NOTE

Record of Aspergillus terreus (Thorn.) (Fungi) as fish pathogen

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ABSTRACT

Aspergillus terreus a fungus found associated with some freshwater fishes namely Channa punctatus, Heteropneustes fossilis and Clarius batrachus cultured in the Gobindgarh tank of Rewa (Madhya Pradesh), India was seen to be pathogenic. The infected fishes showed grey white patches over the body. Haemorrhagic ulceratic patches were observed on the gill and skin. The infections resulted in the death of the fishes.

During the course of investigation on fungi associated with fish diseases, some diseased specimens of cultivated fish with fungal infections were observed in the Gobindgarh tank of Rewa (Madhya Pradesh) in 1990. The infected fishes showed dull grey white fungoid patches over the body. Haemorrhagic ulceratic patches were observed on the gill and skin. These infections usually resulted in the death of the host.

Microscopical examination of gill and skin scrapes stained with cotton blue showed growth of fungus. Small pieces of infected gill and skin, after crushing with glass rod in a watch glass containing water was centrifuged at 5000 R.P.M. for 3 minutes. The supernatant was subsequently centrifuged in 2% formalin solution. The supernatant thus obtained was further centrifuged in distilled water to remove traces of formalin and then transferred to sabouraud's agar medium.

Fungal colonies having distinct radial growth and velvety appearance were observed within 5 days of incubation at 25-26°C. The colony attained a diameter of 4.2 cm in 10 days. Conidial heads were long, columnar, compact and of uniform diameter throughout their length. They were 35 \mu in diameter and 360\mu in length at maturity. Conidiophores were flexuous, smooth, colourless 210 \mu, by 5\mu uniform in diameter throughout, vesicles hemispherical, dome-like and 2.2 \mu in diameter. The isolates were identified using the monographs (Nain et al., 1957; Ainsworth and Austwick, 1955; Saez, 1961; Davis and Schaefer, 1962). The fish species were identified using the key of Jhingran and Sehgal (1978). The pathogen was identified as Aspergillus
Fig. 1. Haemorrhagic ulcerative patches on the skin of *Channa punctatus*, *Aspergillus terreus* and the host as *Channa punctatus*. This confirms the pathogenicity of the fungus on fresh and healthy fishes of *Channa punctatus*, *Heteropneustes fossilis* and *Clarius batrachus*. When injured artificially on some areas of the body and inoculated with the fungus, fungal growth was observed within 26 to 40 hrs in the injured fishes and they died of infection producing dermal ulceration within 7-12 days (Table 1).

**References**


### TABLE 1. Inoculation in fishes and pathogenicity (1990-VI)

<table>
<thead>
<tr>
<th>Fishes</th>
<th>No. of fishes inoculated</th>
<th>Mycosis evident within hours</th>
<th>Death occurred within days</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Clarias batrachus</em></td>
<td>10</td>
<td>32-36</td>
<td>5-9</td>
</tr>
<tr>
<td><em>Heteropneustes fossilis</em></td>
<td>12</td>
<td>28-30</td>
<td>6-11</td>
</tr>
<tr>
<td><em>Channa punctatus</em></td>
<td>14</td>
<td>26-40</td>
<td>7-10</td>
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</tbody>
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