Cultured Tissue Cells

Mouse and chick embryo fibroblast passaged SPV when inoculated in lamb skin, only mouse embryo passage was able to cause a certain visible reaction in lambs and infected animals died after 14 days with specific symptoms of sheep pox infection. While no reaction was observed with chick embryo passaged material.

On challenge with virulent SPV the lambs died after 10 days of post-infection.

The fact that attempts by workers to adapt and attenuate sheep pox virus, in heterologous intact hosts and their cultured tissue cells, have failed suggests that we may have inadequate information about the physico-biological properties of the virus itself. Our attempts to adapt SPV in suckling mice and rats and adult male mice, rats, rabbits, guinea pig and chick embryo, intracranially and intratesticularly, met with failure. Similar negative results have also been reported by Angeloff (1940), Scn (1968), Orentzi (1954), and Ozcebe et al. (1958), while Trotseiko (1961) has reported success in the adaptation of a Chinese strain of sheep pox virus in chorio-allantoic membrane.

In the present studies, cultured tissue cells of mouse embryo could be infected by SPV. Passaged virus produce specific symptom of sheep pox disease in lambs preceded by death.

The authors are grateful to Dr. M. L. Dhar, Director, C.D.R.I., for providing facilities and to Dr. R. C. Pathak, Vety. College, Mathura, for the supply of virus.

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ON THE FREQUENCY OF OCCURRENCE OF PINNOETHERES SP. IN THE WINDOW-PANE OYSTER, PLACENTA PLACENTA (LINNE)

Hornell and Southwell and Chhagia, have described and figured *Pinnotheros placenta*. Silas and Alagarswamy have reviewed the available literature on the systematics, ecology, biology and ethology of the pea-crab of the genus *Pinnotheros* (Latreille) while giving an instance of parasitisation by the pea-crab *Pinnotheros* sp. on the backwater clam *Meretrix casta*. The species identification of the pea-crab presently reported is under scrutiny. The frequency of its occurrence in eighty forms of *Placenta placenta* collected from Kakinada Bay, on the east coast of India during December, 1973 is reported here. Based on the existing literature on the subject it can be said that this is the first report on *Pinnotheros* sp. in *Placenta placenta*.

A total of sixty-four out of the eighty window-pane oysters (80.0%) examined were infested with one or more pea-crabs. An analysis of the frequency of occurrence of the pea-crabs in the infested forms showed the following position:

<table>
<thead>
<tr>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of infested forms out of eighty examined</td>
<td>64</td>
</tr>
<tr>
<td>Number of forms with single crab each</td>
<td>63</td>
</tr>
<tr>
<td>Number of forms with two crabs each</td>
<td>1</td>
</tr>
</tbody>
</table>

For sex-wise occurrence and stage of development of crabs, the window-pane oysters were specially examined. The examination has revealed that there were sixty-one females and four males as follows:

| Female
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I (Hard-shelled stage)</td>
<td>Nil</td>
</tr>
<tr>
<td>Stage II (Soft-shelled stage)</td>
<td>1</td>
</tr>
<tr>
<td>Stage IV (Adult, Non-ovigerous)</td>
<td>13</td>
</tr>
<tr>
<td>Stage V (Adult, Ovigerous)</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
</tr>
</tbody>
</table>

| Male
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I (Hard-shelled stage)</td>
<td>1</td>
</tr>
<tr>
<td>Stage II (Soft-shelled stage)</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
</tr>
</tbody>
</table>

A further analysis of the single and multiple infestations by the pea-crabs in the sixty-four infested window-pane oysters examined shows the following:

| Single infestation
| No. |
|---|---|
| Total Number | 63 |
| Female-stage I (Hard-shelled stage) | Nil |
Female-stage II (Soft-shelled stage) . . 1
Female-stage IV and V (Adults) . . 59 (13 + 46)
Male-stage I (Hard-shelled stage) . . Nil
Male-stage II (Soft-shelled stage) . . 3

Multiple infection
   Double infection
   Total number . . 1
   Female-stages IV and V (Adults) . . 1 (0 + 1)
   Male-stage I (Hard-shelled stage) . . 1

The present study has shown that the number of female crabs in Placenta placenta during December, 1973 is greater than that of the males and that a large number of the females are ovigerous. In most of the ovigerous females the egg mass is light to dark brown in colour. There is presently only a single instance of double infestation.

Christensen and Mc Dermott have suggested that the "deficiency" of males may have been due to a natural death of males after copulation and also that some of them may have fallen prey to predators while moving from one oyster to another in search of females. Christensen and Mc Dermott and Silas and Alagarswamy have also reported that each double infestation consisted of one crab of each sex.

Our grateful thanks are to the authorities of the Andhra University for providing facilities to carry out the present work. The Junior author takes this opportunity to sincerely thank the C.S.I.R. for the award of a Junior Research Fellowship.

Department of Zoology, Andhra Univ., Waltair, S. Lalitha Devi.


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A NOTE ON THE PRESENCE OF "GIANT GLOMERULI" IN A SISORID CAT FISH GLYPTOTHORAX KASHMIRENSIS HORA

A histological study of the kidney of Glyptothorax kashmirensis has revealed the presence of some well vascularized "Giant glomeruli". These are randomly distributed throughout the kidney and may occur in groups of two or more at a place.

The average size of a "Giant glomerulus" is 148 x 155 micra compared to 75 x 66 micra of the normal glomeruli. While the normal glomeruli are round or oval in shape the "giant" ones are almond shaped. The "Giant glomerulus" (Phm. 1) is structurally similar to the normal glomerulus. The Bowman's capsule is lined with squamous epithelium which is also reflected on the glomerulus. The vascular and urinary poles are also present.

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PHM. 1. Photomicrograph of a "Giant glomerulus" of Glyptothorax kashmirensis.

Large well vascularized glomeruli have been reported also in yellow bull head, Ictalurus natalis. Presence of a small number of large sized glomeruli is considered to be a primitive character. It may be that, but it appears more likely that fishes like G. kashmirensis, which inhabit clear hill stream waters have evolved "Giant glomeruli" in order to increase the filtration surface and thereby solve osmoregulatory problems faced by them.

It is also noteworthy that the occurrence of "Giant glomeruli" in a small fish like G. kashmirensis, hardly weighing 12 gm on an average, is a departure from the generalisation that size and number of glomeruli varies directly with the weight of the fish.

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A STUDY ON THE FEMALE EXTERNAL GENITALIA OF HIPPOBOSCA MACULATA (LEACH)

The present paper deals with the morphology of female external genitalia of Hippobosca maculata Leach, ectoparasite of cattle and horses. The work of Theodor (1953) on the structure of genitalia in Nycteribiidae is a valuable work for reference.