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Dear Matt:

This article may be grist for your mill. Mike Ikawa, our very sound toxologists came up with it when we were discussing some recent press release fromthe State Department. While it describes fungi from bumblebee nests, my experience is that the picture is not much different for the honeybee particularly under our humid condidtions. There is virtually nothing reported we have found about insect toxicology studies with mycotoxins. Even if they are found to be toxic to growing pupa, I will bet that the population of bees dedicated to cleaning can transport a considerable load of mycotoxin out of the hive. I observed in a hive that after long confinement a certain fraction of the bees seemed to die upon reaching the hive entrance though their death could not have been the result of cold shock. Thus, for a long time I have harbored the idea (untested) that on confinement a minor population becomes dedicated to serve as feces collectors and are disposed of as opportunity presents itself. Obviously on aestivation or hibernation the pollens available are stored pollens so a significant mixture of types will be present, in contrast to the picture during the main flowering periods. The question is whether the pollens present are those of the russian plains or of the asian sub-continent. Seems readily testable.

In any event, I would suspect that honeybees have developed mechanisms for cleaning the fungi out of hives since in my experience they do so. Bumblebees do not use the same nesting materials from year to year, usually, so I think you're correct in looking in some more permanant hive conditions.

All the best,

Don G M

Don Green