



Buzzkill



“The electronic song “Scary Monsters and Nice Sprites” reduces host attack and mating success in the dengue vector *Aedes aegypti*”

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Background

- Sound = vibration in the form of a wave
 - Waves have a frequency
- Mosquitoes have a wing beat frequency
- Mosquitoes produce sound

- *Toxorhynchites brevipalpis* can sexually identify males and females through wing beat frequency, using low-frequency vibrations to facilitate mosquito mating rituals
- Subsequently it was also shown *Culex* and *Aedes* Genera

Method

- Laboratory raised *Aedes aegypti* exposed to 2 different environments
- Environment 1
 - Music
 - Speaker
 - Hamster
 - Male Mosquito
- Environment 2
 - Hamster
 - Male Mosquito

Observed

- Visitation Frequency
 - How many times they visited the hamster.
- Host attack time
 - How long it took for the mosquitoes to visit the hamster.
- Blood Feeding Activity
 - How much feeding was taking place
- Copulation Patterns
 - Sexual activity of these mosquitoes



Results

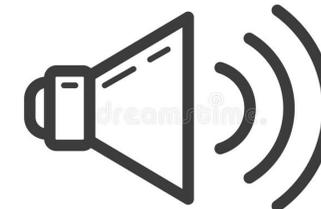
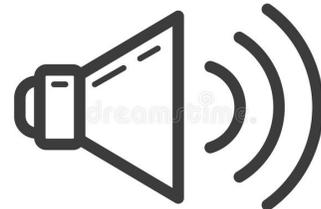
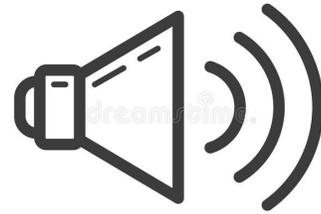
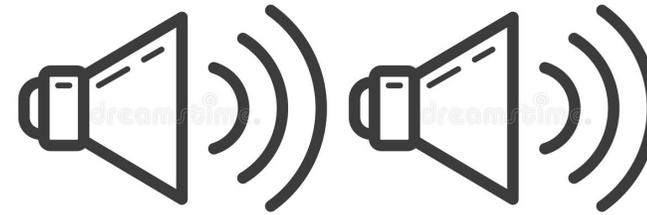
- Visitation Frequency
 - Music On mosquitoes visited hosts less often than their Music Off counterparts





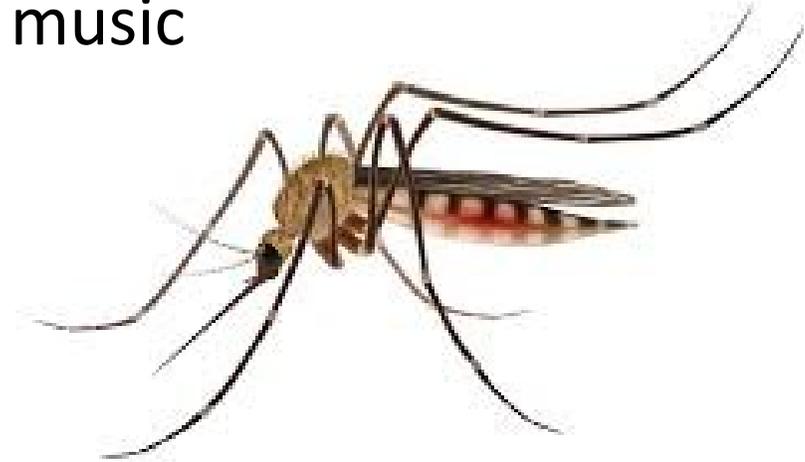
Results

- Host Attack Time
 - Music On – longer time to visit the host
 - Music Off – shorter time to visit host



Results

- Mosquitoes exposed to music showed reduced blood feeding activity as compared to those not exposed to music



Results

- Mosquitoes exposed to the music copulated far less than their counterparts



Conclusions

- When *Aedes aegypti* females were exposed to Skrillex's "Scary Monsters and Nice Sprites" they showed a longer response time to the mammalian host, visited the host less often, and showed reduced blood feeding activity when compared to their non-exposed counterparts.
- *Aedes aegypti* also showed a very low incidence of copulation when exposed to the music

Conclusion

- Aedes aegypti that love to party to Skrillex's Scary Monsters and Nice Sprites
 - Slower
 - Lazier
 - Skinnier
 - Not interested in Sex

What could this mean?

- Adult Mosquito Repellancy through Sound could be worth looking into