

Chemical Analysis of Tissues of *Zonocerus variegatus* (L.) (Orthoptera: Pygomorphiaae) During Post-embryonic Development in Abeokuta, South-western, Nigeria.

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ABSTRACT. Changes in organic (glucose, lipids and protein) and inorganic (Na^+ , K^+ , Ca^{2+} , Cl^- and pO_2) contents of the fat body, haemolymph and femoral muscles of *Zonocerus variegatus* (L.) during post-embryonic development were investigated in Abeokuta, Ogun State, during the dry season of 2005. After the initial rise during the 1st - 3rd nymphal instars, a sharp fall in the concentration of organic substances was observed in the haemolymph and fat body of the 6th instar as well as in the femoral muscle of the 5th instar. Concentrations of anions in the tissues did not show consistent trend. The concentrations of glucose and protein were higher in the fat body than in the haemolymph or femoral muscles, while lipids and anions were generally more in the femoral muscles than in the other tissues.
