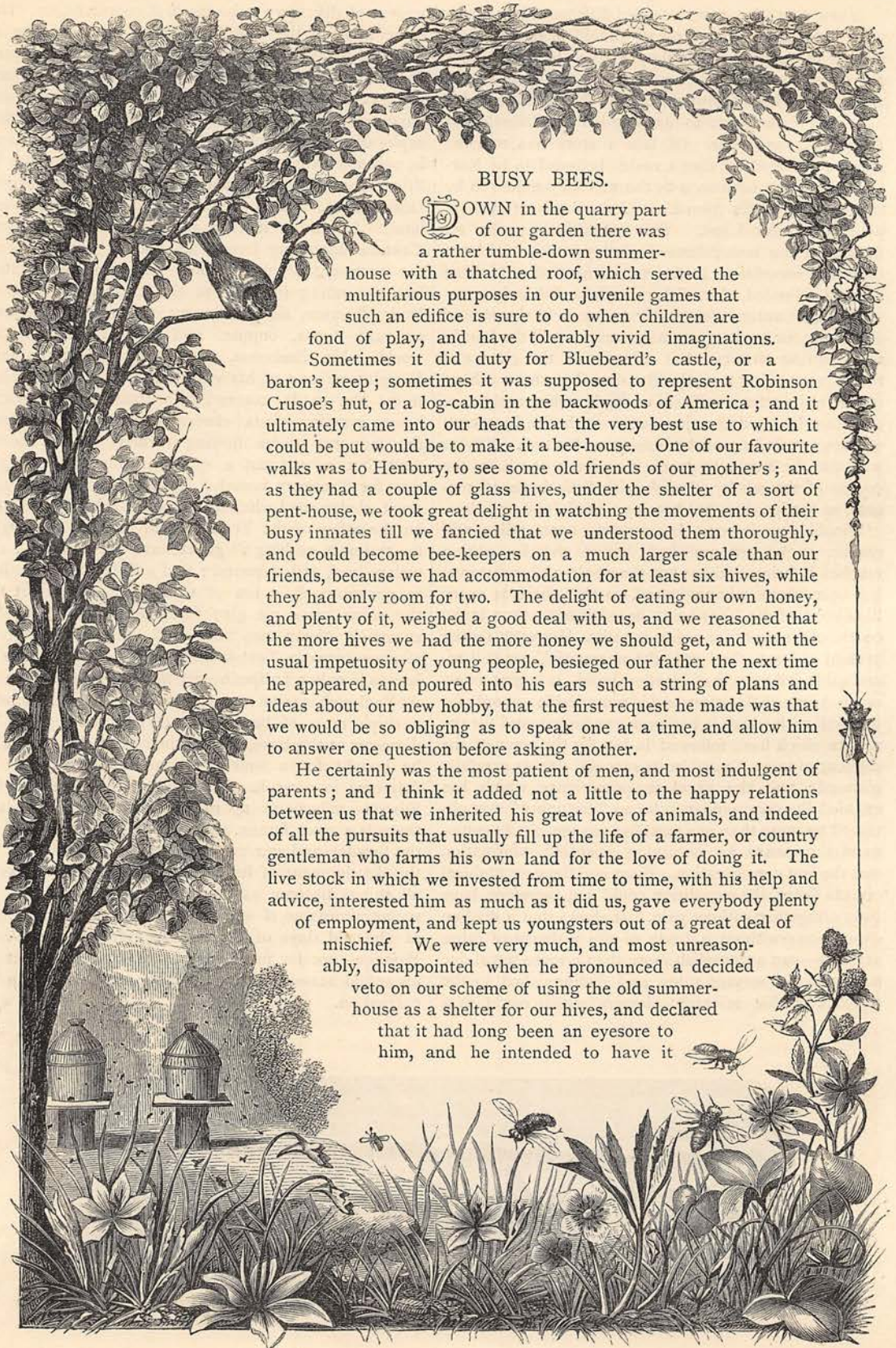


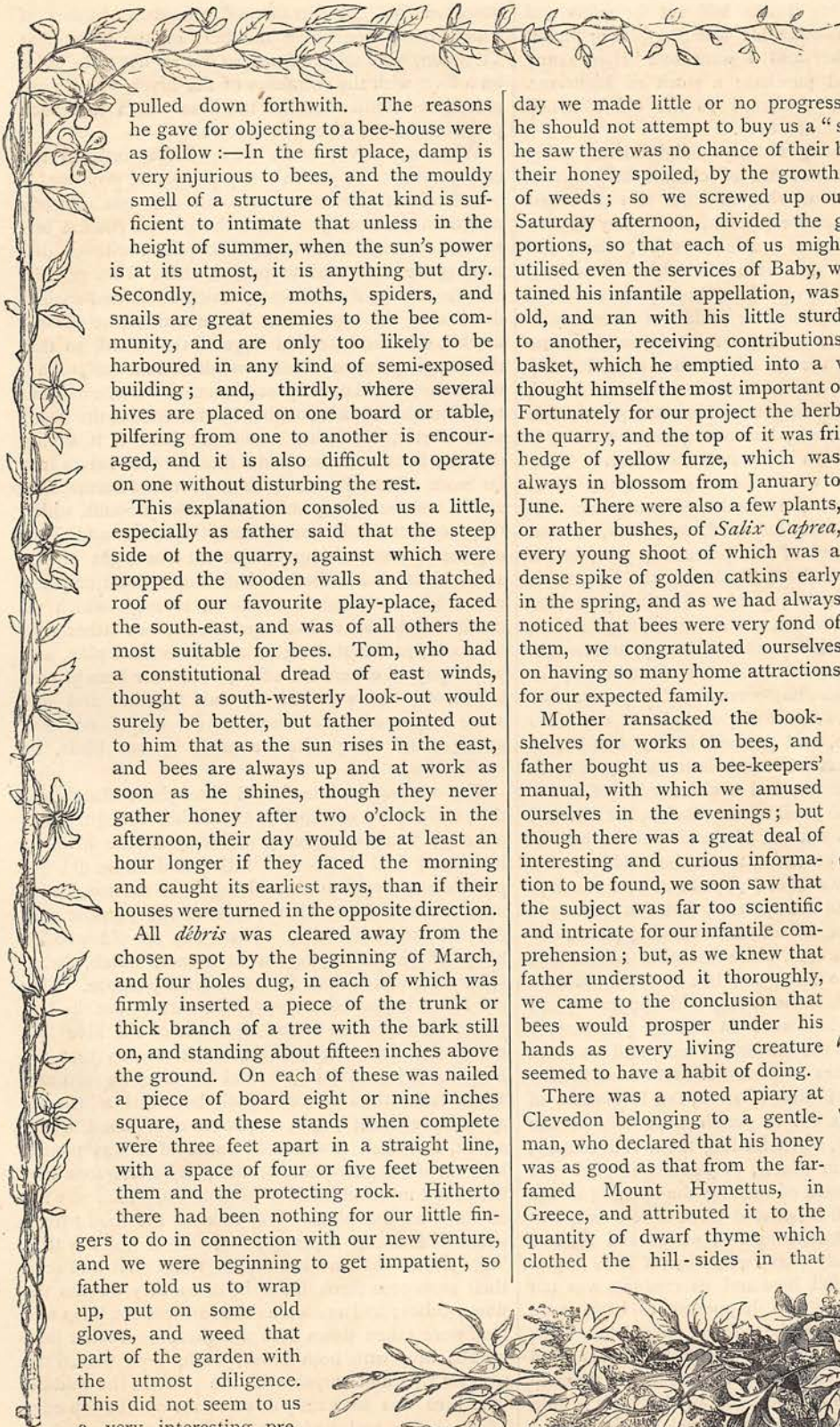
BUSY BEES.

DOWN in the quarry part of our garden there was a rather tumble-down summer-house with a thatched roof, which served the multifarious purposes in our juvenile games that such an edifice is sure to do when children are fond of play, and have tolerably vivid imaginations. Sometimes it did duty for Bluebeard's castle, or a

baron's keep; sometimes it was supposed to represent Robinson Crusoe's hut, or a log-cabin in the backwoods of America; and it ultimately came into our heads that the very best use to which it could be put would be to make it a bee-house. One of our favourite walks was to Henbury, to see some old friends of our mother's; and as they had a couple of glass hives, under the shelter of a sort of pent-house, we took great delight in watching the movements of their busy inmates till we fancied that we understood them thoroughly, and could become bee-keepers on a much larger scale than our friends, because we had accommodation for at least six hives, while they had only room for two. The delight of eating our own honey, and plenty of it, weighed a good deal with us, and we reasoned that the more hives we had the more honey we should get, and with the usual impetuosity of young people, besieged our father the next time he appeared, and poured into his ears such a string of plans and ideas about our new hobby, that the first request he made was that we would be so obliging as to speak one at a time, and allow him to answer one question before asking another.

He certainly was the most patient of men, and most indulgent of parents; and I think it added not a little to the happy relations between us that we inherited his great love of animals, and indeed of all the pursuits that usually fill up the life of a farmer, or country gentleman who farms his own land for the love of doing it. The live stock in which we invested from time to time, with his help and advice, interested him as much as it did us, gave everybody plenty of employment, and kept us youngsters out of a great deal of mischief. We were very much, and most unreasonably, disappointed when he pronounced a decided veto on our scheme of using the old summer-house as a shelter for our hives, and declared that it had long been an eyesore to him, and he intended to have it





pulled down forthwith. The reasons he gave for objecting to a bee-house were as follow :—In the first place, damp is very injurious to bees, and the mouldy smell of a structure of that kind is sufficient to intimate that unless in the height of summer, when the sun's power is at its utmost, it is anything but dry. Secondly, mice, moths, spiders, and snails are great enemies to the bee community, and are only too likely to be harboured in any kind of semi-exposed building; and, thirdly, where several hives are placed on one board or table, pilfering from one to another is encouraged, and it is also difficult to operate on one without disturbing the rest.

This explanation consoled us a little, especially as father said that the steep side of the quarry, against which were propped the wooden walls and thatched roof of our favourite play-place, faced the south-east, and was of all others the most suitable for bees. Tom, who had a constitutional dread of east winds, thought a south-westerly look-out would surely be better, but father pointed out to him that as the sun rises in the east, and bees are always up and at work as soon as he shines, though they never gather honey after two o'clock in the afternoon, their day would be at least an hour longer if they faced the morning and caught its earliest rays, than if their houses were turned in the opposite direction.

All *débris* was cleared away from the chosen spot by the beginning of March, and four holes dug, in each of which was firmly inserted a piece of the trunk or thick branch of a tree with the bark still on, and standing about fifteen inches above the ground. On each of these was nailed a piece of board eight or nine inches square, and these stands when complete were three feet apart in a straight line, with a space of four or five feet between them and the protecting rock. Hitherto there had been nothing for our little fingers to do in connection with our new venture, and we were beginning to get impatient, so father told us to wrap up, put on some old gloves, and weed that part of the garden with the utmost diligence. This did not seem to us a very interesting preliminary, and we did not

attack our task with any great amount of activity; day after day we made little or no progress, but father said he should not attempt to buy us a "stock" of bees till he saw there was no chance of their being poisoned, or their honey spoiled, by the growth and blossoming of weeds; so we screwed up our courage on a Saturday afternoon, divided the ground into four portions, so that each of us might clear one, and utilised even the services of Baby, who, though he retained his infantile appellation, was now three years old, and ran with his little sturdy legs from one to another, receiving contributions of weeds in a basket, which he emptied into a wheelbarrow, and thought himself the most important of little personages. Fortunately for our project the herb-bed was down in the quarry, and the top of it was fringed with a thick hedge of yellow furze, which was always in blossom from January to June. There were also a few plants, or rather bushes, of *Salix Caprea*, every young shoot of which was a dense spike of golden catkins early in the spring, and as we had always noticed that bees were very fond of them, we congratulated ourselves on having so many home attractions for our expected family.

Mother ransacked the bookshelves for works on bees, and father bought us a bee-keepers' manual, with which we amused ourselves in the evenings; but though there was a great deal of interesting and curious information to be found, we soon saw that the subject was far too scientific and intricate for our infantile comprehension; but, as we knew that father understood it thoroughly, we came to the conclusion that bees would prosper under his hands as every living creature seemed to have a habit of doing.

There was a noted apiary at Clevedon belonging to a gentleman, who declared that his honey was as good as that from the far-famed Mount Hymettus, in Greece, and attributed it to the quantity of dwarf thyme which clothed the hill-sides in that

attack our task with any great amount of activity; day after



neighbourhood before it was laid out for villas and converted into a fashionable watering-place; and it was there that father and I went one bright sunny day to inspect and purchase a stock of Ligurians, which he said he preferred to the old-fashioned black, or even the Italian bees.

A trip to the sea-side is always delightful, and a day spent at Clevedon was full of charms and attractions, even if we went with no other aim than that of enjoyment. When we reached the apiary we saw a great variety of hives made of straw, wood, and glass. The owner said he seldom had visits from such early buyers as ourselves, but quite endorsed father's opinion that from the middle of February to the middle of March was the most favourable time for the purpose, as the bees have then passed safely through the winter, the combs are empty of brood, light of honey, and their removal is consequently safe and easy. Most people, however, postpone doing it till May or June, which is the swarming time.

Father tried the weight of a great many hives and also looked at the combs, showing me that they ought to be straw-coloured, or yellow, as that hue denotes a swarm of the preceding year, but if there is any approach to blackness the colony is much older, and must be rejected. He finally decided on a last year's swarm in a straw or cottager's hive, containing about twelve pounds of honey, and bought two new empty ones of the same construction, for each of which he gave half-a-crown. They were nine inches deep and twelve wide, straight at the sides and flat at the top, and shaped like a half-bushel measure. There was a round hole in the top of each, four inches in diameter, and a circular bit of straw-work large enough to cover it, *not fitted in*, but fastened over. A piece was cut out of the side at the bottom of the hive for an entrance, two inches wide by one high, and to this was affixed a piece of zinc one inch larger each way than the aperture, and this was made with a groove that would admit two sliding plates, one of which was perforated, while the other had a hole only large enough to allow one bee to come out at a time. This seemed to me a very odd apparatus, and as I was never behindhand in asking questions, I inquired the use of the perforated zinc, and was told that it had two offices to perform: first to confine the bees to their house in time of snow, the brightness of which entices them out to perish miserably in the cold; and, secondly, when feeding them is necessary, as it frequently is in winter, to exclude thieves and intruders. The reason of making the opening in the other slider so small is because three or four bees can then guard the entrance against wasps and robbers much more effectually than twenty can if it be larger.

The price of the full hive and its contents was ten shillings, and father, who happened to have more silver in his pocket than he wanted, offered four half-crowns in payment; but the owner shook his head and refused to take them, saying that it was unlucky to part with or purchase bees for anything but a gold coin; so a half-sovereign was produced, which satisfied his scruples, and made no difference to us. We

observed that the currant and gooseberry bushes, of which there were great numbers in the garden at Clevedon, were all cut down so low as not to be quite on a level with the entrances of the hives, which were placed on similar stands to those which had been prepared for the reception of ours.

When our hives came home, father ordered the empty ones to be put in a dry place, and produced a board about the same size as the one already nailed on the stand, on which he placed the full one so that it might be moved if requisite without disturbing the bees, and to protect them from rain he sent for a large flat milk-pan, which he turned upside-down over the top; when this was done, he showed us that the rain extended beyond the board, so that the drippings in wet weather would fall on the ground, where they could do no possible harm. Some one had told Tom that the hive ought to be fastened to the board with mortar, but father would not hear of it, saying that the bees would soon do that for themselves in a far more effectual manner than we could accomplish, with a resinous, gluey substance called propolis, which they collect and manufacture. Jennie and Tom expressed some disappointment at the sight of the straw hives, and wished we had had at least one of a newer kind with glass windows, through which we could watch the various operations; but father said he would prefer starting on an economical plan, and would pay all expenses at first, but if our bees proved a success, and we liked to club together and buy some improved hives another year out of our own savings, and the profits we made by our birds, we could do so.

The weather continued cold throughout March and the early part of April; and father thought that, although there was plenty of honey in the hive, we had better feed the bees a little; and as we did not possess any apparatus for doing it at the top, he hit upon a contrivance which answered the purpose, and did not cost a farthing. There was an old wooden hoop of Jennie's lying in a corner, which, being splintered, was useless for its original purpose. This our father happened to spy, and cutting out the bad piece, he measured round the base of the hive and nailed the circle together the exact size, so that the hive would just stand on it, and be about an inch and a half taller than before. Cook boiled us a little ale and coarse moist sugar, a quarter of a pound to half a pint, and when it was cold some of it was poured into an old dinner-plate at first, and afterwards into the round inverted lid of a largish tin, which was not so deep as the plate. We covered the food with a sheet of foolscap paper pricked full of holes with a large pin, so that the bees could stand on it and send their probosces through the holes as they do into the flower-tubes; and as soon as the sun was set, hoop and food were taken down into the garden. Father held up the hive with both hands, while Tom placed the wooden ring underneath with the plate in the middle. The hive was set gently down again on the top edge of the hoop, and its inmates left to eat as much as they chose. The perforated slide was let down; and

the very first thing in the morning the food was taken away. It was necessary also to provide them with water, and this was done by sinking a shallow pan into the ground, with a covering made of very thin wood perforated thickly with small holes, and rather floating on the surface than fitting tightly into it. When we saw how they alighted on to it to drink, and when we heard that a bee-keeping neighbour had lost large numbers by drowning in his fish-pond, we realised the wisdom and ingenuity of this simple contrivance. As soon as there were plenty of flowers the beer and sugar was neglected, and that was the signal for ceasing to give it them.

The 25th of May was a bright warm morning, and when we went to see our bees we heard a loud buzzing sound inside the hive, saw several clusters gathered near the door as if in consultation, and observed that there was a great deal of running to and fro, as though all were confusion within. Presently the hum grew louder, and as a large swarm flew out into the air we drew back in fear of being stung, though we might have saved ourselves the trouble, as the bees were far too intent on their own journey to take any notice of such insignificant creatures as ourselves. I ran off to find father and tell him the news, and Jennie endeavoured to watch the flight. The emigrant colony did not rise very high, but cleared the top of the quarry, and flew towards the other end of our own garden; but the house soon intervened between her and them, and we all had to start on a voyage of discovery among the trees. It was not long before we caught sight of them hanging in a cluster, like a big bunch of grapes, from one of the lower boughs of an apple-tree, clinging to each other by their feet, with their heads up. They appeared perfectly quiet, which father said was a sign that the queen was with them. He then sent for one of the hitherto unused hives, hung it quietly up in the tree a little above them, told us all to keep our distance during the rest of the day; and when towards evening he paid them a visit himself, he found that they had taken peaceable possession of the empty house, which he carried down to the quarry and placed on a stand next to the old hive.

When it was time to take the honey from the original hive, father put on a thick pair of gloves, melted about an ounce of sulphur by setting fire to it in a jar, dipped some pieces of paper into it, and put them all burning into a scooped-out space of earth, on which he set the hive, after carefully closing its doors with a lump of clay. In about five minutes he took it off, by which time the bees were suffocated; and when the comb was taken out and brought into the house and weighed, there were twenty-five pounds of it,

which he called a good average quantity, but said he had known as much as twenty-eight pounds to come out of such a hive. We also had fourteen pounds from our first swarm, but the second did not appear to have made more honey than it would require for its own consumption; and besides, we wanted to keep that one for stock.

The next year we hived our swarms into the bar hives, and since then have neither killed nor allowed our bees to swarm. These structures must be seen to be understood, but the great advantage of them is that each comb is made available, and can be extracted any day, and by the system of putting on an upper box when swarming-time approaches, and thus giving the bees more room and ventilation, they migrate to the storey above instead of flying out by the door. Our first swarm was installed in one of these new abodes on the 28th of May; father saw it was ready to have a glass called a super on the top three weeks later, and in the middle of September took it off, found that it contained thirty pounds of the loveliest honeycomb, and that there was plenty left in the lower storey to supply the bees during winter and spring. We once found on the floor of a hive a queer-looking lump, which proved to be the decayed body of an intrusive snail, that had been first stung to death, and then coated over and glued to the board with a covering of propolis.

We have also experienced some loss from the ravages of the bee-moth, or miller, which has several times succeeded in effecting an entrance at sunset, and whose caterpillars gnaw and destroy the combs in a terrible manner. The best trap for them is a pail half full of water in which some pieces of old honey-comb are soaking. This is placed near the hives, and emits so strong an odour that the moths fly into it and are drowned. Last winter we caught a blue titmouse knocking with her bill near the hive-door, and snapping up eight or ten bees as they came one after another to see what the disturbance was about.

As the number of our hives has increased we have been anxious to cultivate flowers which yield plenty of honey. So we have planted down in the quarry great quantities of crocuses, single blue hepaticas, black hellebore, butter-burr, dwarf marjoram, and mignonette. The latter flowers profusely till the frosts set in, and is thought to impart a peculiar whiteness and delicacy to the honey. The common wood-sage is much beloved by bees, and we put it wherever we can find a spare corner, for it blossoms in the beginning of June and lasts all the rest of the summer. Altogether we have achieved a great success and are very proud of it, and the longer we are acquainted with the busy bees, the more we admire their instincts, and the wisdom of their internal economy and legislation.

ELIZA CLARKE.

