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EFFECTS OF ATROPINE ON SPIDERS' WEB BUILDING BEHAVIOR AND  
THREAD PRODUCTION. Peter N. Witt. State Univ. of N. Y.,  
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1, 2 or 4 mg/kg atropine sulfate were given to 19, 19 or 39  
spiders by mouth 12 hours before web-building time. The two  
lower doses caused webs which showed no change in size or  
regularity but were built with wider meshes, covering the same  
area with less thread. The highest dose caused significantly  
smaller and less regular webs built with less thread. The  
change lasted through the second day after drug application.  
It was suspected that in addition to a central nervous system  
effect atropine might interfere with thread protein production  
in spiders, comparable to the reduced thread length and  
thickness which was observed after atropine in silk worms  
(N. Tamano, K. Kuriaki, Arch. int. Pharmacodyn. 132:49, 1961).  
A method was devised to pull the thread from spiders which  
they had produced during the last 24 hours and weigh it.  
Four mg/kg atropine reduced the amount of thread which could  
be pulled by 58%. This together with other evidence from  
dissected spiders points towards a point of attack of atropine  
at the silk glands of spiders interfering with thread  
production. (Supported by a grant from the USPHS,  
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