Insects and Vision

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Insect observation and tracking prey is being applied to improve the robot vision system, describes how the insects and human knowledge used in the simulation of virtual reality, so that the artificial intelligence can chase an object. Studies have shown that flying insects, such as dragonflies(Figure 1), have significant visual guidance. The dragonfly is chasing prey quite quickly, providing a train of thought for the improvement of the machine vision system. [1]

Figure 1: **Dragonfly Prey**

Mosquito bites are a common phenomenon, and we have taken some measures, such as mosquito repellent. But clearly this is not a perfect solution, because the pests have evolved three times as much vision and smell as the effects human. Many insects, including mosquitoes(Figure 2), are attracted by the carbon dioxide naturally exhaled by humans and other animals. They use vision to identify host and heat sensing information to detect body temperature. Researchers will be through the experiment in the female mosquitoes released into a wind tunnel of hunger, high concentrations of carbon dioxide injection in experimental wind tunnel in the simulation of the human respiratory signal, and introduces a kind of background air and plume of low concentration

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[1]from"Journal of The Royal Society Interface"

of carbon dioxide, and add 20 mosquito using camera tracking and 3d software to track their way and observation. Finally it is concluded that mosquitoes exposed to carbon dioxide, it is near a host of indicators, will analogy carbon dioxide intensity of surrounding objects. [2]

Figure 2: **Mosquito**

Through the above articles, we can be concluded that there is an inseparable relationship between insects and vision, which has a positive influence on the research of machine vision.

[2]from"the journal Current Biology"