

The Life of the Bee

Maurice Maeterlinck (1901)

V — THE YOUNG QUEENS

HERE let us...reopen the mother-city [the hive, after two thirds of the hive flies off in a swarm], and see what is happening there after the departure of the swarm.

The tumult having subsided, the hapless city, that two thirds of her children have abandoned forever, becomes feeble, empty, moribund; like a body from which the blood has been drained. Some thousands of bees have remained, however; and these, though a trifle languid perhaps, are still immovably faithful to the duty a precise destiny has laid upon them, still conscious of the part that they have themselves to play; they resume their labors, therefore, fill as best they can the place of those who have gone, remove all trace of the orgy, carefully house the provisions that have escaped pillage, sally forth to the flowers again, and keep scrupulous guard over the hostages of the future.

And for all that the moment may appear gloomy, hope abounds wherever the eye may turn. We might be in one of the castles of German legend, whose walls are composed of myriad phials containing the souls of men about to be born. For we are in the abode of life that goes before life. On all sides, asleep in their closely sealed cradles, in this infinite superposition of marvelous six-sided cells, lie thousands of nymphs, whiter than milk, who with folded arms and head bent forward await the hour of awakening. In their

uniform tombs, that, isolated, become nearly transparent, they seem almost like hoary gnomes, lost in deep thought, or legions of virgins whom the folds of the shroud have contorted, who are buried in hexagonal prisms that some inflexible geometrician has multiplied to the verge of delirium.

Over the entire area that the vertical walls enclose, and in the midst of this growing world that so soon shall transform itself, that shall four or five times in succession assume fresh vestments, and then spin its own winding-sheet in the shadow, hundreds of workers are dancing and flapping their wings. They appear thus to generate the necessary heat, and accomplish some other object besides that is still more obscure; for this dance of theirs contains some extraordinary movements, so methodically conceived that they must infallibly answer some purpose which no observer has as yet, I believe, been able to divine.

A few days more, and the lids of these myriad urns—whereof a considerable hive will contain from sixty to eighty thousand—will break, and two large and earnest black eyes will appear, surmounted by antennae that already are groping at life, while active jaws are busily engaged in enlarging the opening from within. The nurses at once come running; they help the young bee to emerge from her prison, they clean her and brush her, and at the tip of their tongue present the first honey of the new life. But the bee, that has come from another world, is bewildered still, trembling and pale; she wears the feeble look of a little old man who might have escaped from his tomb, or perhaps of a traveler strewn with the powdery dust of the ways that lead unto life. She is perfect, however, from head to foot; she knows at once all that has to be known; and, like the children of the people, who learn, as it were, at their birth, that for them there shall never be time to play or to

laugh, she instantly makes her way to the cells that are closed, and proceeds to beat her wings and to dance in cadence, so that she in her turn may quicken her buried sisters; nor does she for one instant pause to decipher the astounding enigma of her destiny, or her race.

The most arduous labors will, however, at first be spared her. A week must elapse from the day of her birth before she will quit the hive; she will then perform her first "cleansing flight," and absorb the air into her tracheae, which, filling, expand her body, and proclaim her the bride of space. Thereupon she returns to the hive, and waits yet one week more; and then, with her sisters born the same day as herself, she will for the first time set forth to visit the flowers. A special emotion now will lay hold of her; one that French apiarists term the "soleil d'artifice," but which might more rightly perhaps be called the "sun of disquiet." For it is evident that the bees are afraid, that these daughters of the crowd, of secluded darkness, shrink from the vault of blue, from the infinite loneliness of the light; and their joy is halting, and woven of terror. They cross the threshold and pause; they depart, they return, twenty times. They hover aloft in the air, their head persistently turned to the home; they describe great soaring circles that suddenly sink beneath the weight of regret; and their thirteen thousand eyes will question, reflect, and retain the trees and the fountain, the gate and the walls, the neighboring windows and houses, till at last the aerial course whereon their return shall glide have become as indelibly stamped in their memory as though it were marked in space by two lines of steel.

A new mystery confronts us here, which we shall do well to challenge; for though it reply not, its silence still will extend the field of our conscious ignorance, which is the most

fertile of all that our activity knows. How do the bees contrive to find their way back to the hive that they cannot possibly see, that is hidden, perhaps, by the trees, that in any event must form an imperceptible point in space? How is it that if taken in a box to a spot two or three miles from their home, they will almost invariably succeed in finding their way back?

...

And now let us return to the city that is being repopled, where myriad cradles are incessantly opening, and the solid walls even appear to be moving. But this city still lacks a queen. Seven or eight curious structures arise from the centre of one of the combs, and remind us, scattered as they are over the surface of the ordinary cells, of the circles and protuberances that appear so strange on the photographs of the moon. They are a species of capsule, contrived of wrinkled wax or of inclined glands, hermetically sealed, which fills the place of three or four workers' cells. As a rule, they are grouped around the same point; and a numerous guard keep watch, with singular vigilance and restlessness, over this region that seems instinct with an indescribable prestige. It is here that the mothers are formed. In each one of these capsules, before the swarm departs, an egg will be placed by the mother, or more probably—though as to this we have no certain knowledge—by one of the workers; an egg that she will have taken from some neighboring cell, and that is absolutely identical with those from which workers are hatched.

From this egg, after three days, a small larva will issue, and receive a special and very abundant nourishment; and henceforth we are able to follow, step by step, the movements of one of those magnificently vulgar methods of nature on which, were we dealing with men, we should bestow the august name of fatality. The little larva, thanks to this

regimen, assumes an exceptional development; and in its ideas, no less than in its body, there ensues so considerable a change that the bee to which it will give birth might almost belong to an entirely different race of insects.

Four or five years will be the period of her life, instead of the six or seven weeks of the ordinary worker. Her abdomen will be twice as long, her color more golden, and clearer; her sting will be curved, and her eyes have seven or eight thousand facets instead of twelve or thirteen thousand. Her brain will be smaller, but she will possess enormous ovaries, and a special organ besides, the spermatheca, that will render her almost an hermaphrodite. None of the instincts will be hers that belong to a life of toil; she will have no brushes, no pockets wherein to secrete the wax, no baskets to gather the pollen. The habits, the passions, that we regard as inherent in the bee, will all be lacking in her. She will not crave for air, or the light of the sun; she will die without even once having tasted a flower. Her existence will pass in the shadow, in the midst of a restless throng; her sole occupation the indefatigable search for cradles that she must fill. On the other hand she alone will know the disquiet of love. Not even twice, it may be, in her life shall she look on the light—for the departure of the swarm is by no means inevitable; on one occasion only, perhaps, will she make use of her wings, but then it will be to fly to her lover. It is strange to see so many things—organs, ideas, desires, habits, an entire destiny—depending, not on a germ, which were the ordinary miracle of the plant, the animal, and man, but on a curious inert substance: a drop of honey.

About a week has passed since the departure of the old queen. The royal nymphs asleep in the capsules are not all of the same age, for it is to the interest of the bees that the births should be nicely gradationed, and take place at regular intervals, in accordance

with their possible desire for a second swarm, a third, or even a fourth. The workers have for some hours now been actively thinning the walls of the ripest cell, while the young queen, from within, has been simultaneously gnawing the rounded lid of her prison. And at last her head appears; she thrusts herself forward; and, with the help of the guardians who hasten eagerly to her, who brush her, caress her, and clean her, she extricates herself altogether and takes her first steps on the comb. At the moment of birth she too, like the workers, is trembling and pale, but after ten minutes or so her legs become stronger, and a strange restlessness seizes her; she feels that she is not alone, that her kingdom has yet to be conquered, that close by pretenders are hiding; and she eagerly paces the waxen walls in search of her rivals. But there intervene here the mysterious decisions and wisdom of instinct, of the spirit of the hive, or of the assembly of workers. The most surprising feature of all, as we watch these things happening before us in a hive of glass, is the entire absence of hesitation, of the slightest division of opinion. There is not a trace of discussion or discord. The atmosphere of the city is one of absolute unanimity, preordained, which reigns over all; and every one of the bees would appear to know in advance the thought of her sisters. And yet this moment is the gravest, the most vital, in their entire history. They have to choose between three or four courses whose results, in the distant future, will be totally different; which, too, the slightest accident may render disastrous. They have to reconcile the multiplication of species—which is their passion, or innate duty—with the preservation of the hive and its people. They will err at times; they will successively send forth three or four swarms, thereby completely denuding the mother-city; and these swarms, too feeble to organize, will succumb, it may be, at the approach of winter, caught unawares by this climate of ours, which is different far from

their original climate, that the bees, notwithstanding all, have never forgotten. In such cases they suffer from what is known as "swarming fever;" a condition wherein life, as in ordinary fever, reacting too ardently on itself, passes its aim, completes the circle, and discovers only death.

Of all the decisions before them there is none that would seem imperative; nor can man, if content to play the part of spectator only, foretell in the slightest degree which one the bees will adopt. But that the most careful deliberation governs their choice is proved by the fact that we are able to influence, or even determine it, by for instance reducing or enlarging the space we accord them; or by removing combs full of honey, and setting up, in their stead, empty combs which are well supplied with workers' cells.

The question they have to consider is not whether a second or third swarm shall be immediately launched,—for in arriving at such a decision they would merely be blindly and thoughtlessly yielding to the caprice or temptation of a favorable moment,—but the instantaneous, unanimous adoption of measures that shall enable them to issue a second swarm or "cast" three or four days after the birth of the first queen, and a third swarm three days after the departure of the second, with this first queen at their head. It must be admitted, therefore, that we discover here a perfectly reasoned system, and a mature combination of plans extending over a period considerable indeed when compared with the brevity of the bee's existence.

These measures concern the care of the youthful queens who still lie immured in their waxen prisons. Let us assume that the "spirit of the hive" has pronounced against the dispatch of a second swarm. Two courses still remain open. The bees may permit the first-born of the royal virgins, the one whose birth we have witnessed, to destroy her

sister-enemies; or they may elect to wait till she have performed the perilous ceremony known as the "nuptial flight," whereon the nation's future depends. The immediate massacre will be authorized often, and often denied; but in the latter case it is of course not easy for us to pronounce whether the bees' decision be due to a desire for a second swarm, or to their recognition of the dangers attending the nuptial flight; for it will happen at times that, on account of the weather unexpectedly becoming less favorable, or for some other reason we cannot divine, they will suddenly change their mind, renounce the cast that they had decreed, and destroy the royal progeny they had so carefully preserved. But at present we will suppose that they have determined to dispense with a second swarm, and that they accept the risks of the nuptial flight. Our young queen hastens towards the large cradles, urged on by her great desire, and the guard make way before her. Listening only to her furious jealousy, she will fling herself on to the first cell she comes across, madly strip off the wax with her teeth and claws, tear away the cocoon that carpets the cell, and divest the sleeping princess of every covering. If her rival should be already recognizable, the queen will turn so that her sting may enter the capsule, and will frantically stab it with her venomous weapon until the victim perish. She then becomes calmer, appeased by the death that puts a term to the hatred of every creature; she withdraws her sting, hurries to the adjoining cell, attacks it and opens it, passing it by should she find in it only an imperfect larva or nymph; nor does she pause till, at last, exhausted and breathless, her claws and teeth glide harmless over the waxen walls.

The bees that surround her have calmly watched her fury, have stood by, inactive, moving only to leave her path clear; but no sooner has a cell been pierced and laid waste than they eagerly flock to it, drag out the corpse of the ravished nymph, or the still living

larva, and thrust it forth from the hive, thereupon gorging themselves with the precious royal jelly that adheres to the sides of the cell. And finally, when the queen has become too weak to persist in her passion, they will themselves complete the massacre of the innocents; and the sovereign race, and their dwellings, will all disappear.

This is the terrible hour of the hive; the only occasion, with that of the more justifiable execution of the drones, when the workers suffer discord and death to be busy amongst them; and here, as often in nature, it is the favored of love who attract to themselves the most extraordinary shafts of violent death.

It will happen at times that two queens will be hatched simultaneously, the occurrence being rare, however, for the bees take special care to prevent it. But whenever this does take place, the deadly combat will begin the moment they emerge from their cradles; and of this combat Huber was the first to remark an extraordinary feature. Each time, it would seem that the queens, in their passes, present their chitinous cuirasses to each other in such a fashion that the drawing of the sting would prove mutually fatal; one might almost believe that, even as a god or goddess was wont to interpose in the combats of the Iliad, so a god or a goddess, the divinity of the race, perhaps, interposes here; and the two warriors, stricken with simultaneous terror, divide and fly, to meet shortly after and separate again should the double disaster once more menace the future of their people; till at last one of them shall succeed in surprising her clumsier or less wary rival, and in killing her without risk to herself. For the law of the race has called for one sacrifice only.

The cradles having thus been destroyed and the rivals all slain, the young queen is accepted by her people; but she will not truly reign over them, or be treated as was her mother before her, until the nuptial flight be accomplished; for until she be impregnated

the bees will hold her but lightly, and render most passing homage. Her history, however, will rarely be as uneventful as this, for the bees will not often renounce their desire for a second swarm. In that case, as before, quick with the same desires, the queen will approach the royal cells; but instead of meeting with docile servants who second her efforts, she will find her path blocked by a numerous and hostile guard. In her fury, and urged on by her fixed idea, she will endeavor to force her way through, or to outflank them; but everywhere sentinels are posted to protect the sleeping princesses. She persists, she returns to the charge, to be repulsed with ever increasing severity, to be somewhat roughly handled even, until at last she begins vaguely to understand that these little inflexible workers stand for a law before which that law must bend whereby she is inspired.

And at last she goes, and wanders from comb to comb, her unsatisfied wrath finding vent in a war-song, or angry complaint, that every bee-keeper knows; resembling somewhat the note of a distant trumpet of silver; so intense, in its passionate feebleness, as to be clearly audible, in the evening especially, two or three yards from the double walls of the most carefully enclosed hive.

Upon the workers this royal cry has a magical effect. It terrifies them, it induces a kind of respectful stupor; and when the queen sends it forth, as she halts in front of the cells whose approach is denied her, the guardians who have but this moment been hustling her, pushing her back, will at once desist, and wait, with bent head, till the cry shall have ceased to resound. Indeed, some believe that it is thanks to the prestige of this cry, which the Sphinx Atropos imitates, that the latter is able to enter the hive, and gorge itself with honey, without the least molestation on the part of the bees.

For two or three days, sometimes even for five, this indignant lament will be heard, this challenge that the queen addresses to her well protected rivals. And as these in their turn develop, in their turn grow anxious to see the light, they too set to work to gnaw the lids of their cells. A mighty disorder would now appear to threaten the republic. But the genius of the hive, at the time that it formed its decision, was able to foretell every consequence that might ensue; and the guardians have had their instructions: they know exactly what must be done, hour by hour, to meet the attacks of a foiled instinct, and conduct two opposite forces to a successful issue. They are fully aware that if the young queens should escape who now clamor for birth, they would fall into the hands of their elder sister, by this time irresistible, who would destroy them one by one. The workers, therefore, will pile on fresh layers of wax in proportion as the prisoner reduces, from within, the walls of her tower; and the impatient princess will ardently persist in her labor, little suspecting that she has to deal with an enchanted obstacle, that rises ever afresh from its ruin. She hears the war-cry of her rival; and already aware of her royal duty and destiny, although she has not yet looked upon life, nor knows what a hive may be, she answers the challenge from within the depths of her prison. But her cry is different; it is stifled and hollow, for it has to traverse the walls of a tomb; and, when night is falling, and noises are hushed, and high over all there reigns the silence of the stars, the apiarist who nears these marvelous cities and stands, questioning, at their entrance, recognizes and understands the dialogue that is passing between the wandering queen and the virgins in prison.

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