



Life of the Honey Bee

How Germans Protect Bee Hives.

How the Honey Bee Lives and Performs His Very Important Duties

Prepared by National Geographic Society, Washington, D. C.—WNU Service.

LITTLE does the average layman know of the active life of the honey bee which in summer is conspicuous flying from flower to flower, bearing pollen that plants may blossom and bear fruit in season.

The young queen bee, a few days after leaving the hive in which she has been born, selects a day for her wedding flight. She usually chooses a clear, warm, quiet day because her honeymoon is short, and she must make the most of it. Only when she leaves the hive with a swarm, probably a year hence, will she have another occasion to fly.

Mating always takes place on the wing, and if conditions are such that the queen cannot fly she will die a virgin. The strongest drone is her mate, for the queen is a good flyer, and the weak are thus eliminated in this wise provision to maintain the strength and vigor of the race.

Before the queen has had time to return to the hive after the mating flight, the drone will have fallen to the earth, dead.

Because of her specialized duties and the fact that she does not engage in outside work and is not subject to the hazards of weather and enemies that might prey upon her, the queen may live to the ripe old age of three or four years. When she becomes too old, or when she can no longer produce queen and worker bees, or if she becomes accidentally crippled, the bees will raise another queen to replace her and for a while both mother and daughter may work side by side in the hive. But this arrangement does not last long. The old queen will shortly disappear.

The marked differences between the queen and worker bee, both of whom come from the same kind of fertilized egg, have already been mentioned. Their difference in behavior is even more pronounced. The worker bee is armed with a straight sting, the end of which is barbed like a harpoon. When a worker bee stings, it cannot disengage its sting. The violent effort of tearing itself loose from the well-anchored sting so severely damages the tissue of its body that it dies within a few minutes. Normally it can sting only once.

When Rival Queens Battle.

The sting of the queen, instead of being straight and barbed, is smooth and curved. It is constructed so that it can easily be withdrawn when she uses it. The queen seemingly does not realize that she possesses this very effective weapon. She may be picked up and handled as harmlessly as a kitten.

If the queen gets into the wrong hive in returning from her mating flight, a royal battle is sure to ensue, and the two queens fight it out until death comes to the weaker.

If the queen used her sting indiscriminately, she might easily lose her life in meeting an enemy with which she could not cope. If she were being handled by her keeper and attempted to free herself by stinging him, he might instinctively retaliate by crushing her frail body. Should he do so, it would jeopardize the future life of the colony, especially if there were no larvae in the hive from which a successor could be raised. For her protection therefore, she depends upon her own daughters or sister workers, who far outnumber her and whose sacrifice is not so fatal to the well-being of the colony.

The drone usually is regarded as a lazy individual, but, after all, he is the father and is entitled to certain respect. He gathers no food, nor does he help defend the family; he has no tools to collect sweets nor has he a sting to defend even himself. During his brief existence, however, he has certain privileges not accorded his sisters. He can safely visit neighboring colonies. Neither workers nor queens are ac-

cepted in other hives, but during the breeding season drones are allowed to come and go as they please.

Know One Another by Smell.

When the breeding season is over, and the honeyflow comes to a close, the bees become more economical with their food supply, which must carry them through the long, cold winter. Then they drive all the drones from the hives, thus dooming them to perish soon for lack of food and shelter.

The person who can recall the names and faces of several hundred acquaintances is unusual; yet in a family of 80,000 individuals the bee instantly recognizes every member. It is evident that recognition is not through the sense of sight; instead, it is effected by the more highly developed sense of smell.

Every colony has a distinctive family odor, different from that of every other colony. If a strange bee attempts to enter a hive, the guards at the entrance detect its alien odor and drive it away. When a colony is divided into two parts, the parts placed in separate hives and given queens that are sisters, the bees in each half develop different odors. Within a week's time they become total strangers to each other. Were the halves united again, the bees would disregard the existence of any relationship.

It sometimes happens that a beekeeper unites two or more colonies, which separately are too weak to produce a crop or to survive a hard winter. The usual method is to place one hive on top of the other, inserting a sheet of newspaper between them. The bees from both sides gnaw small holes in the paper, and in doing so, they "rub noses," but the holes at first are not large enough for the bees on either side to engage in combat. The apertures permit the mingling of the odors of the two units, so that by the time the holes are large enough for the bees to pass through, the two parts have an identical odor. Thus union takes place peacefully.

If it becomes necessary to place a new queen in a colony, it is essential that she be properly "introduced." The old queen is removed at least an hour before the newcomer is "presented." In this interval the colony discovers that it is queenless and it may start constructing new queen cells.

Even though the colony desires a queen, it would not do to release the usurper, because her strange odor would antagonize the bees and endanger her life. She is placed in a wire cage to protect her from assaults. Although her new subjects would kill her were she suddenly released, they feed her by inserting their tongues through the meshes of the wire.

Must Store Food for Winter.

Honeybees help perpetuate their race by their insatiable desire to gather nectar. Unlike bumblebees, hornets, yellow jackets, and wasps, honeybees cannot live from hand to mouth. They must store enough food during the summer to keep the colony alive throughout the winter. Of the four other insects just mentioned, all the individuals in each colony die at the approach of winter except the young mated queens, and these simply crawl into protected places where they hibernate. During this period they require no food.

Among honeybees, only the drones die in the fall. The queen and the workers live and are semi-active throughout the winter. It is important, therefore, to gather enough food during the summer to maintain the colony during seasons when insect activity largely ceases. At the end of the swarming season, which coincides with the height of the breeding season, the queen lays fewer and fewer eggs until fall, when the rearing of the brood entirely ceases. Cold weather has overtaken the colony by this time, imposing changes in its organization to cope with low temperatures. Individual honeybees die of chill at temperatures well above freezing; in fact, they seldom fly when the temperature is lower than 45 degrees Fahrenheit.

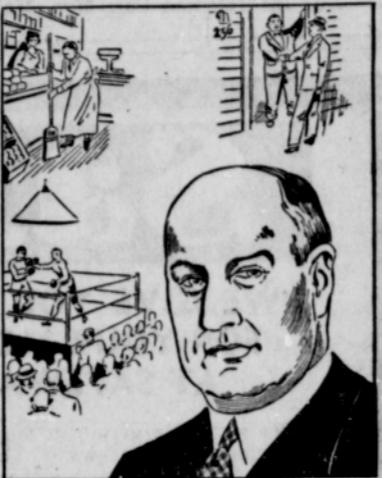
Way Back When

By JEANNE

FARLEY WAS ONCE A BOOK-KEEPER

NOT everyone can be an individualist and blaze his own trail to fame. Some of us are better fitted for falling into line as part of an organization. James A. Farley's rise in politics is an example of the rewards which may come to the good lieutenant.

Farley was born in 1889 in Grassy Point, N. Y., a small village on the Hudson river. There were five children, and the father was a saloon keeper. When Jim Farley was ten years old, his father died and his mother started a combination saloon and grocery store. The boy often tended bar or worked as grocery clerk on the other side of the store. Through these jobs he learned to meet the public, be friendly with strangers and show



sympathy for their problems. He attended the Stony Point high school and the Packard commercial school in New York. Graduating in 1906, he was employed as a bookkeeper. Jim was always interested in politics; and, before he was old enough to vote, he called house-to-house, getting out the Democratic vote in Stony Point.

His first political job was as town clerk of Stony Point. He was courteous to all, jolly, a hale-fellow-well-met sort of man who had a pat on the back for everyone. Through Alfred E. Smith, whom he helped elect governor of New York, and Franklin D. Roosevelt, for whom he was faithful lieutenant in the Presidential campaign, Farley forged steadily ahead. He won the top political plum in the United States, postmaster general.

POET WAS ONCE A LAWYER

READ this story of the conventional lawyer who became one of our most famous poets. Not a dreaming, unsuccessful lawyer, but a man with a profitable and important law practice, important enough to associate with Clarence Darrow at one time. A busy man of commerce who became a writer of songs and poems, sonnets, essays and drama!

Edgar Lee Masters was born in the little town of Garnett, Kan., in 1868. His father was a descendant of old Virginia stock; his mother, the daughter of a Methodist minister and descendant of Israel Putnam of American Revolutionary fame. The family moved to Petersburg, Ill., and later to Lewistown, where Edgar was raised in the typically respectable atmosphere of small town America.

He did newspaper work for the local weekly, learned the printing trade, and studied law under his father, who was one of the leading lawyers in the state. In 1891 Ed-



gar Lee Masters was admitted to the bar and practiced in partnership with his father. The following year he opened his own office in Chicago where he was a highly successful lawyer until 1920.

But even in high school, Edgar Lee Masters was interested in writing and he never forgot his ambitions. He contributed to the Waverly Magazine of Boston and the Saturday Evening Call of Peoria; he wrote poems for a Chicago newspaper. His first book, published in 1896, while he was struggling to establish a practice in Chicago, was called simply "A Book of Verses." "Songs and Sonnets" followed, but none of them attracted much attention until his "Spoon River Anthology" was published in 1916.

Those of you who lament your unexciting lives and yearn for opportunity, look at his dual personality, the poet who has won such high awards in the realms of literature.

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Crochet Her a Chic Little Dress

By CHERIE NICHOLAS



ONE, two, three!—here they are, a trio of pretty little crocheted frocks worn by a trio of pretty little girls as pictured. And do little folk of feminine gender love the dresses that dotting mothers and big sisters crochet for them! Well, just show this picture to wee daughter or sister or niece or little girl neighbor and we wager that their opinion on the subject will make elders seek crochet hooks, yarns and books of instructions instant, forthwith and without delay.

These cunning frocks are supposed to be party dresses—that's the way the designers thereof listed them on fashion's program, but for our part charming as any one of them would be to wear to a party, we believe your little girl will be wanting to wear her crochet dress every day. Why not? The idea of general wear will be found perfectly practical, workable and demonstrable for it is crocheted of fast dye mercerized cotton yarn that washes like new and is so much easier to launder than a dress that has to be ironed each time. Serviceable, too—almost no wear-out to it!

Speaking of smart styling in crochet fashions for little folks, never have professionals paid so much attention to this angle as during recent years. The result speaks for itself in the three models pictured. There is the charmingly styled princess worn by little Miss Six-Year-Old (possibly she may be seven); anyway the dress shown to the left reaches a new high in swank so far as children's fashions are concerned. It is crocheted of mercerized cotton, and we leave it to you to visualize it in the color your little girl happens to like best. It has puff sleeves as stylish as can be and is buttoned all the way down the front with crocheted buttons a la smartest mode. It really does not take long to crochet this dress and it is delightful pick-up work to inspire you to "improve each shining hour."

Little Two-Year-Old, who stands

centered in the foreground, has on a fluffy-ruffle type of dress with bows on the shoulders and a ribbon run through the waistline of the very full skirt. It is just the sort of be-ribboned dress that makes an adorable child look more so. Why not make two of 'em, one for Sunday-go-to-meetin' dress and one for everyday service?

Party days for a small girl mean ribbons and lace, cambric tea and ice cream and cake. What could be nicer to wear at such festive times than the lacy dress which the cunning youngster to the right is wearing? It is crocheted of delicate mercerized cotton quite to this miniature queen's taste, you may rest assured. It will also prove a boon to mother for it is dependably serviceable for all its fragile appearance, will wash, of course, and all that has to be done is to pull the lacy crochet into shape here and there caressingly with your fingers—doesn't require the least mite of ironing.

Here's a suggestion or two to mothers who are making over dresses for little daughter's play and school wear. Leading Paris couturiers are combining crochet and various materials. The idea would work out admirably in "fixing over" children's clothes. A cloth or sturdy linen dress that needed lengthening could be made attractive by adding desired inches of plain crochet done either in the identical shade of the fabric it is to trim or contrasting it. Make a matching crochet belt of the mercerized cotton and carry out the idea further with crochet buttons and perhaps decorative pockets of the crochet.

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NEW SLEEK BLACKS

By CHERIE NICHOLAS



To all appearances much is "going black before the eyes" of fashion. At any rate there is nothing in the way of a frock so outstanding in early fall style showings as sleek black gowns of either gleaming satin or of slinky, slenderizing, flattering-to-the-figure jersey which may be either a pure silk weave or of synthetic texture. The vogue for this type of frock is pronounced. Deft drape effects predominate in the fashioning of these stylish all-black gowns somewhat after the manner pictured. Top them with a tall draped toque or one as shown.

NEW FABRIC TRENDS FOR AUTUMN SEASON

Trends in the silks and rayons which Paris fabric houses have prepared for the fall costume collections:

New plain silks have a softer, more velvety touch, a duller surface than before.

Rayons of intricate weaving are dull, pebbled, "crushed," have fine matelasse patternings, Ottoman ribs, plain or fancy, and many novelty surfaces obtained by uneven yarns.

Serge or twill weaves appear in delicate silks or rich metals.

Neon lights have inspired a whole group of lames made with colored metal yarn, also new changeable, mosaic, cashmere and jewel effects using the same colored metal.

Novelty velvets are made with pile that is completely dull or has only a medium luster. Also with printed gold backs or satin backs.

Metals and lames are finely patterned or quite plain, elaborate in texture and often have small Paisley, Persian, Byzantine, Oriental and Eighteenth century designs.

Capes Replace Jackets in Early Ensembles for Fall

First autumn ensembles often replace coats or jackets by capes, and are trimmed with sleek, flat furs. One such is Martial and Armand's three-piece costume of brown wool, already ordered by several smart women. The skirt features front fullness and is topped by a leopard gilet which shows beneath a hip-length circular case of the brown wool finished with a tiny flat collar of leopard skin that is knotted under the chin.

Pleats for Autumn

Autumn will be a season to wear box-pleated numbers with built-up waistlines, and the newest manner of raising a waistline is to build the skirt up at the sides only.

Dish-Drying Is a Picnic With These

More fun than a picnic . . . drying dishes with these cross-stitched towels. Put color into them with cotton floss, and you'll have the gayest, gladdest set ever! Here's your pick-up work that fairly flies for each motif's in 8-to-the-inch crosses. Think what a welcome



Pattern 5858

gift just a pair of these would make at bridal shower or housewarming. But chances are you won't be willing to part with a single one of this handy set. In pattern 5858 you will find a transfer pattern of six motifs averaging 8 by 7 inches; material requirements; color suggestions; illustrations of all stitches used.

Send 15 cents in stamps or coins (coins preferred) for this pattern to The Sewing Circle Household Arts Dept., 259 W. Fourteenth St., New York, N. Y.

Please write your name, address and pattern number plainly.

OF INTEREST TO THE HOUSEWIFE

For a Delightful Odor—Add a drop of perfume to starch as it cools and children's dresses, which require starch, will have a delightful fresh odor.

Keeping Apples—Apples will keep longer if rubbed over with a little glycerin, which can be washed off before the apples are used.

Sparkling Glasses—To get a beautiful sparkle on cut glass, wash in cold water to which a few drops of ammonia have been added. Dry and polish with clean tissue paper.

When Using Soda—To prevent the soda taste in foods in which soda is used as a leavening agent, dissolve the soda in a small amount of liquid called for in the recipe before mixing it with the other ingredients.

Testing Fish—If fish is fresh and has been properly refrigerated from the time it was caught, it will have a little odor. If it has a strong odor do not serve it. Let your nose and eyes tell you whether or not it is usable.

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Sentinels of Health

Don't Neglect Them!

Nature designed the kidneys to do a marvelous job. Their task is to keep the flowing blood stream free of an excess of toxic impurities. The act of living—life itself—is constantly producing waste matter. The kidneys must remove from the blood if good health is to endure. When the kidneys fail to function as Nature intended, there is retention of waste that may cause body-wide distress. One may suffer nagging backache, persistent headache, attacks of dizziness, getting up nights, swelling, puffiness under the eyes—feel tired, nervous, all worn out.

Frequent, scanty or burning passages may be further evidence of kidney or bladder disturbances. The recognized and proper treatment is a diuretic medicine to help the kidneys get rid of excess poisonous body waste. Use **Doan's Pills**. They have had more than forty years of public approval. Are endorsed by the country over. Insist on Doan's. Sold at all drug stores.

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