Come; let us go out on a summer morning. Early see the solid dome of heaven yield to the red glow in the east, and glance at the red glow as it shatters into a mere rid shafts of brass. As the first sun rays shaped across the landscape, in your own minds eye, picture the scene dearest to you. Mine is a prairie, undulating perhaps, broken here and there by knots of live oak. An occasional outcropping of limestone is it an asset? For it is a token that the land will not be marred by the plow and will, if rightly used and cared for, will serve mankind through the ages. All living things are stirring and plied by hunger the mockingbird has closed his morning sonata and is hunting his breakfast. A crow, or raven more properly, has left the perch and is away a mile or so looting the Milo fields. A rabbit hops about in search of a green tender morsel. Not so easy to find for a drought is on the land and the rabbit had better be wary for not far away a hungry coyote is lurking. We hear the beating of tiny wings, a fly? No, there’s a hum not a buzz. It comes and goes faster than the wind. It is a bee, a scout honey bee out this early in search of food. And the odds are against finding anything in the midst of a drought, but the search must go on. Let nothing be missed.

Not necessarily so, but this is likely an old bee. It was days and days ago we say days and days not years and years because years don’t enter into measuring the life of a honey bee. One day in the life of a honey bee speaking in counterpart is a year in the life of a human being. Days and days ago this bee cut the thin film of wax that bound her in her cell. Made her way out of the cell with great effort, moved about awkwardly, learned the use of her limbs, scraped the protective film from her body and left a visible sheen, ate heartily and possibly took a very short flight. And on the third day was ready to enter the work in that great insect commonwealth. Nothing guided her, nothing gave directions, she just knew what to do. Her first task was lowly, polishing the cells and cleaning them out so that the queen might lay again, or they might be used to supply food. Then she became possibly a nurse bee taking care of the baby bees, and then a receiver. Bees gather nectar that is about half water that must be evaporated and the sugar, largely sucrose, changes in to dextrose and laevulose. Honey is a complex commodity. Then she likely this bee will go on and become a fanner keeping the hive cool cons before man learned the evaporative cooler. Bees use the principle in fanning the air over more surfaces. She may have been a member of the home guard a little while. On her 21st day, ordinarily she was ready to join the great band of workers that go to the field and gather the nectar and the pollen that are essential to carry on the colony. By human standards her life was not unpleasant. She kissed the plump cheek of the milkweed blossom. She powdered her face with the pollen of the daisy. She sipped the almost microscopic droplets of nectar from the mesquite blossom and the fragrant cat claw. She’ll not make many more trips. One morning she’ll leave and not return and if she does return and is not able to go again her sister bees will throw her out. There’s no old age security in this insect commonwealth of which she is a member, but do not sell her short there’s mighty strength in those frayed wings and in that body of sinew and fiber. Strength such as if we had it in proportion to our size and weight we’d not carry a jack in our car, we’d lift up the car wheel and place a block under to change the tire. An athlete would not pride himself in putting a 16 pound shot 40, 50, 60 feet; he would throw a 100 pound weight half across the grid iron. This morning the bee proceeds, takes a little wider course and strikes a current of air that has suggest it has something in it of interest. She bears in to the air, flies 100, 1000 yards or possibly even more. Lowers, poises a moment over a blossom, flies and lays her mandible in the nectar gland of a prickly pear blossom. Yes a drought has prevailed but a small area has been favored by showers and the prickly pear, that nuisance on the range, supplies food for the bees both pollen and nectar and may be a life saver. But how can one bee feed 10,000? Part of this
I cannot remember when bees were not fascinating to me, but I do recall very vividly the time
when I was about 12 years old and my dog Ring put me in the bee business. Ring and I were
pals, we had grown up together I was a little older than Ring. Ring had his foibles, his foolish
ways and I had mine. We both were tolerant toward one another. And Ring, I call Ring my but
dog. He would have been a good squirrel dog, but he would chase rabbits. And he might have
succeeded better at rabbit hunting, but he’d chase a lizard or a mouse. He was like some people I
know, very broad minded and very superficial. So I did not get excited that day, by the way Ring
had courage he had a fashion too much courage. You know there is an animal commonly dis-
tributed in America, widely distributed. Biologists call them a mephitis. He has a very effective
means of defense or offense. And I had four sisters in my family, the youngest four years older
than I. It always seemed that if they were planning on having a beau they wanted to impress or
if we having some high fluting company old Ring would tackle a skunk and scent up the whole
place. But for all of that we did very well and so on that day I didn’t get excited when I heard
Ring’s listless bark, but went there and caught going in and out of a knothole bees. Bees a bit of
nature’s music that attracted my attention, the buzz of the bees. My father and an employee cut
the tree that I claim the bees and from that day until this I have owned a few colonies of bees and
have spent a great deal of time with the bees. Bees have been more than a hobby for me they,
have been an outlet for thought, for investigation, and really a spiritual inspiration.

I am not a biologist, but on the habits of the honey bee I am well acquainted Apis mellifera,
honey makers or honey bearers. Linnaeus is one, several oh perhaps a hundred or more species
of social bees. A colony consists of a queen a beautiful insect very shapely and many thousands
of workers. It takes several thousand to make a small colony. A satisfactory colony would have
to have 10, 20, or 30,000 in it. The worker bees and the queen hatch from the same egg, placed
in different types of cells, and fed different food. The queens will emerge in 16 days; it takes 21
days for a worker to emerge. Bees have many traits that remind us of mammals and human be-
ings. Their memory is very good they can remember about seven days. And when you think of
one day in the life of a bee being equivalent to a year in the life of a human being, that’s doing
pretty well. Their sight is very good, not as good as that of man or mammals, but quite effec-
tive. They don’t hear, but they are subject to vibration and so they are not unaware of sound all
together. They have a wonderful sense of smell and evidently most bees surpass that of the blood
hound. The sense of smell that they have, but the marvelous sense the bees have the inexplicable
sense is that of communication. Let us go back to the bee we left visiting the cactus blossoms.
She makes her way into the hive with a load of new food. If the area indicated plentiful food, a
plentiful supply of nectar coming on, she would be quite excited and would set up a line of con-
duct very pronounced. Men have observed that commonly called the food dance. Since the days
of Aristotle, but not until the 20th century did men actually crack the code of the honey bee in
that food dance. If the food is near the colony, the performance consists simply of whirls and no
running. If it is some distance away, the bee will run, stop, and whirl or turn about something like
a whirling motion.
Meanwhile very rapid wagging of the tail the tail seems to move as fast as the propeller of an airplane. She may give the sister bees a taste of this new food and get them excited and interested. Yes it’s dark in the hive but they can observe her movements and they do and soon they are taking notice of what she is doing. In her movements she executes a line. If the food supply that she’s informing the other bees about is in the direction of the sun, she runs straight up the cone. If it is let us say 60 degrees away from the sun, she runs she makes an angle with vertical 6 degrees to the left of the sun or 6 degrees to the right if to the right of the sun. Yes that is some performance. I never tried it, but I wonder how well we’d do in locating something on a black board if we had just a glance at the sun and went inside with a piece of crayon and a blackboard. Could we do as well as a honey bee in locating these directions? And the bees when they leave the colony have those directions. The distance between the whirls indicates something of the distance the food is and the bearing of the line the queen has made that creates the angle with the vertical is the a rather with the sun determines the direction of the food. The sun is a bee’s compass. These things sound fantastic. If you doubt them, read Martin Lindauer’s Communication Among Bees or Communication of the Bees Harvard University Press about 1961 [Communication Among Social Bees. Martin Lindauer. Harvard University Press, Cambridge, Mass., 1961. 143 pp. Illus.] He and his students carried out thousands of experiments, worked many years, he had slave labor college students and little money and they observed these things in great detail. How do we account for such performance? Oh, chance mutation, natural selection, survival of the fittest. Yes all those things are in evidence, but they do not explain to me the honey bee just as they cannot explain man. There are features there characteristics that have nothing to do with the survival of the bee and yet are very important indicating a design and plan in nature.

Oh what’s the bees, by the way there’s one practice we might notice just briefly that does indicate that it might be a value in preserving the bees. Bees will not accept water closer than about 70 feet to the hive if there is other water within flying distance. I didn’t know that, one time I had word from a neighbor that the bees were taking water from the dripping hydrant. I decided I would correct that, I started a hydrant in my own yard and put out water in various places and nary a bee would touch it. I didn’t know this characteristic of bees then. That might be a matter of conserving for the bees because just as we conserve and try to keep our own water pure, but what about this? Look at the blossoms in the orchard. Sometimes the limbs are intertwined between let us say plum and peach. Bees are working both types of blossom, but the bee will stay with the species. Oh possibly 5% will break over. That is no benefit to the bee, but not hurt to mix the honey with the nectar but it makes the bee far more effective as a pollination agent.

Oh it is said there is cooperation between the animal kingdom and the vegetable kingdom. That is true, but why that cooperation? How do you explain that cooperation? Cooperation implies a mind, a direction, a purpose, a determination. Can you link that with a flower or with these tiny things of fiber and with a brain not much larger than a pinhead? Once a good many years ago an experience I had and have often related since, an evening out with some friends linked with the University of Texas as I was linked to The University that summer. We had our dinner out our supper we called it ‘around a campfire’ about a half dozen. Dr Robert Cotner, department of history, retired now is the only other man living; the others are dead. Frank Dobie, well known as a popular writer, writer of folk lore; and Roy Betachech, a wonderful man who did some good writing on birds; although he spent the first 70 years of his life in other pursuits. Walter Prescott Webb, renowned historian, we talked about various subjects. I talked about bees. I happened to know more about that subject than the others and it drew me out on as somewhat odd.
Betachech volunteered the information that he started out to make ants a hobby, study the ants. And he found the subject was too complex, too many questions there he couldn’t answer. He didn’t have the time to devote to it that it would call for. And he chose a subject a little simpler, although that’s not quite so complex the subject of birds and did write a good book on birds. Dobie said, “That’s why I never could be a skeptic. I never could conceive of a universe without a guiding force somewhere. There are too many things you cannot explain when you look at them”. Betachech said thoughtfully, “It just depends on what you call it. Beyond a doubt there are things we do not see, there is a force we cannot comprehend. It just depends on what you call it”. He didn’t say what he’d call it. We were breaking up the group, the party, then dowsing the fire. I don’t know what he would call it, but I would say just read the first verse and the first chapter of Genesis. “In the beginning God created heaven and earth”.

19:12

20:12