

# IS THE QUEEN STILL ROYAL?

Gunther Hauk

The honey bee queen's life raises so many questions, so much wonder and awe: miracle after miracle...!

The marvel starts at the beginning of the queen bee's life. Seemingly insignificant phenomena appear that determine her royalty. An egg is laid; one that could just as well become a worker bee.

The egg that is meant to be become a worker is laid into a hexagonal cell and is positioned horizontally. The egg is not round; its oblong body points to the horizon for three days, before the larva hatches from the egg. Have we ever pondered what this positioning means? Every geometric shape in fact radiates an invisible field of energy that 'informs' and affects living organisms in a powerful way. What happens in nature is not accidental or hap-hazard but full of tremendous wisdom – even if it surpasses our modern intelligence and comprehension. At the beginning of her life, before food is given, the queen egg is already in a position and in surroundings that are radically different from the worker egg. Does this positioning have meaning, or can we simply ignore it? It seems that in the beekeeping profession no great importance is placed on this fact. Even the most modern scientific books on bees, such as the wonderfully illuminating one by Juergen Tautz,<sup>1</sup> only casually mention this difference.

One could say that the very fact that the worker egg is positioned horizontally for the first three days predestines the worker bee to fly out to the fields, and connect with the living surface of the earth. This horizontal plane, circling the earth from east to west, from south to north, is one we can also see as the plane allowing people to unite in the social sphere, letting us work with our fellow human beings across nations, spanning oceans and continents.

The egg that is meant to become a queen, however, is placed in a round cup, almost like

the cap of an acorn, and hangs in a vertical position. This egg, for the first three to four days of her development into a queen, points in two directions, both to the centre of the earth and the centre of our solar system, to the sun. If we consider the human being, it is this vertical position that allows us to express our own sovereignty. We literally stand up for our inalienable rights; we hold our heads high. However, a psychiatrist may often have a patient lie horizontally, to access the unconscious.

We all know that conditions during the first quarter of any organism's embryonic development greatly influence its proper development and health. The fact that the bees make an early differentiation between

worker	horizontal vs. vertical	queen
	hexagonal vs. round	

should tell us that there are important, albeit hidden reasons relating to the creation of a queen as opposed to worker bees.

The queen egg hatches and the future queen enters her second stage of development. Throughout this larval stage, lasting six days, she receives royal jelly, whereas the worker larvae receive it for only a few days – and even then, the protein composition is different.

Modern research has provided insight into the transformative power of food, and we have ample evidence that this also applies to humans. What eloquent praise we have heard in the last decades about the rejuvenating and ennobling qualities of royal jelly!

Unfortunately, millions of queens are raised to the ninth day of development and then killed in order to 'harvest' royal jelly, much used in cosmetics. Not many people are aware of this practice, which should be forbidden!

The importance of a distinctive, high-quality diet in the creation of a queen is logical. But it seems that everyone erroneously points to this factor alone as causing a queen to be created

# IS THE QUEEN STILL ROYAL?

Gunther Hauk

from an egg which would otherwise be a worker.

After three days as an egg, and six days as a larva, the queen-to-be pupates on the ninth day, as do the workers and the drones. The all spin a cocoon of silk in which they will complete their metamorphosis into a finished insect. The drones spend 15 days in the cell as a pupa, emerging plump and strong on the 24<sup>th</sup> day. On the other hand, the workers spend only 12 days, hatching on the 21<sup>st</sup> day. This certainly makes sense, since the drones are heavier and larger than the workers.

And yet another puzzle, another miracle challenges logic. The queen, this paragon of the colony, is ready to emerge on the 16<sup>th</sup> day, after only seven days as a pupa. How do we wrap our brain around that? Rudolf Steiner's research indicates that this short span of development relates to the revolution of the sun, which, according to Steiner, takes 21 days. Through the study of sunspots it is now accepted that the sun does indeed revolve.

If we take this as a hypothesis, the drones, by exceeding this cycle, become real 'earth beings'. The workers are right there at the borderline, midway between earth and sun forces, just touching the earth, while the queen never really becomes fully integrated into earth forces. She remains, so to say, 'in the sun'. Sustained by the organism of the hive, and serving it, she never engages with the earth as such, and leaves the colony only on her marriage flight, which takes her up towards the sun, and when she swarms to create a new colony. This mating in the heights lets the strongest and at the same time lightest drones inseminate her, up to a dozen or even more. Genetic diversity and health are thus insured. Artificial insemination – for the sake of 'pure-bred' queens – falls short of nature's intention and wisdom.

After mating, the queen now has enough semen to last her for up to four or five years; and a few days after returning to the colony her reproductive organs have matured enough for her to start laying eggs.

Once again, an unexpected, exceptional occurrence awaits us: the queen can lay fertilized or unfertilized eggs, both resulting in new life. When she puts her abdomen into a slightly larger cell, the queen places an unfertilized egg into it and a drone is created. In the smaller cell, the fertilized egg will result in a worker bee. The drones are creations of virgin birth. This is also known to occur in aphids, wasps, some fishes and even a few lizards. But how the queen senses the size of the cell and chooses between fertilized and unfertilized eggs leaves us in awe and wonder.

Now comes the miracle par excellence: a queen can lay 1500 to 2000 eggs per day and, lo and behold, the weight of these eggs surpasses her own body weight! The nearly unending source of food she receives from the worker bees attending to her every need is being digested and almost instantly transformed into eggs. Is it any wonder then that the denatured food the honey bees receive from humans, in the form of sugar or corn syrup – fed to them for their winter provisions – results in a lower quality of food for the queen?

Add to this the poisons the foragers bring home with their bounty of nectar and pollen – we know that these have a cumulative effect even in the highest dilutions – and we have two major causes for the present-day epidemic of brood diseases, foul brood and chalk brood. Additional reasons are the artificial raising of queens from worker larvae, as well as the lack of a diversified diet due to medicinal 'weeds' being eliminated in our 'clean' agriculture, or more often than not, monoculture.

All of these factors are bad enough, but add to these the stress that millions of queens

# IS THE QUEEN STILL ROYAL?

Gunther Hauk

experience, being shipped like spark-plugs long distances and then introduced into existing colonies as strangers. Is it any wonder that within the last 45 years queens' life expectancy has more than halved? Today, queens rarely live longer than one or two years. A side effect of this quick turnover is often ignored: the resulting youthfulness of a colony. Youth is highly valued in our modern society, but we fail to acknowledge that in our modern bee colonies a healthy maturing process is now missing, and with it the accompanying wisdom that comes with age. Resourcefulness is usually learned from life experiences, which present a diversity of problems to be solved. Youth in its exuberance tends to be more inept at coping with problems. Aren't today's bees faced with a host of challenges?

Let us now turn to a more mysterious phenomenon. Rudolf Steiner tells us in his bee lectures that the queen emits light radiation, though modern science does not acknowledge this since it is a spiritual rather than physical light. If this seems a strange idea, it might be worth remembering that light itself is a remarkable thing, and is in fact invisible until it falls upon a surface. This 'royal' radiance is perceived by the worker bees' three mysterious, tiny eyes on their foreheads. Both the pheromones the queen exudes and this light suppress the workers' ovaries from developing and maturing enough to be able to lay eggs. Worker bees are female, but their innate feminine quality to lay eggs, to create new life, is 'sacrificed' under normal conditions, when a queen is present in the colony. These workers are like nuns in an orphanage, being able to care with utter love for someone else's children, having renounced their own possible motherhood. In the same way, the workers care for the queen's offspring, working for the well-being of the colony as a whole.

But if the queen is absent for a few days or longer, then all the workers' reproductive

organs develop and some actually become 'laying' workers. If nothing is done by the beekeeper, the colony is doomed to die, since these laying workers can only lay unfertilized eggs. Soon, more and more drones will populate the hive.

The queen's royal light fills the hive, illuminating it with what we might call spiritual sunlight. I suspect that with the gradual degradation of queen bees over the last 100 years or so (artificial queen-raising was discovered toward the end of the nineteenth century and practiced since then) this light and its organizing energy have been degraded as well. This results in a weakening of the queen, so that she has a harder time keeping the colony together in its function as a whole entity, an organism. Add to this the attack of pesticides, herbicides and insecticides on the nerve-sense organism of the workers, resulting in disorientation, and you have at least two of the major causes of CCD. Not only have environmental degradation and poisoning contributed to the plight of the honey bees, but mankind's beekeeping practices are also to blame.

It is a rude awakening to realize that our industrialized queen breeding is at the very heart of the crisis. From the moment the egg is laid, the physical and spiritual environment is wrong. The degradation of queens in general, over 100 generations through this practice alone, can tell us whether the queen is still really a queen. In my opinion, a clear 'NO' is the answer. Too much of the worker element has been introduced into her. Her 'royalty' has been diminished. Food quality, stress and poisons just add to the problem. This may explain why any residual – though today sorely decimated – feral colonies tend to be healthier and more resistant than our highly manipulated domestic colonies.

It seems overwhelming and disheartening when we think of all that needs to be changed in

# IS THE QUEEN STILL ROYAL?

Gunther Hauk

beekeeping practices, let alone our agricultural methods, to revitalize and save our honey bees.

One difficulty in accepting change lies in the fact that we are so proud of our modern accomplishments, especially our interventionist ability to produce queens in great numbers out of worker larvae. We have convinced ourselves that this is the way to go, and we make every effort to bring our techniques to the remotest corners of the world. By doing so, we feel good about rescuing people from 'outdated' beekeeping practices.

It will take courage to make the needed changes – courage coupled with humility and a deep understanding and renewed esteem for nature's inherent wisdom. Only the acknowledgment that we have gone too far in our attempt to control and alter nature will let us take on the task of permitting swarming (very often prevented by beekeepers), so that we can have naturally raised queens again. It should be clearly stated that only in colonies preparing to swarm will natural, fully fledged queens develop, with the 'queen egg' in the right position and form from the outset.

Currently, one is considered a fool and an incompetent beekeeper when unable to stop a colony from swarming! But though 'inconvenient' for the beekeeper, it is possible to catch swarms and rehive them; and anyone who has seen a swarm will acknowledge what a marvelous sight it is: a great exhalation of bees which, like the renewal and reinvigoration we gain from our own breathing, gives both the original and the new colony a new, re-energized beginning. Working with swarms and naturally raised queens does take time and effort but will be the only way to allow the queens to regain their health and royalty.

The mechanized way of raising queens is the core issue in the harm we have caused honey bees. However, we must acknowledge that

sustainable beekeeping practices altogether, not one factor alone, will return our honey bees to health and vitality. If we succeed, then the single, most important result will be: *we have a future!*

Until our agriculture turns away from destructive, life-estranged practices, it will be the task of hobby beekeepers to create islands, corridors of safety for honey bees and the other pollinators; places where the bees are cared for and nurtured, where their own needs are met and their instinctual wisdom respected. Such places will be sanctuaries in the true meaning of the word: where holistic thinking – heart thinking – creates such beauty and wholeness that the honey bee can, once again, be considered a sacred creature.

I have hope that we can turn the tide. What beekeeper is not deeply touched when seeing the queen in a hive? Our hearts jump; an outpouring of love and admiration flows to her. We wonder why this is so. Is it that we recognize in her the eternal feminine quality of creating life, of fulfilling in utter selflessness the needs of the future? We can call this her 'Sophia' being (Greek = wisdom): the hidden, deep wisdom of true royalty radiating into our lives, calling us to work *with* the laws of life.

Throughout the world a new sensitivity is awakening for the needs of other beings, a compassion for their suffering, and the will to serve the greater good. However, this new development is overshadowed by a wave of materialistic, profit-oriented thinking, still washing over us with the force of a tsunami. But no one can deny that the undertow of that wave is already tugging us in the opposite direction.

Note:

1. Jurgen Tautz, *The Buzz About Bees*, Springer,