Dr. Fergus' answers to questions

From minute papers

1) **Are there any other factors in addition to temperature that can have an effect on male or female preference in crickets?**

Temperature is the major environmental factor that can quickly change temperature and preference. Nutritional state is also likely to play an important role in how well a male can produce the ideal song, and may also alter a female's choosiness. It is not well studied in the system, but other crickets singing nearby may influence song or preference. For example, and if one male is singing, another male may not sing because he can just stand near the 1st and get the benefits of the song without the costs. Or the 2nd male may sing louder and longer to try to out compete the first in attracting a female. And the female's preference may be influenced by these different strategies.

2) **Do male crickets have a role in selecting their mates or is it entirely female selection?**

That is an important question for which we don't have an answer. There are simple ways to measure female choice, such as seeing if she walks to one song over another or seeing if she accepts spermatophores. Males on the other hand usually will mate with a willing female, but might express choosiness in more discreet ways. He might allocate more nutrients into a spermatophore or transfer more sperm to a 'better' female. So far we haven't been able to measure such differences and we don't really know what factors a male would use to access females.

3) **I'd like to know if there has been any research done on the reproductive rate of Hawaiian crickets after eating the microspermatophore vs. if it isn't eaten.**

That hasn't been done, but would be great. Something along those lines has been done. If a female receives and eats the microspermatophores, she takes up more sperm into her spermatheca from the final macrospermatophore than a female who didn't receive microspermatophores. If a female mates with multiple males, then this could have a big influence on the % of offspring that are fathered by a male that produces few or no microspermatophores.