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COMPUTER EVALUATION OF SPIDER WEB PATTERNS AS
A METHOD FOR THE STUDY OF INVERTEBRATE
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The geometric pattern of orb webs has been shown to change reliably in different ways following drug ingestion (Witt, Harvard Univ. Press, 1958) or cns lesions (Witt, Reed, Tittel, Nature, 1964). It seems likely that certain dimensions in the web pattern correspond to distinct sensory-motor functions. The more detailed the analysis of the geometric pattern for size and regularity is made, the more additional information can be gained on behavioral components. The extensive measurement and computational requirements of such an analysis have been made feasible by the use of an IBM 1620 computer. The webs of Araneus diadematus Cl. were defined by a coordinate system using central angles and the position of thread crossings. The present computer program performs Chi square and T tests on 21 parameters on an average of 5 control and 5 treatment webs of a single spider. Examples of results are presented which show the usefulness of the approach. (Supported by grants from USPHS, No. NB-01794-06, MH-06133-02).