SHORT SCIENTIFIC NOTES

A First Report of *Curvularia brachyspora* Boedijn Inciting Leaf-Spot Disease of Rose

During a survey for diseases caused by genus *Curvularia* several rose plants growing in the garden of Horticulture Department, Agriculture College, Poona, were found to be severely affected by leaf-spot disease. A critical microscopic observation revealed that it was due to *Curvularia* sp. The symptoms were on leaves only. There were irregular light black spots from margin to midrib. The spots increased in size, affected leaflets turned yellow, then started withering and in some cases finally shed off after drying. Isolations from such affected leaf-spots yielded a species of *Curvularia*. In artificial inoculation tests, the fungus was found to be pathogenic. Host range studies showed that the fungus was pathogenic on Bajra, Sorghum cultivars, CSH–1, CSH–2 and Swarna, Paddy, Sugarcane, blue panic (*Panicum antidotale* Retz.) Marverl 93 (*Dichanthium caricosum* A. Genus.), thin napier (*Pennisetum-polystachyon* Schult.), Grape, Soybean, Cotton (*Gossypium abroreum* L.), Ginger, Gladiolus, Pinus (*Pinus pumula* Regel), Screw pine and *Cynodon dactylon* Pers., out of thirty three hosts tested besides its own host.

The description and measurements of the test fungus very nearly resemble those of *Curvularia brachyspora* given by Ellis[1] whose measurements of conidia were 19–26 (22) μ × 10–14 (12) μ and hence the fungus was identified as *Curvularia brachyspora* Boedijn. The leaf-spot disease of rose incited by *Curvularia brachyspora* Boedijn has been reported for the first time in India.

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Rare Occurrence of *Amphiprion percula* (Lacepède) Eggs in the Gut Contents of *Ambassis commersoni* (Cuvier)

Observations on the food and feeding habits of *Ambassis* spp. are very limited[1,2]. During our study on the feeding habits of *A. commersoni,* the stomach contents proved that this species is a plankton feeder, feeding mainly on mysids of prawn, adults of *Acetes indicus,* copepods and rarely on diatoms. However, in 2 specimens out of 15 captured (45·0–57·0 mm Std. length) during January 1975, the stomachs were filled with 200 and 290 eggs of *Amphiprion percula.* These eggs were identified by their elongated shape with an average length of 2·2 mm, a narrow perivitelline space and one big and a number of smaller oil globules[3]. Partly spawned *A. percula* were also obtained in large numbers in cast-net catches in the Vellar river mouth coinciding with the occurrence of eggs.

A. percula is a pelagic fish with demersal eggs and *A. commersoni* is a plankton feeder and it was therefore puzzling to find the eggs of *A. percula* in the stomach of *A. commersoni.* A Similar instance of *A. gymnocephalus* feeding on mullet eggs has been reported from Chilka lake[1]. May be that *A. commersoni* descended to the bottom for feeding as instances of a pelagic fish feeding on bottom organisms are not rare[4]. Problems of distinguishing between generalized and selective feeding are considerable[5]. It is difficult to decide in this instance between selective and indiscriminate feeding.

We are thankful to Dr. R. Natarajan, Director, Centre of Advanced Study in Marine Biology, for encouragement. One of us (K.V.) grateful to the U.G.C., for the award of a Junior Research Fellowship.

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Flower Bud Rot of Marigold (*Tagetes erecta* L.) Caused by *Alternaria dianthi* Stevens and Hall in West Bangal

There are a few *Alternaria* species occurring on various parts of the marigold plant (*Tagetes erecta* L.). The two reported *Alternaria* species pathogenic to marigold, in India are *A. Zinnae* Pape[1] and *A. tagetica* Shome and Mustafee[4]. Both the species cause blighting of leaves and flowers. The infections of *A. tagetica,* have further been reported to be systemic[4]. Recently, a dry rot of developing flower buds of marigold (var. Sutton's Climax, F_1, hybrid mix.) has been seen to be caused by *Alternaria dianthi* Stevens and Hall.

Infections were obtained during the months January to March, 1975. Young, flower buds showed dry rotting with characteristic brown, scorched, necroting discolouration of the sepals and peduncle. The ray and disc florets were also infected and turned brown. At later stages the buds were shrivelled, turned deep brown to black and dried up. Symptoms were less prominent on more matured buds, which however, failed to open, and there was hardly any infection on the flowers already in bloom. A few deep brown, necrotic spots developed on the older leaves towards their margin and tips and were confluent. The symptoms were, however, more prominent on the floral parts. The fungus brought into pure culture from single spores proved to be pathogenic to the leaves and buds of marigold, on spray inoculation by conidia.

Colonies of the fungus on PDA were dark olive-brown with moderate development of air mycelium of paler colour. The conidiophores were straight to curved, septate, pale brown, upto 112 μ long and 5–8 μ broad. Conidia, formed in short chains of 2–4, were straight to slightly curved, conical to obclavate or elliptic, olivaceous brown, darker when old, measuring 13·5–64 $\mu \times$ 8·5–22 μ, with a maximum of 10 transverse and 6 longitudinal septa; Beak not very prominent, short, often swollen at the tip, concolourous with the main body of conidium.

On the basis of its salient characteristics as compared to the type descriptions of the species[2,3], the fungus was identified as *Alternaria dianthi* Stevens and Hall. The species is widely different in its conidial characters including size measurements from the other two species of *Alternaria* reported from India as pathogenic to marigold. *Alternaria dianthi* though generally is restricted to the members of caryophyllaceae, can also infect other hosts[2]. This is the first record of its occurrence on marigold (*Tagetes erecta* L.) in India. The culture is deposited with the Indian Type culture collection at IARI, New Delhi, under ac. No. 1982.

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Additional Hosts for *Pseudomonas solanacearum* Smith

Pseudomonas solanacearum, the incitant of bacterial wilt disease, attacks an extremely wide range of host plants belonging to different families[1-3]. During the course of a study for natural occurrence of this disease on different hosts, three weed plants, *viz., Phyllanthus niruri* L. (Euphorbiaceae), *Cleome monophylla* L. (Capparidaceae), and *Acanthosperma hispidum* L. (Acanthaceae) were noticed showing wilt symptoms in wilt sick plots of tomato and brinjal at Hessaraghatta. Examination of the root and stem cuttings of the infected plants revealed typical bacterial streaming from the cut ends. The pathogen was isolated on Triphenyl tetrazolium chloride agar medium[2] and the pathogenicity was confirmed on the respective host plants by stem inoculation[3] with 48 hour old culture of the isolates. These were also pathogenic on tomato (var. Pusa Ruby) and brinjal (var. Pusa Purple Long). The disease symptoms appeared late (20–25 days) in all the three weed hosts compared to tomato and brinjal (7–10 days). Under natural conditions, of infection, wilt incidence was more on *P. niruri* and *C. monophylla* than on *A. hispidum.* Further, *P. niruri* was also found as a symptomless carrier of the pathogen.

Out of the three weed hosts, *P. niruri* has been reported earlier as a host under natural conditions[4] and our findings are in conformity with this report. The other two weeds, *C. monophylla* and *A. hispidum* are new additions to the host range of *Pseudomonas solanacearum.*

The authors are grateful to Dr. G. S. Randhawa, Director, for his interest and encouragement. Thanks are also due to Dr. D. Leela of Plant

Physiology Division, for help in the identification of the weeds.

Indian Institute of Horticultural Research, Bangalore, *August* 21, 1975.

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Occurrence of Bajara Mosaic in U.P. (India), with *Myzus persicae* Sulz. as an Additional Vector

In July, 1973, a mosaic disease (incidence of 3–6%) has been observed on Bajara [*Pennisetum typhoides* (Burm. f.) Stapf. and C. E. Hubb] near Faizabad (U.P., India). The infected plants were stunted, with the leaves showing severe mosaic consisting of broken, chlorotic streaks of varying sizes.

The disease was sap transmissible to *Cynodon dactylon* L., *Dactyloctenium aegyptiacum* Willd., *Eleusine coracana* L., *Panicum miliaceum* L., *Paspalum scrobiculatum* L., *Setaria italica* (L.) Beauv., *Oryza sativa* L. var. IR–8, and *Zea mays* L. But attempts to infect *Arundo donax* L., *Triticum aestivum* L., *Hordeum vulgare* L., *Saccharum officinarum* L. var. B.O. 14, CO. 740, *Nicotiana tabacum* L., and *Phaseolus vulgaris* L. were unsuccessful.

The virus showed dilution end point in between 1 : 500–1 : 1000, and a thermal inactivation point in between 55–60° C (when heated for 10 minutes). Longevity *'in vitro'* varied from 12–16 hours at room temperature (30 ± 1° C).

The virus was transmitted in a stylet-borne manner from artificially infected maize to maize by the aphid *Rhopalosiphum maidis* Fitch. up to 40% and by *Myzus persicae* Sulz. up to 30%. However, *Aphis craccivora* Koch. could not transmit this virus.

On the basis of symptomatology, host range, physical properties and aphid vectors, the virus has been identified as Bajara Mosaic Virus reported by Seth *et al.*[1]. *Myzus persicae* Sulz. has now been shown to be an additional vector.

The author is thankful to Dr. R. S. Tiwari, Principal, K. S. Saket, Post-Graduate College, Faizabad (U.P.), for providing the necessary facilities during the present investigation.

Department of Botany, K.S. Saket Post-Graduate College, Faizabad (U.P.), *August* 27, 1975.

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A New Post-Harvest Disease of Pomegranate in India

During the survey of different fruit markets of Rajasthan, large number of pomegranate fruits were found to be rotting due to *Alternaria solani* in November, 1974. It was observed that this fungus causes considerable damage during storage and transit. Generally the infection was common in cracked fruits. The symptom of the fruit rot was characterised by the development of light-brown spots, which gradually changed to dull-brown. Later on, due to severe infection, the fruits became pulpy. The grains of the infected fruits became greenish and eventually turned dark due to sporulation of the fungus. Rotten fruits emitted fermented odour.

Pathogenicity of the organism was confirmed by inoculating the fruits by Granger and Horne's method[1] and also by spraying the conidial suspension of the organism over the injured and uninjured fruits. Only injured fruits developed typical symptoms. Reisolations made from artificially infected fruits yielded pure cultures of *Alternaria solani*. This fungus disease of pomegranate has not been reported in literature so far.

The senior author is grateful to C.S.I.R., New Delhi, for the award of Post Doctoral Fellowship and to Prof. H. C. Arya, Head, Department of Botany, for providing laboratory facilities.

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