

Reprinted from THE PHARMACOLOGIST
Vol. 2, No. 2, FALL 1960
Printed in United States of America

EFFECTS OF PSILOCYBIN ON WEB-BUILDING BEHAVIOR OF SPIDERS.
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Six g/kg synthetic psilocybin (from Sandoz Pharmaceuticals) given per os in sugar water 12 hours before web-building time to 33 spiders stopped web-building completely for 24 to 48 hours. After 600 mg/kg 5% of the animals built the next day, and 11% after 300 mg/kg. Forty six Araneus diadematus Cl. spiders whose control webs had been photographed received 150 mg/kg psilocybin on 4 different days. Twenty five webs were built 12 hours later. These webs showed significantly less spiral turns (P 0.0006), less radii (P 0.03) and the webs were smaller (P 0.01). The smallest unit in a geometrical orb web, the mesh, had increased in size after the drug. The same kind of change, a wider meshed web, was measured after weights had been pasted on the spiders' backs or when spiders grew heavier in the course of their life. Comparing the changes brought about by two different means leads to the conclusion that spiders under the influence of psilocybin behave as if they were heavier. (Supported by a PHS grant).