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دراسة مورفولوجية ونسجية على الجهاز العصبي لجراد العشر
- Document Language** : Arabic
- Abstract** : The grasshopper, *Poekelocerus bufonius* (P.b.) is an orthopteran insect that feeds on the leaves and latex of the poisonous plant, *Calotropis procera* , (C.p.) .The present study was carried out to investigate the anatomical and histological structure of the central nervous system -(C n s) of P.b. , to see if it acquired some sort of protection or adaptation against the poisonous effect of C.p. that it feeds on .Different staining techniques were used in the present study. The gross anatomy of the c n s of P.b. was found to consist of the brain, the suboesophageal ganglion, three thoracic ganglia and five abdominal ganglia; it can be seen that there is similarity to nervous systems of other insects. The histological study was concentrated mainly on the metathoracic ganglion which was found to consist of outer fibrous neural sheath; peripherally distributed layer of neural cell bodies and an internal fibrous mass occupies most of the ganglion called the neuropile. The neural cell bodies are of the globular or oval shapes and are of different diameters. Four longitudinal through -tracts were described. The whole nervous system was found to be surrounded externally by a fat body sheath. It was noticed that the metathoracic ganglion, and probably the other ganglia, of the females loaded with eggs exhibits some sort of decay manifested as clear areas of fibres within the neuropile and cell bodies contain less cellular contents. The results were discussed with previous related studies.
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