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Yet it was possible that it was not a
mere change of queens in the case of
Mr. Greene's treatment. It must be re-
membered that generally, when a queen
is introduced, there is a break in laying—
practical queenlessness—for a day or
more, and perhaps for several days. Even
when the new queen begins laying, she
is not up to her full count for some time,
and a diminution in the amount of brood
ought to give the bees a better chance to
clean up.

This much seems clearly established:
That bees are able to clear out a certain
number of cells in European (not Amer-
ican) foul brood. It also seems nearly
proven that bees in good heart will
clean out all, if there is not too much
for them to do, and that a stoppage or
diminution in egg-laying diminishes the
number of foul cells to be cleaned up, and
increases the chances for cure. A prac-
tical question is: "How long should a
colony be queenless to give it a fair
chance to clean up?"

Mr. Alexander's rule was to leave the
colony queenless for three weeks. But if
I understand the matter correctly, Mr.
Alexander had hardly gone beyond the
experimental stage, and it is possible that
he never tried any shorter time than
three weeks. Perhaps he reasoned in this
way: "It takes three weeks for all the
brood to hatch out, so that the time for
the colony to be queenless." But it is
just possible that there is little or no
chance for conveying the disease from a
cell that is sealed, and that eight or ten
days' queenlessness will serve the pur-
pose just as well as three weeks. And if
there be not too much cleaning up to do,
it seems reasonable to believe that even
less than eight days may answer, when
we take into account Mr. Greene's ex-
perience, and also the fact that a num-
ber of my colonies that were mildly af-
fected cured themselves without any in-
terference on my part.

Let me give one example of self-cure.
No. 100 was foul-broody, but not very
bad. July 16 I put an excluder on the
hive, and then piled on it four or five
(I think five) stories of foul-broody
combs. Aug. 13 I took away the upper
stories, out of which, of course, all brood
had emerged, and then opened the lower
storey in order to treat it. To my sur-
prise not a single diseased cell could be
found in the hive!

Marengo, Ill.

NOTES ON HONEY BEES GATHER- ING HONEY-DEW FROM A SCALE INSECT, PHYSOKERMES PICEAE, *Indexed* SCHR.

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It is known that scale insects as well as
aphids secrete honey-dew. For instance,
Lecanium oleæ,¹ upon the citrus fruits of
California produce great quantities of
honey-dew, which collects as a coating
upon the leaves and is a medium for the
growth of a fungus, *Capnodium* sp. The
mycelium of this fungus sometimes forms
a felt over the leaf, closing the stomata
and thus killing the tree.

On the spruces at Amherst, Mass., a
scale, less well known than this black-
scale attracted the writer's attention late
in May and June, 1908. Large numbers
of bees were humming in the trees on the
campus of the agricultural college. At
times the roar was suggestive of a
swarm. At first, however, it was
thought from the behaviour of the bees
that they were collecting materials for
propolis, but none were seen with a bur-
den packed upon their legs. By following
a single bee it was possible to see her on
a twig at the union of the last two
years' growth searching with extended
tongue for something apparently sweet.
At the base of what looked to be a

³ Washington, 1901.

¹ Kellogg, Vernon L., 1905, *American In-
sects*, New York, Henry Holt & Co. VIII
+679 pp. Page 187.