. H. Cale Jr., C. L. Farrar, M. H. Haydak, C. E. Killion, H. H. Laidlaw, O. Mackensen, V. G. Milum, O. W. Park, W. C. Roberts, W. C. Rothenbuhler, and many members of the Dadant family, whose home it was. The geneticists at the party had never all met together before ; this surprised me until Dr. Laidlaw told me that he spent two days and nights in the train coming from California.

My diary entry for the next day reads : 'I am writing in C. P. Dadant's study. The garden goes down to the Mississippi (a mile wide here, 600 miles from the sea), and I went to sleep to the sound of the cicadas in the trees and the ships on the river. I woke at 5 (my metabolic clock still being several hours fast) and sat watching the Mississippi from my window. It is the hottest day yet, about 95° F. and very humid.' In this heat some 500 of us attended the very successful Tri-State meeting (Illinois, Iowa, Missouri). Some figures published subsequently may arouse the interest and whet the appetite of English beekeepers :

Number of colonies owned by members : varied from 1 to 2000, average 242

States represented : 21 (here and elsewhere England was referred to as one of the 'other States'!)

Food consumed at picnic : 92 lb. ham, 6 gal. applesauce, 14 gal. beans . . . Served : 305 adults, 40 children.

This meeting — and others I attended later — had several features different from ours in this country. The meetings themselves were much less formal, and the services of chairmen and movers of votes of thanks were happily dispensed with almost entirely. Discussions were freer on the whole, but it was clear from them that beekeeping as a *cultural* activity is comparatively rare in most of the United States. It was not until I returned to New England, and overheard the remark so characteristic of English meetings — 'I was watching my bees the other day . . .', that I realized that I had not heard it at any of the earlier meetings.

The 'panels' were a good feature. A problem was discussed, by say half a dozen experts sitting at the table, any member of the audience being free to take part as well, and the 'leader' guided the discussion and summed up at the end. Subjects were Honey-house layouts, Commercial pollination, Queens of the future, and so on. (The last of these decided on the following requisites, in order of importance: honey production, good wintering, good temper, little propolizing and burr comb production, white cappings, little swarming, disease resistance.)

We had an opportunity of visiting the Dadant factory, which makes foundation, candles and beekeeping equipment (but not hives, which are made by G. B. Lewis Co. at Watertown), and where the *American Bee Journal* is published. A large bee-breeding apiary is also maintained; several hundred queens are reared each year, all except those used for drone production being instrumentally inseminated.

We left Hamilton on 3rd August, and Dr. Farrar took Dr. and Mrs. Morgenthaler and me back with him to Madison, Wisconsin, about 350 miles north. With us were Dr. W. C. Roberts, and Mrs. Harriet Grace the Director of the American Honey Institute, whose headquarters we visited when we got to Madison. This useful organization, which carries out publicity work for honey in both the U.S.A. and Canada, has no equivalent in any European country; its many activities increased my impression that in most of North America the major problem is not to *get* honey but to *get rid of it*.

We visited the apiary which Dr. Farrar uses for his 'methods of management' experiments, which have recently been described in detail in *Bee World* (Farrar, 1953). I had read and heard much about these colonies; even so, I was impressed by what I saw. The colonies, with 80-90 000 bees, were in shallow 12-frame Dadant bodies, 8-9 per hive. The two-queen units had already been united when we saw them. When the hives are to be inspected, a truck drives between the rows, and each hive in turn is lifted and turned over sideways on to a platform, and examined while on its side.

At a party that evening I met the other research workers from the University of Wisconsin, and was more than ever sorry that I had to leave the next day without hearing in detail about their work. I did however achieve one ambition, by visiting the C. C. Miller Memorial Library; it was this Library, built up by Professor H. F. Wilson, which purchased Colonel Walker's valuable collection of beekeeping books in 1930 (Walker, 1929; Miller, 1936).

I parted from Dr. Farrar and Dr. and Mrs. Morgenthaler at the G. B. Lewis factory some 40 miles east of Madison. Here we had seen hives and frames (including the 'nailless' top-bar frame) being made, and other beekeeping equipment. Since the beekeeping trade is largely seasonal, most equipment factories have a second interest which can be profitably run in conjunction with the beekeeping side, such as plastics (G. B. Lewis) or wooden toys (A. I. Root). G. B. Lewis sell all their hives in the flat, and *all* products are 'packaged' — a carton containing 20 brood frames, or 20 shallow frames, or a hive complete with frames, and so on.

Before I left Milwaukee by the ferry across Lake Michigan that night, I was taken to visit Walter Diehnelt at Menomonee Falls, Wisconsin. Mr. Diehnelt specializes in 'fancy honey packs,' 'honey candies' and so on,

and packs and sells 500 tons of honey a year. The goods are advertised and sold through the post direct to the consumer.

The boat arrived at Muskegon (Michigan) early next morning, and there I found myself in the capable hands of Mr. Baxter Woodman (the Woodmans are another of the American 'beekeeping appliance' families, operating in Grand Rapids), and Professor E. C. Martin, who runs the Beekeeping Department at Michigan State College, where there are altogether some 13 000 students. They took me to see several commercial beekeepers in Michigan, and I was able to see really large-scale extraction in full swing (see, *e.g.*, Shaw & Cogshall, 1950).

On 7th August — just a week after I had left Boston — we went south again, into Indiana, for another Tri-State meeting at Angola (Indiana, Michigan, Ohio). This area was only settled in 1830–40, and memories of Indians are very recent, in Pokagon State Park where the first day's meetings were held, and in the town itself. At this meeting each session started and ended with 'attendance drawings and awards' — a great deterrent to late arrivals and early departures. On registering, each member was given a book of four coloured slips carrying his own identification number; at the beginning of each session he handed in his slip (of the colour asked for), and the slips were shuffled and six numbers drawn at the beginning, and again at the end, of the session. The owners of the slips drawn got a prize, *provided they were present at the drawing*. The Grand Prize, drawn for at the end of the last session (five complete Root hives), was won by Mrs. Bishop of Louisville, Kentucky. I felt that she deserved it, for she and her husband had driven 400 miles each way the previous weekend to the Hamilton meeting, and a similar distance to the Angola meeting. This prize, and all the others, were given by beekeeping equipment firms.

Another feature of this meeting was 'choosing the Michigan Honey Queen'. The six entrants — all girls between 17 and 21 — were paraded on the platform while the six (male) judges among the audience gave them marks for beauty, poise, and so on. The function of the Honey Queen is to provide publicity for honey by appearing in radio and television programmes, being photographed with jars of honey, and so on.

I made another set of new friends before I left Angola, including Dr. and Mrs. W. E. Dunham, Dr. B. Elwood Montgomery, and members of A. I. Root Co., with whom I left for Medina, near Cleveland in Ohio, some 200 miles east.

Here Mr. Alan Root and Mr. Huber Root showed me round the factory, including the printing press (both *Gleanings* and the *ABC & XYZ* are printed on the premises); I discussed publication problems with Mr. Jack Deyell (Editor) and Mr. Walter Barth (Assistant Editor), and spent a happy evening listening to Huber Root's memories of American bee masters of the last century — Langstroth, Quinby and Bingham, and of course A. I. Root. In the old days there were many personal quarrels and jealousies, but today there seems to be an extremely friendly relationship between the beekeeping appliance firms, and the families who own them play a large and useful part in the beekeeping community. But it seems a pity to me that there is *no* national beekeeping journal in the States published by an independent body.

I flew from Cleveland to Ottawa on 10th August, and had two days there, seeing the Bee Division of the Experimental Farm and — thanks to Mrs. Jamieson's persistence — something also of Ottawa and the surrounding country.

The honey *disposal* problem seems to be even more pressing in Canada than in the U.S.A. Dr. Jamieson gave me the following figures to show how many Canadian beekeepers had become discouraged and given up :

		beekeepers	colonies	price for bulk honey
1947	.. ..	43 000	588 000	25 cents/lb.
1952	.. ..	16 000	387 000	15 cents/lb.
decrease	.. ..	64 %	34 %	40 %

The loss of Canada's export market (to Britain and elsewhere) contributes largely to this decrease. Canada must I think have a higher average yield per hive than any other country : about 80 lb. a year. Recently a beekeeper on the Alaska Highway averaged 140 lb. per hive from 450 colonies in a single apiary.

At the Bee Division Mr. Ed Braun and others were trying out their new honey-processing plant, which preheats the honey, drives it through pipes at 160° F., and then through cooling pipes and past an injector which adds seeding material ; the whole process takes place in a closed system, and is continuous. The plant could handle 300–700 lb. honey an hour. Other work in the Division was concerned with the physical properties and granulation of honey, pollination of legumes, and disease control — in co-operation with Dr. A. G. Lochhead and Dr. H. Katznelson in the Division of Bacteriology.

In the evening we went — with Mr. C. B. Gooderham, Dr. Jamieson's predecessor — to a bee meeting about thirty miles from Ottawa, at the Henderson's house. The Hendersons have 1000 or more colonies, and use *single* Langstroth brood chambers (2–3 are usual in Canada). They average 100–150 lb. per colony, and they are clearly first-class beekeepers ; their honey plant was also of the best, and best kept, of any I saw. I had the pleasure of meeting members of two of the Canadian 'bee supply' firms there, Mr. Harry Jones from Quebec and Mr. George Benson from Ottawa.

My other hosts in Canada were the Apiculture Department of Ontario Agricultural College, which is housed in a beautiful campus at Guelph, some 60 miles from Toronto. Here I found much going on. The research which interested me most was Dr. Shuel's study of nectar secretion by red clover plants ; plants from the same clone are grown in peat moss (supplied with known nutrients), in a 'light chamber' in which both weather and daylight can be completely controlled (see also Shuel, 1952, 1954). Work was also in progress on pollination, with the aid of fluorescent marking materials (Smith & Townsend, 1951).

The way to Dr. Shuel's 'light chamber' led through a cold-room, and here I worked my way round 150 half chickens which were laid out to thaw ready for the chicken barbecue : this was to be the highlight of the evening's bee meeting. I had already seen the barbecue pit, and was most interested to see the process — and to partake of the product, which was quite excellent. I met many other Ontario beekeepers at the meeting, including some I was disappointed not to have time to visit —

Mr. and Mrs. Maguire, who are well known to readers of the *Canadian Bee Journal*, and Mr. Tom Shield who is in charge of the Ontario Honey Producers' Co-operative, the first of all the honey co-operatives.

I was reluctant to leave Canada after a brief four days ; my departure was however made most enjoyable by the kindness of the Ontario Beekeepers' Association, who arranged for me to spend a night at the Sheraton-Brock Hotel overlooking the Niagara Falls, and of Mr. P. W. Burke who took me there, and on to New York State next day.

#### NEW YORK STATE

New York State covers a very large area, stretching from New York in the south right up to the St. Lawrence River in the north. My introduction to it was the Annual Meeting of the State Beekeepers' Association in Genesee Valley Park near Rochester (on 15th August), and here I found several people I had long wanted to meet — Mr. R. B. Willson who had arranged my visit to America, and Professor and Mrs. E. J. Dyce from Cornell University. I then paid a short, but very happy, visit to the 'Thousand Islands' which stud the St. Lawrence River just below its egress from Lake Ontario, where the river is eight miles wide. At the meeting at the Wahls' house, where I stayed the night, we had one speaker who was out on bail — his bees had stung a neighbour badly, and in the end (I never got hold of the complete story) he had been arrested. Another trouble which was discussed was the loss of bees through spray poisoning ; this seemed to be a new hazard here.

On the journey south from Thousand Islands to Ithaca, in company with Dr. and Mrs. Dyce and Dr. and Mrs. Morgenthaler, I saw my first Indian reservation and smelt my first skunk. I enjoyed my stay in Ithaca enormously, and it seemed to me that Cornell University — one of the great American seats of learning — must be an ideal place in which to work. The new Albert R. Mann Library has everything that one could wish for in a library, and in it is housed the E. F. Phillips Memorial Library. Here Dr. Morgenthaler and I were able to read L. L. Langstroth's own handwritten diary, and here we saw what is probably the largest collection of publications on bees and beekeeping in the world. Both I and the Bee Research Association are greatly indebted to the Librarian, Professor W. Powell, and his Assistant Miss V. Warters, for their co-operation during my visit — a co-operation which continues, and which promises to bear much fruit.

I was of course too late to meet Professor Phillips himself ; he died in 1951. But his personality still seemed to pervade the Department which was under his charge for so many years — from 1924 until his retirement in 1946. It seemed to me that Dr. Phillips can have let no piece of information he ever came across go undocumented ; as a result the Department has an invaluable store of classified information on beekeeping and (more especially) on honey. As a result of Dr. Dyce's energetic policy in keeping the records up to date, the collection is gaining in value each year.

Research work done in the Apiculture Department at Cornell includes investigations on both academic and practical problems ; work on the process of beeswax secretion (Coggshall, 1953) and on its commercial production ; on the fermentation of honey and on the production of mead (Morse, 1953) ; on the properties of honey and on commercial



honey processing (Dyce, 1953) ; on foraging behaviour and on pollination, especially of bird's foot trefoil, which I was told here and elsewhere was the 'coming legume' — it withstands drought very well.

The Apiculture Department at Cornell is comparatively wealthy — thanks to the royalties obtained from the Dyce Process Honey Patent (Dyce, 1931), and the money is certainly being spent in a way which benefits the American beekeeping industry, and the beekeeping community in general.

While I was in Ithaca I had the pleasure of spending several hours with Mrs. M. G. Phillips ; I was also able to see some of the College apiaries, and their field work, and the collection of early American beekeeping material. Dr. Coggs shall also took me over the very large honey-processing plant at Groton (Finger Lakes Honey Co-operative), where all the processes are mechanized. Here I was able to see the 'filter aid' process, used here for *all* honey to be sold liquid ; this process removes virtually everything in the honey which is not in solution (including pollen grains), and leaves it sparkling clear. I was told that this treatment was essential, since the honey must compete with extremely 'clear' syrups and jellies in the self-service super-markets, where the *appearance* of the product is everything.

I finally left Ithaca on 21st August, when Mr. R. B. Willson very kindly met us at Albany, and took me on to Massachusetts with him

#### NEW ENGLAND AGAIN

From Mr. Willson I learned something of the wholesale honey trade ; R. B. Willson, Inc. must be the largest honey dealers in the world, and during the drive to Amherst — over the beautiful Berkshire Hills, where the trees were just starting their 'fall' colouring — I learned to think of honey by the thousand tons, and to know my way around switch deals, agios, and so on. I also learned something of the speed with which inter-continental deals must be conducted ; indeed, I became quite breathless with excitement as we chased the current 'deal' halfway across the world, by telephone, cable and radiotelephone, during the drive and throughout the following weekend. At one stage I fully expected Mr. Willson to drive to the nearest airfield and fly away to Yucatán, leaving me to take the car on to Amherst and New York.

I spent the weekend with Professor and Mrs. F. R. Shaw at Amherst (21st and 22nd August) ; they have a flat at the top of the beekeeping building on the campus of the University of Massachusetts. (It was in the basement of this building that Burton Gates carried out his experiments on hive temperatures in 1914.) There was an all-day bee meeting on the Saturday, and here I felt I was almost back in England, with the discussions on swarm control, how bees behave, how much they should be packed for winter, and so on. I continued my education on the world trade in honey at a lecture Mr. Willson gave, and learned something of the comparative 'sales resistance' to imported honey of the different European countries. After the meeting I was taken to a sea food restaurant in Northampton, for a clam supper. The food was excellent, and certainly fresh ; indeed the motto of the establishment was '24 hours from C 2 U'.\* On the way back we watched the sunset from the war memorial at Amherst College. This is one of the most beautiful

\* from sea to you.

memorials I have seen — a stone platform on the brow of a hill, looking out across the valley of the Connecticut River to the Mount Holyoke range. I marvelled again, as I had done many times on this journey, at the genius of the Americans in designing large things, and their lack of skill and perception (or unwillingness to spend the time?) in producing small ornaments of beauty.

On Sunday morning we went on a Langstroth pilgrimage. It was a misty autumn morning, and we drove leisurely through by-roads to Greenfield, to visit the Congregational Church where Langstroth was pastor from 1843 to 1848, before he went to Philadelphia. To me the church itself seemed ugly, but the house beside it — where he lived and where he conducted a girls' school — was one of the many beautiful New England homes built in the eighteenth century. As it is now a 'funeral home,' I was able to see some of the rooms, which were furnished much as they were in Langstroth's day. Outside the church there is a simple memorial stone, erected by American beekeepers in 1948, with the words 'Lorenzo Lorraine Langstroth . . . Inventor of the movable-frame bee hive which made modern beekeeping possible, 1851 . . . . This tablet is erected as acknowledgement of the debt of beekeepers of the world to his skills and unselfish leadership.'

When we returned, Dr. Shaw showed me the Department's collection of early American hives, including one of the original Langstroth design, and a 'U.S.' hive made in 1859 which was curiously like a Nutt hive.

After lunch Mr. Willson took me back with him to New York; our route lay along one of the 'parkways', and I saw something of the fantastic traffic problems in the New York area. After a meal, and a visit to Mr. Willson's large and interesting collection of ornamental honey pots (Willson, 1950), I caught the night train south to Washington.

#### WASHINGTON

As I stepped off the train I found myself back in summer weather (Washington is on the same latitude as Sicily); indeed there was a heat wave which lasted for the rest of my stay. Mr. J. I. Hambleton met me, and I could not have had a kinder host than him and his family, in a farmhouse 25 miles or so from Washington and Beltsville. Mr. and Mrs. Hambleton and their family have largely rebuilt the house themselves, and are now busy rebuilding another house nearby.

The headquarters of the U.S. Division of Bee Culture and Biological Control, of which Mr. Hambleton is the head, occupy one of the buildings in a beautiful tract of woodland near Beltsville, Maryland — perhaps ten square miles — owned by the U.S. Department of Agriculture. The Division also runs a number of Laboratories in different States, in close collaboration with the Universities there, where research is carried out in specialized fields (bee breeding in Wisconsin, bee diseases in Wyoming, pollination in Arizona, California and Utah, and queen rearing in Louisiana). By this decentralization Mr. Hambleton has greatly extended the work accomplished by the Division, and the Universities in which the various Laboratories are housed have made valuable contributions to this work.

At Beltsville I met the administrative staff, including Mr. W. J. Nolan, and also Mr. A. S. Michael who is working on E.F.B., and Dr. Dutky of the Biological Control section who has been developing a

method for controlling Japanese beetle larvae by treating soil infested with them with spores of 'milky disease' (similar to A.F.B.). The U.S. Division of Bee Culture is indeed fortunate in its chief ; I do not think I have known any head of a department so universally loved by his staff as Mr. Hambleton, and after spending a few days in the Division I began to understand why.

But I saw far more at Washington than the Bee Division. I saw the great machinery of the United States Department of Agriculture itself at work, and I must confess that I found its ruthless efficiency a little frightening. But I had Miss Judy Merrill from Beltsville for my guide, with her great fund of good nature, and even here I found new friends, especially Mr. Harold Clay who looks after the price-support programme for honey (Clay, 1954)

I also had the great pleasure of visiting Mr. R. E. Snodgrass at the National Museum, and I can pass on to intending B.B.K.A. examination candidates the good news that there will be a new edition of the *Anatomy of the honeybee* within the next two years or so.

In Washington I also did more sightseeing than anywhere else — thanks to Mr. Hambleton's kindness — and even managed several hours' shopping.

#### BACK TO NEW YORK

I left on 28th August, with Mr. and Mrs. W. A. Stephen and their son, who had come to visit Beltsville from their home in North Carolina and were now on their way to Pennsylvania State College for the last day of a week's beekeeping course. Our route lay through Gettysburg, and I had to remind myself once again how *recent* American 'history' is ; the battle at Gettysburg — which decided the outcome of the Civil War — was fought in 1863. We then followed the Susquehanna and Juniata Rivers up into the Alleghany Mountains, through the country of the 'Pennsylvania Dutch' [Deutsch], who came from North Germany and for a long time retained their own speech and customs, and some religious sects even their seventeenth-century dress. The country was some of the most beautiful I had seen in the States, and the Alleghanies reminded me very much of parts of the Jura. By the Juniata River we found one of the (unattended) roadside honey stalls which are often illustrated in the American beekeeping journals. It was all that such a place should be — a clean white shed, unlocked, with a display of honeys inside, a price list and a moneybox for the money, honey recipes, a book for visitors to sign, and an observation hive.

We were I fear very late arriving at Pennsylvania State College, and we found the classes just finishing. Professor E. J. Anderson, in charge of the Department, showed us round it, and here we met Dr. Morgenthau who had been lecturing at the course. (This week's course is I think the longest and most advanced course for beekeepers in the States, and is not unlike many given in England — except in details, such as the identity of the local bee enemies, which in Pennsylvania are skunks and bears.)

Although we were late for the course, we were in good time for the banquet at the end of it. Dr. Morgenthau and I had attended bee banquets together in Switzerland, Holland and England, and we were both interested to see what an American one would be like. It was

very pleasant — fewer courses than in Holland, fewer drinks than in (French) Switzerland, and fewer speeches than in England, but it seemed just right for the occasion — and for the terrific heat which still persisted.

My stay at State College was all too short, for at 6 next morning Dr. Morgenthauer and I set off again with Mr. Maclean, who kindly took us back with him to New Jersey, another 300-mile journey. In the afternoon there was a meeting in a log cabin on the campus of Rutgers University. Again I was late, and I suspect that this had greatly inconvenienced the meeting, but no mention was made of it. It was the hottest day of all, and I felt far too tired to give another lecture (it was my last), but the audience was so interested, and raised so many interesting points during and after the lecture, that I soon forgot how tired I was and settled down to enjoy myself. Moreover when there was at last a lull in the questions, I was asked if there were any questions I would like to put to the audience. This was new to me, but a most useful opportunity for a traveller from another country.

I spent the rest of the weekend (29th–31st August) as a guest of Dr. and Mrs. Morgenthauer and their son and daughter-in-law at Woodbridge, about 30 miles south of New York. We explored the New Jersey countryside together, and I realized suddenly that whenever we came to some place which attracted us, we exclaimed ‘That could almost be in England,’ or ‘in Switzerland’. So we knew that we were ready to go home to our native lands; we were in fact due to sail together in the *Queen Elizabeth* on 2nd September.

I had a final two days in New York, where Mr. Willson took charge of me again, and I managed to fit in at least some of the things I wanted to do, including a visit to Dr. A. Z. Abushâdy, who founded *Bee World* in 1919. Mr. Willson and his staff proved to be a tower of strength in dealing with my baggage, which by now had grown to sixteen items, a large proportion of them being gifts for the National Beekeeping Museum. When I said goodbye to Mr. Willson on the dock I realized how much more I owed him than the actual organization of my visit.

#### CONCLUSION

What can I say in conclusion? Unless I can make some useful synthesis from my experience, I have largely failed in the task I set out to do. I still cannot answer the question I have been asked so often: ‘Is American (or English) beekeeping *better* than ours?’; indeed I no longer regard it as a valid question. It seems to me that where North American and English beekeeping have developed along different lines, it has been largely because the conditions, and hence the problems, have been different, and that the differences are to a certain extent simply an expression of the different ‘way of life’ in the two countries. Beekeepers of the European and North American continents could with profit learn much from each other, because in so many ways the developments have been complementary.

I list below what I now consider to be the strong points of beekeeping in the two Continents.

#### *United States and Canada*

Beekeeping equipment, its quality, simplicity and uniformity  
Large-scale beekeeping methods which give a good yield in a good district  
Research leading to a workable answer to a practical problem  
The emphasis placed on *honey* in research, education and publicity

Initiative and enterprise in selling the products of beekeeping

*Britain and other European countries*

Fundamental research work on bees

Beekeeping as a cultural activity

The high standard of education among beekeepers, especially about *bees*

Their knowledge about beekeeping developments in other countries, and their receptiveness to ideas which do not originate within their own country

The standard and the amount of the work done by voluntary beekeepers' associations.

I would list as weak points : in America, the comparative ignorance among beekeepers about developments outside their own country, and about research work in general ; in some European countries, what I call 'gadgetry,' the undisciplined production of a multitude of hives and pieces of equipment whose usefulness often exists only in the minds of their inventors.

But these points are themselves an expression of the facts that in much of North America large-scale beekeeping is profitable, but that honey there fetches only three times as much as sugar, while in much of Europe beekeeping is far more difficult, but that nevertheless (or therefore?) people get much pleasure from it as a hobby, and that there honey fetches four to eight times as much as sugar. Moreover the distances which beekeepers must travel to meet together are far greater in America. In support of my argument that it is largely the conditions which determine this issue, I would suggest that the methods of the few large-scale honey producers in England are more like those of the Americans than those of most other English beekeepers, and that most New England beekeepers would find themselves more at home running an English apiary than one in the Middle West.

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