muscles of chick and interpreted that the decay is a consequence of motor end plate formation of the muscle fibres. They observed that the decay begins at about 16 days of incubation. On 17 days of incubation Bonichon and Begliomini and Moriconi noted by silver staining technique the formation of motor end plates. Hence, the decay in AchE activity is correlated to the formation of motor end plates. Same phenomenon is noticed in the PLD in the present study. The PLD is a fast muscle and it possesses the well-developed motor end plates. Based on the above finding it may be possible that the motor end plate differentiation is occurring in the development of PLD on the 16th day of incubation. The developmental curves of AchE (Fig. 1) activity for AID and heart are not showing the decay. It shows these muscles are not showing the end plate formation within the prenatal period chosen for comparison. Concomitantly, the ALD, being a slow muscle, shows engravpe-endings and cardiac being a specialized fibre has no end plates.

After 16 days of incubation many enzyme systems, concerned to glycogen and creatine metabolism and PO₄ potential, exhibit increasing trends in PLD. In view of the present results all these changes are correlated with the formation of motor end plate and these changes are attributable to the trophic influences of the nerve. The raising trend of AchE activity in the PLD and (to a lesser degree) in ALD indicates that the differentiation of the enzyme is myogenic in origin. When it is localized in the motor end plate, the decaying trend appears. There is a lot of histochemical evidence in support of this fact: Begliomini and Moriconi observed the AchE distribution throughout the sarcoplasm of skeletal muscles in young embryos below 10 days incubation. Mumenthaler and Engel observed the same at the same period of incubation in embryonic leg muscle fibers and reported the evidence of motor end plate formation occurring at 14th day. By the 16th day these showed that a definite localization of the enzyme can be observed in the region of the presumptive end plate: whilst in the sarcoplasm the enzyme localization is greatly reduced. This corresponds to the time at which the AchE activity was observed to decrease dramatically. Increase in eserine inhibition (Fig. 2) in PLD after 16th day may characterise the motor end plate enzyme. Hermann and Barry found that muscle proteins increase at a fairly uniform rate during 10-19 days of development in chick embryonic leg muscle. The muscles under present study also exhibited a steady increase in the total protein-unit dry weight during 16-20 days of incubation.

We thank Professor K. Pampapathi Rao, Head of the Department of Zoology, Bangalore University, Bangalore, for offering facilities and encouragement.

Department of Zoology, E. RADHA. Bangalore University, R. V. Krishnamoorthy. Bangalore, August 7, 1972.


A NEW SPECIES OF AMPHISPHAERELLA (SPIRAEALAE) FROM INDIA

In the course of their mycological survey of Coorg Forests (Mysore State) an ascomycete was encountered growing saprophythically on the common Beth plant (Calamus rotang L.) producing dark carbonaceous stromata which on critical examination was identified as a species of genus Amphisphaerella (Sac.) Kirsch., emend. Munk. This genus has been reported from India only once as A. celastrii Kale and Kale (Kale and Kale, 1970). The present fungus was, therefore, critically compared with A. celastrii as well as the type
species *A. dispersella* (Nyl.) Erikss. (= *A. amphispheeraeides* Sacc. and Speg.) and *A. vylotes* (Pers.) Munk and found to be significantly distinct in respect of gross morphological characters, dimensions of asci and ascospores and host relationship (Table I), thus justifying its accommodation

**Table I**

<table>
<thead>
<tr>
<th>Species</th>
<th>Host</th>
<th>Perithecia</th>
<th>Asci</th>
<th>Ascospores</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Amphisphaeraeides</em> (Nyl.) Erikss. (= <em>A. amphispheeraeides</em> Sacc. and Speg.) (type species)</td>
<td><em>Pyrgus</em> sp.</td>
<td>250-350 μ in diam.</td>
<td>90-120 x 10-12 μ non amyloid</td>
<td>20-22 x 8-1 μ with (3-) 4 (-several) germ-pores</td>
</tr>
<tr>
<td><em>A. vylotes</em> Munk (Pers.)</td>
<td><em>Ionecris</em> sp.</td>
<td>260-400 μ in diam.</td>
<td>120-170 x 11-13 μ amyloid</td>
<td>Ellipsoid with slightly flattened on both sides, with 4 equatorial germ-pores, 15-25 x 7-14 μ</td>
</tr>
<tr>
<td><em>A. vylotes</em> Kale &amp; Kale</td>
<td><em>Calospermus paniculatus</em> Wild.</td>
<td>180-225 μ</td>
<td>130-144 μ long</td>
<td>Wall with a spiral hyaline band and equatorial germ-pores, 21-25 x 10-11 μ</td>
</tr>
<tr>
<td><em>Amphisphaerea</em> sp. (under study)</td>
<td><em>Calospermus rotang</em> L.</td>
<td>256-400 μ</td>
<td>80-100 μ</td>
<td>Wall with a transverse hyaline band and equatorial germ-pores, 10-16 x 5.5-6 μ</td>
</tr>
</tbody>
</table>

in a new taxon. The fungus is, therefore, presented here as a new species with the following Latin diagnosis:

*Amphisphaerea petrakii* sp. nov.

Perithecia atra, solitaria, innate-erumpentia, ostiolo papilliformi, 256-400 x 144-224 μ; asci cylindracei, octospori, amyloidei, unitunicati, 80-100 x 8-12 μ; paraphyses filiformes, hyalines, inramosi; ascosporeae fusco-brunneae, continuae, ovales vel elipsoidae, monostichae, viitatae transversales hyalinae, et

The genus *Amphisphaerea* (Sacc.) Kirschst. was placed in Xylariaceae by many authors (Arx and Mueller, 1954; Dennis, 1955; Munk, 1957). The distinctive feature of this genus is the presence of pores over equatorial hyaline band of the dark brown ascospores. Thus the ascii and ascospores are not typically Xylaroid and, therefore, this genus has been subsequently transferred to the family Amphisphaeriaceae (Eriksson, 1966). The present species, therefore, constitutes a second known report from India.

The species is described after Prof. Dr. Franz Petrák (Wien, Austria) for his outstanding contributions in the field of Mycology.

The authors are highly grateful to Prof. M. N. Kamat for his valuable suggestions and to the Director for the laboratory and library facilities.

Fig. 1. A. Habit, B. V.S. through the ascocarp; C. Ascus; D. Ascospores.

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