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Student Research Conference Abstract

How young animals allocate resources among different activities affects their rates of development. A unique system to study this relationship in is the orb-weaving spider, since the results of resource allocation can be measured in both spider growth rates and web synthesis. I will study these trade-offs in *Nephila clavipes* spiders by examining how spiderlings choose to use resources when potential web size is fixed by restricting some spiderlings to small spaces. The spiderlings are then all fed the same diet, and measurements of both their web and body size are taken to determine relative resource allocation. If web synthesis requires many resources, it should follow that the spiderlings that can build larger webs will accumulate mass more slowly than the spiderlings building small webs. Since spiders that grow slower mature at a slower rate, these results will indicate whether variation in foraging investment, seen here as web building, affects overall fitness.