season, no trace of the plant could be seen above ground. The tubers, called in the Telugu language "Potha Jougu Nimayalu", are eaten by local people.

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STRUCTURE AND ONTOGENY OF STOMATA ON THE PERICARP OF ANETHUM GRAVEOLENS LINN.

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While literature regarding stomata on vegetative parts in Umbelliferae is available, information regarding the stomatal studies on floral parts is meagre. The present paper deals with the structure and development of stomata on the pericarp of Anethum graveolens Linn.

Study of peel mounts of pericarp has revealed three types of stomata: Aperigenous, Anisomesoperigenous and Diamesoperigenous (Figs. 1-4). The eįidermal cells are polygonal or rectangular elongated in various directions (Fig. 1). Stomata are oval and elliptical in shape with average size $18.75 \times 14.87\mu$. The stomata are located at level with the outer eįidermis having sub-stomatal cavities (Fig. 12). The meristemoids lie amongst the eįidermal cells with dense cytoplasm and conspicuous nuclei (Fig. 5).

In Aperigenous type, the meristemoid cell cuts off no subsidiary cell but metamorphoses directly into a guard mother cell. The latter undergoes a vertical division giving rise to two guard cells (Fig. 9). The stomata thus formed are surrounded by 4 to 5 eįidermal cells (Figs. 3-4).

In Anisomesoperigenous type, the meristemoid cell divides by a curved wall resulting in a smaller triangular and a larger rectangular cell (Fig. 6). The larger rectangular cell metamorphoses into a subsidiary cell which is, thus, mesogenous in origin. The other two subsidiary cells are contributed by the eįidermis and are, therefore, perigenous. Central cell (g.m.c.) undergoes division by a straight wall resulting in a pair of young guard cells. The division of the g.m.c. may be at right angles to the mesogene, parallel to it (Figs. 7, 8) or in between the two, thus resulting in different orientation of the guard cells (Fig. 1). Eventually the young guard cells assume the characteristic crescentic shape.

In the case of Diamesoperigenous stomata, the meristemoid divides by a curved wall into two cells, the smaller one behaving as g.m.c. and the larger forming the first subsidiary cell (Fig. 10). The second subsidiary cell is perigenous in origin (Figs. 10-11). The g.m.c., enlarges and forms two young guard cells by a single vertical division (Fig. 11).

The stomatal index and stomatal frequency are 10-5% and 56-8% per mm$^2$ and the percentage of Aperigenous, Anisomesoperigenous and Diamesoperigenous stomates is 55-5, <0 00, 12-6 respectively.

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A NEW RACE OF XANTHOMONAS MALVACEARUM IN INDIA

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EIGHTEEN races of Xanthomonas malvacearum (E. F. Smith) Dows. have been identified (Hunter et al.; Verma and Singh; Hussain and Brinkerhoff). Out of them 15 races, viz., 1-8, 10, 11, 13-16 and 17 have been reported from India (Srinivasan and Tanek); Verma and Singh; Singh et al.). This note deals with the distribution of races in Maharashtra and Tamil Nadu during 1975-76 and a new race, hitherto unreported.

A number of isolates of this pathogen was obtained from diseased cotton leaves collected from different cotton growing areas in Maharashtra and Tamil Nadu during 1975-76 at C.I.C.R. Regional Station, Coimbatore (Tamil Nadu). The isolates were screened for the presence of races on a set of differential cultivars developed by Hunter et al.). The isolates from Maharashtra belonged to races 10 and 13, while those from Tamil Nadu were identified as 7, 10, 13, 14, 16 and a new one. The new race was isolated from Gossypium hirsutum varieties, namely, AV 2249 and MCU 5, and G. hirsutum × G. barbadense hybrids namely, CBS-156 and Varalaxmi. This was pathogenic to six differentials, viz., Acaca 44, Stoneville 20, 20-3, 1-10 B, Mebane B-1 and Gregg, but non-pathogenic to Stoneville 2 B-S9 and 101-102B. This reaction of differentials is not exhibited against any of the eighteen races described so far, hence this is a new race. Verma and Singh revised the system of Hunter et al.) for naming the races. They proposed the classification of 32 races based on reactions of five differentials, namely, Stoneville 20, Stoneville 2B-S9, 20-3, 1-10 B, and Mebane B-1, leaving Acaca 44, a universal susceptible and 101-102B, a resistant differential. If this revised system is followed, the races observed in Maharashtra will be 1 and 32 and in Tamil Nadu 1, 28, 29, 30 and 32. The new race will be 31. This race was equally pathogenic when inoculated artificially to cultivars like Lakshmi, MCU 5 and Sujata.

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ON THE OCCURRENCE OF ICHNOCENUS ICHNYSPICA LINCK FROM UPPER JURASSIC JAISALMER SERIES, RAJASTHAN

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Gupta et al. have reported occurrence of Nereites, as a fossil Polychaeta (Annelida) from the Jaisalmer Series of Upper Jurassic rocks of Rajasthan. Since the name Nereites Macleay is preoccupied for an ichnogenus described as a meandering, grazing trail, their choice of this name for body fossil of a Polychaetes worm is erroneous. What Gupta et al. have described as a body fossil is in fact a repitichial trail belonging to ichnogenus Ichnyspica Linck as given by Haentzkels.

Ichnogenus Ichnyspica: Linck 1949

Ichnyspica guptai ichno sp. nov. (Fig. 1)


Dimensions: Width of trail 1 cm. Markings per cm 7.

Repichiral trail preserved as positive epirelief having straight, sharp projections on both the sides of a median rib, resembling the teeth of a comb. These projections are distorted and unevenly spaced where the turn is executed; otherwise they are opposing each other and well separated. The ends of projections are directed in the direction of propagation of the animal. What Gupta et al. have imagined to be tentacles are the drag marks of posterior end or the tail portion of the animal,