Mosquitoes supply spider with blood

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Scientists in Sydney, Australia, say they've determined an East African species of jumping spider prefers to prey on blood-engorged female mosquitoes. And that, the Macquarie University researchers said, demonstrates a rare example of a predator choosing its prey based on what the prey has eaten.

Evarcha culicivora, a type of mosquito-eating spider, lives near Lake Victoria in Kenya and Uganda. As with all other spiders, these spiders lack the specialized blood-sucking body parts that mosquitoes and ticks possess and thus cannot feed directly on animal blood.

Ximena Nelson and colleagues studied E. culicivora and found the spiders consistently choose to eat female mosquitoes that had recently fed on vertebrate blood. The spiders preferred the mosquitoes to other prey such as midges, male mosquitoes, and sugar-fed female mosquitoes.

The researchers said the spiders identified their preferred prey by sight and smell. Those preferences appear to be innate, and not due to other factors such as prior experience or prey availability, the researchers say. Further work suggests the blood-meal is biologically important to E. culicivora.

The study appears in the online early edition of the Proceedings of the National Academy of Sciences.