gaged in each kind of activity noted. But, except where the occasion required it, no individual bee was kept under continuous observation throughout the day. Instead of this the observations were made generally in twenty minute periods, one every hour or every three hours. The observations on individual bees were limited to two queens, and eight marked workers. Further details and observations on special activities will be stated when I come to the statement of those results.

I shall give first the results on the two queens. Some statements will necessarily not be contributions to our previous knowledge, but are included for the sake of giving a complete picture of the bee's life.

The queen's work is all within the hive. She remains on the surface of the cells, never entering one except with the abdomen to deposit an egg at its bottom. The number of eggs laid in the course of 24 hours varies largely with the general condition of the hive, but it may normally reach two or three thousand. Says Cook: "The activity of the queen is governed largely by the activity of the workers. The queen will lay sparingly or stop altogether, in the interims of storing honey, while on the other hand, she is stimulated to lay to her utmost capacity when all is life and activity in the hive." At any time of the day or night she may be seen moving slowly over the cells, the workers generally making way for her, frequently several being arranged around her, patting and rubbing her with their antennae, and offering her food. But at times she may be quite unattended, and the workers even hardly getting out of her way. As she moves along she frequently pokes her head into a cell, and if it is empty and clean, may dip her abdomen into it, and deposit an egg. She seldom persists in the same kind of activity for longer than ten minutes at a time, on an average much less than this. She may move along for several minutes without doing anything else, or may look into many cells, depositing eggs at the rate of two to several a minute. Then she may stop for an interval and sit more or less perfectly quiet resting or "barbering" (I use this term as descriptive of the activity common to most insects and termed by others "making their toilet") herself thoroughly or feed, for half a minute or so. I transcribe the following from my notes as a typical 20-minute period of observation: Observation on the young queen; time 4 p.m. "1. Rests, attended by 7-11 workers, licking and barbering her. An occasional slight move. 2. Barbers herself 20 seconds. Rest two minutes and then moves. Deposits an egg in 10 seconds. Egg in 15 seconds. Egg in 15 seconds. Egg in 10 seconds. Seven cells looked into. 3. Egg in seconds. Egg in 12 seconds. Moves. Four cells looked into. 4. Moves. Sits still 30 seconds, not attended. Sits two minutes, attended by 7-11 workers." The main characteristic of her doings is the greatest sort of irregularity. She alternates from one thing to the other often at only several seconds intervals. From merely observing her at different parts of the day and night it is not noticeable that light or darkness makes any difference to her. She seems about as active at night as during the day, and in about the same way. The following table, however, gives my results in figures on the two queens, with respect to three things, egg-laying, feeding and resting. The old queen was watched for fifteen minutes every hour for a continuous period of 24 hours, omitting three hours, from 12-3 a.m. It was

the latter part of
was quite busy
nectar, and the
filled with brood.
grouped in three-l
expressed upon a

Old

	A. M.
	3-6 | 6-9 |
Eggs	12.8 | 9 4 |
Times fed...	1.5 | 4 0 |
In rest....	4.25 | 6.6 |

Above table covers tw

More observations
young queen. Dur
period she was wa
intervals for eight
continuous obser
minutes, usually one
The next table give
expressed in the sam
preceding.

Young Q

	A. M.
	3-6 | 6-9 | 9-1
Eggs	8.8 | 7 8
Times fed.	.66 | .65 | .3
In rest..	1.17 | 1.81 | 1.8

Above table covers twen

Average for the

	A.M.
	3-6 | 6-9 | 9-12
Eggs	12.8 | 9.1 | 9.5
Times fed..	1.08 | 2 33 | 4.69
In Rest..	2.69 | 4.21 | 5.55

Above table covers twent

The observations w
are enough to establis
differences there might
between the activities o
night. The figures ar
and it seems evident t
very great difference.
active during the night
night. There is some sli
and she is a little mor