INTRODUCTION.

Nezara viridula L. was first described by Linnaeus in the Systema Naturae Ed. 10, p. 444, under the name Cimex viridulus. The species has now been placed by Amyot and Serville in the genus Nezara, having previously been given various names by different authors. The synonymy is listed by Van Duzee (Catalogue of the Hemiptera north of Mexico. Univ. California Tech. Bull. Vol. II).

The insect bears a number of common names. Drake gives "Green bug", "Tomato and Bean bug", "Southern green plant bug", "Pumpkin bug", "Green soldier bug", while Wolcott states that the name "Mary Grudgeful" is locally used in Jamaica.

The systematic position of Nezara is in the Pentatomini of the Pentatomidae. A very closely related genus is that of Acrosternum, of which the three species, marginatum, hilare, and pennsylvanicum, were usually regarded as species of the genus Nezara, until Bergroth (1914), guided by the structure of the male genitalia and the osteolar canal, defined the genus Acrosternum as distinct from Nezara, with which it had been previously regarded as synonymous. Viridula seems to be the only New World species in the genus Nezara.

The generic is given by Amyot and Serville as being "de l'hebreu 788 , azar, ceinture 788 , nezar, ceint d'un cordon, à cause de la carène ventrale qui ressemble à un cordon." The specific name viridula is from the Latin, meaning "green".

Three varieties are recognised in the literature on this species, these being smaragdula Fabricius (L. smaragdus - emerald), hepatica, Horvath (Gk. ἵερν - liver), and torquata Fabricius (L. torquatus - adorned with a neck-band).

The variety torquata Fabricius is described as being marked with yellow on the head, excepting a small distal green area, the anterior portion of the thorax, and the connexivium. As in the variety smaragdula, three yellow spots are present at the base of the scutellum.

The variety hepatica Horvath is to be distinguished by the general colour of the body being greenish brown, while the anterior portion of the head and pronotum, the scutellum towards the base, and a part of the meso-thoracic wing are pale yellow.

The variety smaragdula Fabricius is uniformly green over both
surfaces of the body, with the exception of (1) three small yellow spots developed at the base of the scutellum, (2) a median white line along the carina formed by the abdominal sterna, and (3) the fuscous tarsi, rostrum, and antennal segments 4 and 5. Of the above only the variety smaragdula has been found in Trinidad by the author, and only this variety is to be found under this species in the I.C.T.A. Entomological Collection.

THE BIOLOGY OF NEZARA VIRIDULA L.

(1) THE EGG.

The egg is cylindrical, with a flat base and a slightly curved top, forming an operculum. At the junction of the latter with the upper edge of the cylinder occurs a series of evenly spaced club-shaped chorionic processes, about thirty-two in number. The operculum and wall of the egg, which are sub-hyaline, bear a regular but ill-defined hexagonal pattern.

Measurements:

- Length of egg: 1.3 mm.
- Diameter of cylinder (including the egg walls): .8 mm.
- Diameter of operculum: .52 mm.

When first laid the eggs are creamy white in colour, and after approximately thirty-six hours assume a pink or orange tinge, while through the operculum a red T-shaped area becomes visible, this being the cephalic denticle of the embryo.

Period of incubation.

This appears to be mainly dependent on temperature, reports showing that in the Spring and Autumn in the U.S.A. the incubation period is greatly extended. In Trinidad, where temperature shows little seasonal fluctuation, the period remains fairly constant at about five days.

<table>
<thead>
<tr>
<th>Eggs. Cluster No.</th>
<th>Laid.</th>
<th>Hatched.</th>
<th>No. of days incubation</th>
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<tbody>
<tr>
<td>1.</td>
<td>Nov.10th 1933</td>
<td>Nov.17th 1933</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Dec.2nd</td>
<td>Dec.7th</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Dec.8th</td>
<td>Dec.13th</td>
<td>5</td>
</tr>
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<td>4.</td>
<td>Dec.10th</td>
<td>Dec.15th (14.00)</td>
<td>4 3/4</td>
</tr>
<tr>
<td>5.</td>
<td>Dec.14th</td>
<td>Dec.20th</td>
<td>6</td>
</tr>
<tr>
<td>6.</td>
<td>Feb.22nd 1934</td>
<td>Feb.27th 1934</td>
<td>5</td>
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