

keeps in memory Daubigny's Gardens, noted for equestrism; here, too, Wildman exhibited his docile bees in 1772.

Copenhagen House, upon the site of the London Cattle Market, was first opened by a Dane, and is named in Camden's "Britannia;" it was noted for fives and tennis to the day of its removal.

Among the more important notabilia of Islington is the tunnel, 970 yards (half-a-mile and ninety yards) in length, through which passes the Regent's Canal, *under the town of Islington and the New River*, and emerges into what was the field adjoining the City Gardens; where the water is received into a basin 1600 feet long by 110 feet wide, covering with its wharfs an area of twenty-five acres.

Islington has been, from the earliest times, the abode of many notable persons, to be hereafter noticed, with the institutions and other means by which the place has attained its importance as one of our great suburban centres.

THE BATTLE OF THE BEES.

BEING witness to the results of a remarkable phenomenon last autumn, and only regretting that it occurred without the complete observation of any competent naturalist, I am induced to offer the best account I could gather of what I have faithfully called The Battle of the Bees! And first let me say, that anything similar is unprecedented and unknown to the oldest inhabitants, gentle or simple, in this part of the country.* Therefore I am inclined to think the circumstances sufficiently extraordinary to deserve a report. Having accidentally seen the effects, I was curious to ascertain the cause, and the following narrative is the embodiment of the answers to my inquiries from the gardener, under-gardener, and one of the household servants.

Before presenting it, however, I must describe the position of the battle-field. A lawn and pleasure-grounds, of handsome extent, and enriched with flower-beds and flowering shrubs, was the seat of the apiary involved in the catastrophe. It consisted of three square box-hives, united on the same platform, and each glazed at the back, with a wooden slide opening to admit the works of their industrious inhabitants to be viewed in progress as they formed their combs and filled their cells. A single straw hive (which was not molested) stood near, and the whole were in most prosperous order, with the bees healthy and strong; as well they might be with the heaths on Harrow Weald and Stanmore Common close at hand to supplement their own abundant food in wood, field, and garden. Such was the *status quo ante bellum*.

Wednesday and Thursday, 21st and 22nd of August last, were two of the fine, warm, and sunny harvest-weather days which gladdened so important a portion of that month. About noon, on the 21st, the gardener noticed the large triple hive darkened, and instinct with the movements of a myriad of bees. He fancied that a swarm was being thrown off, but, on approaching the scene of action, discovered that the whole appearance was owing to a furious contest between the bees under his care (the family were from home) and the bees, as he inferred, of a foreign invasion, apparently assailing the centre hive with indomitable rage and perseverance. Every post, and pillar, and vantage space was crowded by them, and charge after charge upon the defenders of their sacred home was incessantly iterated with desperate courage and repulsed. The great point

attempted to be forced was the entrance to the centre hive; and, except that its warriors were on the outside of their wooden walls, nothing could more accurately represent the determination to storm a fortified place, only defeated by the bravest resistance of the besieged. The method of the defence, too, was very remarkable, as an example of insect (marvellously resembling human) strategy. Across and on each side (shall we say?) of the gateway, the hiveites were drawn up in strong lines on the platform, and opposed, as it were, a disciplined phalanx to the enemy; and the enemy, on their part, never ceased to form in sections or divisions, and rush to the encounter to break the lines and penetrate the hive. These feats they often partially effected. At and near about the entrance the struggle was astonishing, and the slaughter immense—the slaughter of the invaders, for there were no dead observed among the defenders. On the contrary, they were vindictively employed in overpowering and murdering their foes, and dragging and pushing them to the edge of the platform, and throwing them over upon the grass. In this way they made three heaps of the slain, one nearly opposite to each entrance, and of some variety. At one end the hecatomb was so large that you could lift the dead bees up in double handfuls (in short, by hundreds) at a time. At the other end the tumulus was not so great, and at the centre the deposit of the killed was intermingled with many fragments of apparently broken, coarse, or formative wax. Two or three of the hive bees were generally engaged in the killing of one of their adversaries, and joined in hauling the victim of many vicious stings to the overthrow from the platform. Meanwhile the battle was tumultuously raging about the centre opening, into which if any of the attacking party succeeded in entering, they seemed to be immediately dispatched and brought out for disposal along with their butchered comrades. Knowing what we do of bee order and discipline, it is not in the least unlikely that the body employed as executioners and throwing over the dead were specially appointed for the service, and that no warrior ever stepped out of his ranks to assist in the office.

This continued all Wednesday afternoon. "No slackness was there found." The combat was going on till the shades of evening fell upon it, and the gardener left them still fighting when he went away, at the darkening of night. In the morning of Thursday, little or no change was observable; and, throughout the day, the battle was furiously contested. One different manoeuvre was noticed, viz.: bodies of perhaps fifty or sixty of the assailants flew off, hotly pressed by a posse of the home bees, by which they were pursued, pounced upon, and knocked down, and immediately followed to the ground and put to death. The lawn and gravel walks were extensively sprinkled with their remains, and a considerable number were found destroyed in a greenhouse and a garden toolhouse, not far from the spot—the latter, however, being on the other side of a high wooden paling fence, with shady trees, so that the flight and pursuit were as obstinate as they were hot and merciless.

On Friday, the 23rd, the battle had ceased, and the field was clear of combatants. Unfortunately, neither the commencement nor the termination of the contest was noticed; and, two days later, viz., the 25th, when the tale was told to me, I could only observe the entire corroboration of its truth in the multitudes of slain I have mentioned on the three tumuli under the platform, and the numbers of dead scattered over the gravel-walks, or swept into heaps off the lawn. There was proof enough that there had been a furious war and

* Bushey Heath, Herts.

immense loss of life. And the other visible signs were no less remarkable. The two outside hives were in full activity—a ceaseless current of departing and returning bees—whilst the centre was obviously deserted, and its desolate entrance, only a few inches distant from each of the other two, violated by an exploring wasp, or single occasional bee, which also just walked in as if to reconnoitre, and came immediately out again. In one instance, I noticed the spy returned, pushing a dead body before it.

Seeing that neither the origin nor the final issue of this mortal struggle could be ascertained, a curiosity for farther investigation was excited; and all remaining so long in the same condition I have described (on the 25th), it was resolved to examine the ruined hive, and discover what were the consequences of the sack, or desertion, or holocaust in which it had been sacrificed.

Accordingly, at the end of a fortnight, the middle hive was detached and examined (September 13th), previously to which all that could be seen was a comb occupying the whole transverse space at the box at the back window, and which was a perfectly clean cellular structure of wax, with a single bee, as it were, accidentally deposited, but nothing bearing any relation to the siege and battle except the absolute stillness which had followed the catastrophe. I am minute, because in my ignorance of apiarism I am not aware whether small incidents may be quite trifling or of a certain value.

On the floor, if we may call it so, six or eight dead bees were lying. There were nine complete walls of comb, in their usual admirable order, as built under properly selected architects, surveyors, superintendents, foremen, and police, by skilled working-bees, regularly paid in honey! Of these nine walls, all (except that next the window as I have described) were in ruinous plight—dirty brown mahogany colour, and clogged with morsels of bee-bread (perhaps a few clean pieces of comb about the skirts); the cells were empty, desolate! Forsaken or plundered? A more determinate clearance never was seen. What had become of all that the cells contained? Whither had gone the large honey provision (usually completed in September) for the winter? Who carried it away? When was it carried away (it must have been within a few hours or it would have been observed after the fray)? and where was it taken or consumed?

One of the specimens of comb has been kindly sent to me. Several queen bee cells are visible on one of its outer edges, and I may remark that among the slain bees the elongate remains of at least one of the queens have been distinguished. There is a perceptible odour resembling tobacco in the débris, which, if not attributable to the rotting wax or some other chemical cause, is unaccountable. The presence of such an ingredient might suggest an unpleasant origin to the phenomenon; but surrounding circumstances are all against the suspicion; and the supposition of any artificial introduction of "the weed," in any form, could not in the slightest degree account for the results of a determined battle of eight-and-forty hours, the spoliation of the hive, and the unanswered question, What has become of the survivors? But, in fact, the exactly similar condition of another hive in an adjoining garden settles the question, and leaves the inquiry, What became of the bees?

Before endeavouring farther to elucidate the problem, however, it may be very important to state that the multitude of the insects killed were smaller, say about two-thirds the size of those in the hive; as is still manifest from the appearance of the two yet living hives, which have no sign of having been disturbed, interfered with, or in any way affected by the desperate strife waged so

close to, and indeed just between, their respective domiciles. What then has become of the fugitive or the victorious legions? The former could not have been exterminated; the latter could not (could they?) have been absorbed by their neighbours. And had either swarmed (as it were) and settled in any near locality, there is hardly a doubt that they would have been heard of and traced.

Angry bees, much more numerous than usual, infested the neighbourhood for some time, and threatened, if they did not sting, people walking about. About a fortnight after the battle, a similar hive, as I have mentioned, in an adjacent garden, was found deserted and emptied of its stores, but no previous fight was noticed; and the only semblance of a cast, anywhere, was observed in another garden, where a considerable cluster took possession of the cornice of the villa porch, and were so troublesome that the inmates were obliged to shut doors and windows to protect themselves from nearer annoyance. This body took its flight about six o'clock in the evening, and of all I have described nothing more has ever been heard or seen.

The matter seemed altogether so curious that we thought it worth while to seek information at the British Museum, but their science could not here help us. Our next application was to well-known practical apiarists who had made a study of this interesting branch of natural history, and readily and courteously gave us the results of their experience. From all we could learn it would appear that a perfect knowledge of all the wonderful economy of the hive has not yet been acquired. The works published on the honey bee are elaborated to the utmost of actual observation; yet still there are points, the conditions and nature of which have not been ascertained. Into these points, however, it is not for a paper like this to enter; and they are only alluded to in order to show why we could not get a certain explanation of the *status quo ante bellum*, the war itself, and its inexplicable sequel. As we are told, it frequently happens when the honey gathering season closes (about the beginning of September), that bees will pillage other and weaker hives—our middle box might be in this condition, and who could answer for the pacific dispositions of even its next-door neighbours? But the invaders are, it is stated by one of our informants, invariably young bees just developed,* with all their passion for honey gathering at its height, when the honey-giving flowers to gratify it gradually fail; and this in the present case would account for their not being so large as their brethren.

The question we would here put also is, Do queens lead such forays? as no instance is known of a swarm of bees taking possession of a hive already tenanted; although it is a common thing in bee management to put a swarm into a hive already furnished with comb.

In the early part of November the middle hive was recolonised: the weather was then very mild, and the bees being fed with sugar (which they greedily devour), again constructed their combs, and filled them rapidly with honey.

W. J.

* Having broached the subject, I may take the opportunity to notice two matters connected with it, and I presume not generally known. Among the many species, or rather varieties of bees in England, there is only one, the honey bee, thoroughly domesticated. Within the last three or four years, however, a beautiful bee has been introduced from Italy, called the Ligurian or mountain bee, and hived like our native brown honey bee. It is, I am informed, of smaller size, not so pugnacious, a better honey gatherer (having a larger tongue), and a marked and handsome appearance, having the abdomen richly banded with yellow stripes. I shall only add that instead of "the perfect octagon," so commonly spoken of as a marvellous example of compactness and adaptation of capacity, Mr. Willich, the accomplished geometrician, long since demonstrated the cell to be truly a construction of seven oblique rhomboids, and, in fact, an elongated dodecahedron.

done. As the hole every moment was made larger, more and more care was required to prevent materials falling inwards and making a noise. All went on prosperously and silently until the hole was large enough to admit a man's head, when a brick fell into the shop with a dull, heavy thump on the earthen floor, and at that very moment their scout in the main street signalled that some one was coming.

The confederates shrank into the dark corner formed by the pile of wood. Cowering down under their black blankets, they held their breath, listening for sounds from the inmates who might have been disturbed, and for the footsteps of the belated person. Slowly the passenger came along, pace by pace; then, turning down the lane, and passing within two feet of the crouching men, he paused as if he saw something. Their hearts beat wildly, and Tokee's comrade was about to spring up and rush away; but Tokee seized him by the arm and forced him to keep his place. Then the drizzle, which had almost ceased, began to come on thicker, and the man moved slowly away.

As soon as he was out of hearing, they listened intently at the hole to ascertain if any of the inmates had been disturbed. All was quiet. The work was resumed with increased vigour, and in a short time a breach was made large enough to enable a man to creep in freely. Putting his head and shoulders through the breach, Tokee listened intently for any sound that would indicate the vicinity of an inmate—any one sleeping in the shop or stirring in the house. All was silent, and the confederates crept in and groped about, Tokee to find the hiding-place of the treasure, his comrade to help, or find anything of value. The hiding-place of the treasure was soon found, the bags piled over it moved away; then, with some difficulty and care, to avoid noise, the box containing the treasure was forced open, and they got possession of the bag.

Again their faithful scout in the main street gave the signal; but this time the house was stirring, for day-break was close at hand. Quick as thought, Tokee made a dart at the hole, and got out into the lane, grasping the bag of rupees. His confederate, following at his heels, was equally quick, but not equally lucky; for, in the hurry of getting through the breach, Tokee's foot caught in a string that hung from a shelf above, and, in the struggle to free himself, he brought down on the head of his follower a large round earthen pot, that proved to be full of treacle, and felled him to the ground.

"Bāp ré bāp!"—oh dear, oh dear! called out the man, in his surprise; but in an instant he was up again, struggling to get out through the hole. Half of the broken pot, however, stuck on his head, and the treacle, streaming down, filled his eyes and half stupified him.

The crash of the pot and the man's involuntary exclamation roused the Bunniah's family; some rushed into the shop, others into the courtyard, and one stout old lady ran into the lane, all screaming at the top of their voices, "Chor, chor"—thieves, thieves—"Dawro,* dawro"—help, help—"Dhakoo, dhakoo, dacoits, dacoits." The neighbours, roused by the well-known cry, took it up, and the police, who were on the move, came running up from the Cutwallee, calling out "Māro, māro"—kill, kill—"Pukrō, pukrō"—seize them, seize them. Just as they reached the corner of the lane the unfortunate thief had staggered out of the hole with the instinct of self-preservation, had thrown off the broken pot, had drawn his hand across his eyes to clear away

the treacle, and dashed down the lane. Coming full butt against the stout old lady, he knocked her down and fell over her. Up he jumped, and off again, running for dear life, for the police were within a few yards of him; but the fall of the old woman saved him. On being knocked over, she fell on something hard, and, being terribly frightened and much hurt, and feeling herself covered with something wet, which she thought was blood, she believed herself to be wounded, and groaned out, "I'm killed, I'm killed." The foremost policeman stopped a moment to see if a murder had been committed, and this gave the fugitive some yards start. Running and staggering on, he missed the narrow gully (fortunately), blundered on to the end of the lane, stumbled over a heap of rubbish, and went souse into the river. This washed the treacle out of his eyes, and he struck out boldly for the other bank, but with much noise, for he was a poor swimmer.

In the meantime Tokee, who on the first alarm had darted off like an arrow, fled down the gully, and threaded its various windings with the silence and speed of a night hawk; but as he emerged from the lane and got to the bridge head, he was suddenly confronted by three chokeydars. Believing that his comrade was close at hand to second him, he instantly dashed at the three. The right-hand man was knocked down and hurled several paces away, but the others, though staggered, seized hold of him, one by the blanket, which was hanging loose from his head and shoulders, the other seized by the arm; and now the precaution of oiling his body stood him in good stead. Struggling on, he abandoned his blanket to the man who had seized it, and, giving himself a sudden wrench, he twisted easily out of the hands of the other, who had no firm hold on account of his greasy skin. Then, bounding forward, he crossed the bridge, the chokeydars in full cry after him, leaped the low wall at the end of the bridge, and dived at once into a perfect rabbit-warren of mud huts close at hand, the resort of himself and gang, and he was safe, for the chokeydars dared not follow him. Hiding his plunder, and putting on some clothes, and taking another blanket, he went boldly on to the bridge, and calmly listened to the uproar in the town.

When his less fortunate comrade fell into the river and swam towards the opposite shore, some of the police came up armed with matchlocks, and, directed by the noise he made, began to fire at him. Tokee instantly guessing that his comrade was swimming the river, ran swiftly and silently to a bend in the stream, gave the signal to his follower, and, reaching out, he soon caught him by the hand and got him ashore. Then, making a wide circuit, to avoid the police, they reached their haunt in safety, and on examining their booty found that they had got nearly six hundred rupees.

Of course, Tokee did not fail to visit the old extortioner next day and enjoy his despair, whilst he lectured him on the folly of keeping so much money in such an insecure place. It was tempting, he said, all the rascals in the country to try and rob him; and on being shown the breach made in the wall, he quietly remarked, that it must have been done by a pukka chōr (a skilful thief), and an impudent fellow, to attack a house so near the police-station.

BEE-BATTLES.

AFTER reading "The Battle of the Bees" in No. 840 of "The Leisure Hour," I waited to see if any bee-masters could afford to the writer trustworthy information on

* Dawro means run; but, as used here, it means "run and help us."

the subject of his very interesting paper. Having made the habits of the honey-bee a careful study for many years, I offer the following observations.

That the uninitiated may be the better able to judge of the extent and consequences of these occasional wars called bee-battles, be it known that each community of bees consists of one queen, from 500 to 1,500 drones, and from 10,000 to 30,000 working bees. The drones,

“Those lazy fathers of the industrious hive,”

are allowed to enjoy their life of ease and pleasure but for a few months—generally from May to July, sometimes from April to August.

In the contests between the drones and workers the fighting is all on one side. This we pass over for the present, only observing that the hive is placed in a better position by the contention.

A battle between the workers of different communities is a much more serious affair. Bee-fights generally originate in those persistent attempts to rob, which are to a greater or less degree indulged in at various times, but mostly in the autumn. In the richer part of the honey-season, if the weather is very hot, the strong odour of pollen and honey attracts the bees recently hatched, so that, instead of following the older ones into the fields, they enter the fragrant domiciles of their neighbours, and many fall a sacrifice to this indulgence of their natural instincts. But newly-hatched bees are not the only robbers. Bees, though proverbially industrious, will always save themselves labour when they can, and help themselves to honey when it can be had. A swarm of bees sometimes enters a hive already occupied, causing serious strife. Queens never take part in these desperate struggles, commonly called bee-battles. Bees have many enemies; but the inhabitant of the adjoining hive is the one most to be dreaded. Strong, or at least well-to-do hives, are as a rule the aggressors, and weak hives, especially queenless ones, are the first victims. When weak hives are overpowered and robbed, the marauders seek other prey, and occasionally the most disastrous consequences follow.

When bees are about to swarm, certain scouts select a place suitable for a new home, and it often happens that the neighbouring hives are examined for this purpose. This leads to quarrelling, and to some loss of life, but never to a bee-battle. Such loss may in some degree be prevented by keeping near the apiary a hive or two, with a little comb in position.

After a battle the defeated hive is always robbed; indeed, the robbery goes on during the fight, and the few remaining bees (if any) are dispersed—mostly, perhaps, in their search for food.

Some years ago, at Newtown, a hamlet belonging to this parish (Tisbury, Wilts), two stocks of bees, the property of cottagers, occupied each its own garden, the highway lying between. At the close of the honey season one hive attacked the other with such violence, that, after several days' hard fighting, the whole population of one of the hives was destroyed, and the fruits of the summer's industry transferred to the stronghold of the invaders. I had not the opportunity of ascertaining the origin of this battle, but have not the slightest doubt but that it began in the usual way, by a raid in search of plunder.

In my own garden, where I have had from thirty to sixty hives, I have frequently prevented a serious fight by contracting or closing the doorways of the hives. Upon one occasion the strife had assumed such serious proportions that I was obliged to remove the invaded

hive to a distant part of the garden. Even this did not suffice, probably on account of a few of the invaders being left in the hive. I then took the stock about five hundred yards from the scene of conflict. This succeeded, and in a few days the bees went to work as if nothing had happened, although during the fray they had lost many bees, and some pounds of honey. It is a difficult matter to separate the belligerents after a fight has fairly commenced, because in their exasperation they continue the strife long after working-time.

Within the limits of this parish is a farm called Withyslade, the property of Lord Arundell of Wardour. The dwelling-house is situated about a quarter of a mile from any other residence. Many years ago the occupier of this farm lost a mare when her foal was in a helpless condition. It was taken and “brought up by hand,” and thrived in a most satisfactory manner. As was likely under the circumstances, it became quite the pet of the family, and was allowed to go in doors with the freedom, if not the frequency, of a lap-dog. When it had grown quite a nice colt it found its way into the garden and upset a stock of bees. The infuriated insects attacked the poor animal with such fury that after a short time he died in extreme agony.

Some years afterwards, this same garden was the scene of one of the most determined and disastrous bee-battles perhaps ever recorded. The farm had passed into other hands, a new house had been built, and an apiary erected at right-angles with the house, and close to it. In the spring (I forget the year), four or five communities occupied the apiary. My aunt (the bee-mistress), considering her bee-house too much exposed to the wind, placed all the swarms of the season out of doors, in the usual single-pedestal cottage style. Five or six swarms came off during the summer, and were placed just outside the apiary, and in a line with the front of the farm-house.

At the usual time for freebooting, a serious disturbance amongst the hives took place. Very soon the strife had become alarming, and my aunt concluded that some mysterious cause of quarrel between the old hives and swarms had arisen. From this time to the end of the conflict the battle raged so furiously that no person dared do more than look on from a respectful distance, and, with regretful amazement, let the thing take its course.

My aunt's suspicions as to the combatants were not verified. Whilst this fierce war was raging, something equally enigmatical was taking place in the garden of a cottager living about a quarter of a mile distant. He kept a number of bees, and was not a little astonished to find them in the early part of the day leaving their homes in the most excited manner, as if some half-dozen swarms were coming off at the same time. The bees were evidently intent upon something that engaged all their energies, and that was not in the line of common bee-work. This was the invading host, so skilfully marshalled, and that seemed to understand the cause of the uproar. Off to the seat of war in “double quick time” seemed to be the order of the day. Day after day was this terrible conflict continued, till every hive of my aunt's was destroyed, and every cell rifled of its treasure.

It would be quite useless to attempt a description of the scene of desolation that appeared after this fierce battle; it can be more easily imagined.

It seems somewhat ungrateful to our industrious and useful little friends thus to hold them up as quarrelsome neighbours; but I hope to make them some amends by adding, in a future paper, a few facts relating to their “love and labour.”