

SHORT SCIENTIFIC NOTES

A New Method of Staining Tissue Sections with Giemsa Using Common Rosin

This method has been found suitable to detect protozoa in the tissue sections, eg., exoerythrocytic schizonts of malaria parasites in the liver, lung or in the kidney. This staining method has been proposed to be named as Giemsa-rosin. Bray and Garnham (1962) used Giemsa-Colophonium method for staining protozoa in tissue sections.

For Giemsa-rosin method the tissue should be fixed in Carnoy's fixative and the sections should not be thicker than 7 μ .

Staining procedure :

The sections are deparaffinised and brought down to tap water and the sections are left for 5 minutes in a weak solution of liquor Ammonia at pH 7.2. The sections are then transferred to the staining solution.

The composition of the staining solution is as follows :

adjusted to pH 7.2 with drops of liquor ammonia

On p. 603, 1st column, after the para "The composition of as follows : ' please read—

- | | | |
|-------------------------|----|--------|
| 1. Conc. Giemsa's stain | .. | 8 ml. |
| 2. Methanol | .. | 5 ml. |
| 3. Acetone | .. | 5 ml. |
| 4. Distilled water | .. | 50 ml. |

Also read the names of Authors as N. L. Pal and B. Dasgupta.

1. Bray, R. S. and Garnham, P. C. C. *Indian J. Malar.*, 1962, 16, 153.

Prodajus ovatus Pillai (Isopoda) Parasitic on a New Host

Bopyrid parasites (family Dajidae) commonly infect Mysids and Euphausiids. In India there is only a single observation by Pillai¹. Species belonging to the genus *Prodajus* are found parasitic on different *Gastrosaccus* species. Pillai¹ has described *Prodajus gastrosacci* from *Gastrosaccus simulans* and *Prodajus*

ovatus from *Gastrosaccus muticus* in the planktons of Tarvancore coast.

Gastrosaccus simulans occurring in the intertidal area at Porto Novo was found infected with Dajid parasites having symmetrical and indistinctly segmented body and reduced pleopods in the female. The highly enlarged anterolateral parts of the peraeon and the drawn out posterolateral parts of lamella present in the parasites collected from *G. simulans* in Porto Novo easily distinguish it as *Prodajus ovatus* described by Pillai¹. *G. muticus* has not been so far collected from the waters of Porto Novo. *Prodajus ovatus* occurs on *G. simulans* on the southeast coast of India at Porto Novo while it has been reported from *G. muticus* on the southwest coast of India at Trivandrum.

We are grateful to Prof. R. Natarajan, Director, Centre of Advanced Study in Marine Biology, Porto Novo, for his keen interest and guidance in our work.

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New Additions to Soil Mycoflora

During the course of investigation of soil mycoflora of a sal forest of Varanasi, two fungal forms, viz., *Beltrania rhombica* (Penzig) Subram¹ and *Beltraniella portoricensis* (Stevens) Pirozynski² were isolated. These two fungi have not so far been reported from the soil.

Beltrania rhombica (Penzig) Subram.

Colonies on Czapek-yeast extract agar light brown to olive, reverse greenish black. Setae arise from the stroma which are dark, stout and septate 10-135 \times 3.5-5 μ in size. Conidiophores arise in groups from the base of the setae, 35-140 \times 3-4.5 μ and bear hyaline and oval separating cells, 4-12 \times 3-4.5 μ in size. Conidia are olivaceous green, biconic with a hyaline band on their broadest part, 21-25.5 \times 7-10.5 μ ; their proximal end is V-shaped and distal end furnished with a hyaline seta 7-10 μ in length.

Beltraniella portoricensis (Stevens) Pirozynski

Colonies on Czapek-yeast extract agar pale olivaceous grey to dark brown, reverse black. Setae are olive brown septate branched and 160-400 \times 3.25-3.5 μ in size. Conidiophores arise as lateral

branches from the setae just below the septum, are thin walled bearing separating cells $10-18 \times 3.2-3.5 \mu$. Conidia are acrogenous smooth walled, sub-hyaline, $17.5-21.0 \times 5.2-7.5 \mu$, having a hyaline band at their broadest region.

This specimen has been deposited in C.M.I., herb No. IMI 175124.

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1. Pirozyrski, K. A. and Patil, S. D., *Cand. J. Botany*, 1970, 4^o (3), 567.
2. Subramanian, C. V., *Hyphomycetes*, ICAR, New Delhi, 1971, p. 888.

Some New Leaf Spot Diseases

During the year 1975-76 the authors have observed three leaf spot diseases, caused by pathogenic fungi in the local botanical garden. The pathogens causing diseases were isolated separately by the usual methods. The cultures of different fungi were identified and have been deposited in the Botany Department, Bhagalpur University. The morphological characters of the organisms were similar to those of type species. The symptoms of the diseases are given below:

Alternaria alternata (Fr.) Keissler produced dark brown necrotic spots on the leaves of *Melia azadirachta* Linn. The lesions were irregular in shape and 2-5 mm in diameter. Concentric rings of conidial mass appeared on the older spots.

A leaf spot of *Mimusops elengi* Linn. incited by *Epicoccum purpurescens* Ehrenb. was observed during January and February 1976. The spots were marginal, light reddish brown and 10-15 mm in diam.

The severe anthracnose disease on the leaves of *Cinnamomum tamala* F. Nees. caused by *Colletotrichum gloeosporioides* Penz. was noticed during October 1975. The lesions usually started from tips and proceeded downward marginally. The diseased area was drab brown and covered the entire surface of the leaf.

The pathogenicity tests on their respective hosts were found to be satisfactory. The above-mentioned diseases are new records from India¹⁻⁴.

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Trace Element Nutrition of Mushroom *Pleurotus sajor-caju* (Fr.) Singer

The trace element requirements of cultivated mushroom (*Agaricus bisporus*) have already been studied^{1, 4}. The information regarding the trace element nutrition of other edible fungi is rather lacking. The present information deals with the trace element nutrition of *Pleurotus sajor-caju* which is a well-known edible mushroom and is considered a delicacy.

Five trace elements (ferrous sulphate 2 ppm, zinc sulphate 1 ppm, manganese sulphate 0.5 ppm, molybdenum as ammonium molybdate 3 ppm and boron as potassium bromide 5 ppm) were tried to see their effect on the growth of the mushroom. Trace elements present in various analytical grade chemicals as impurities were removed by the Steinberg's method². The pH of the basal medium (Czepek Dox) was adjusted to 5.6 and 5 ml of mycelial suspension was used for inoculation. The inoculated flasks were incubated at 25°C and mycelium harvested after 12 days.

Addition of ferrous sulphate individually resulted in the maximum growth and this was followed by zinc sulphate. When ferrous sulphate and zinc sulphate were added in different concentrations (0.1, 1, 5, 10 ppm) individually as well as collectively, maximum dry mycelial weight was harvested when mixture of ferrous sulphate and zinc sulphate was used in various concentrations. Addition of ferrous sulphate singly yielded maximum growth at a concentration of 10 ppm/l. But zinc sulphate upto a concentration of 1 ppm/l. increased growth and at higher (5-10 ppm/l.) concentrations there was no appreciable increase in growth. The present observations are in good agreement with the findings of Humfeld and Sugihara² in the case of *Agaricus campestris*.

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