

parts of the brinjal by the method as described by Asha Ram and Lele² for pathogenicity test failed to cause infection.

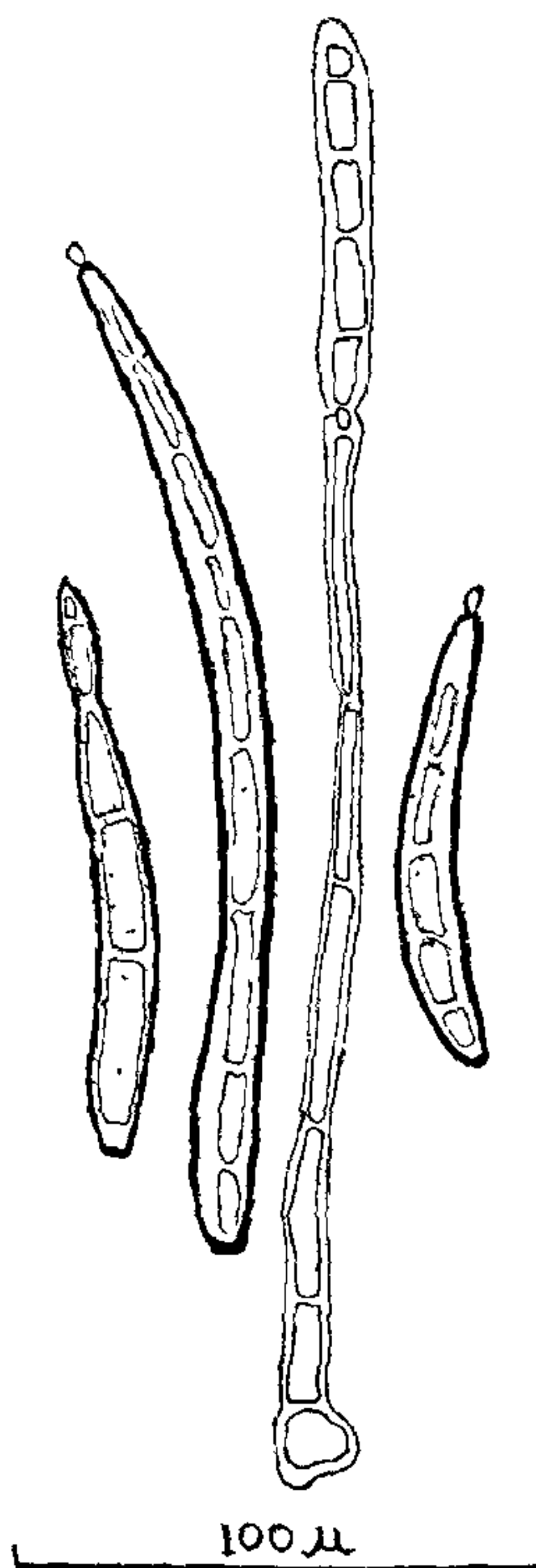


FIG. 2. *Corynespora cassicola*; Conidia and conidiophore.

On artificial inoculation, the fungus infected fruits of 36 varieties of brinjal and tomato but could not infect fruits of banana, apple, orange, citrus, pea pod, potato tuber and carrot root.

The seeds from naturally rotten fruits of brinjal variety Pusa Kranti were collected and isolations made from seed coat, embryo and endosperm by standard methods revealed the absence of the fungus in the seed.

The fungus studied herein on the basis of morphological and taxonomic characters as described by Wei⁵ was identified as *Corynespora cassicola* (Berk. and Curt.) Wei, culture of which has been deposited at CMI, England (IMI 182694). The fungus has been recorded for the first time causing

fruit rot of brinjal. Earlier the fungus was recorded on fruits of tomato, cucumber and papaya (Wei⁵) and caused leaf spot of brinjal but not fruit rot (Asha Ram and Lele²). Since the present isolate did not produce any leaf spot on brinjal it may be a different strain of *C. cassicola* described by Asha Ram and Lele². Agarwal¹, Munjal and Gill³, Thirumalachar and Lacy⁴ and many others have also reported this fungus on several other plants in India.

Since the disease is soil-borne, a three years crop rotation with non-susceptible host may be followed to prevent the disease.

Thanks are due to Director, CMI, England, for confirming identification of the fungus.

Department of Botany and G. S. DUBEY,
Plant Pathology,
Himachal Pradesh University,
Agricultural Complex, Solan (H.P.),
June 14, 1975.

1. Agarwal, G. P., *J. Indian bot. Soc.*, 1961, 40, 404.
2. Asha Ram, and Lele, V. C., *Indian Phytopath.*, 1968, 21, 347.
3. Munjal, R. L. and Gill, H. S., *Ibid.*, 1962, 15, 269.
4. Thirumalachar, M. J. and Lacy, R. C., *Sydowia*, 1951, 5, 124.
5. Wei, C. T., *Mycological Papers*, CMI, Kew, 1950, No. 34, p. 5.

EVOLVING BREEDING SYSTEM IN RAI (*BRASSICA JUNCEA*)

RAI (*Brassica juncea*) is a predominantly self-pollinating oilseed crop. Its low recombination potential resulting from the self-fertilizing system of mating is a major deterrent limiting the speed with which desirable genetic materials from diverse sources could be brought together, whether for heterosis breeding or for recombination breeding. Any biological device, therefore, promoting outbreeding will have an important bearing on the breeding efficiency of self-pollinating crops. This note is to report on an Advanced Stigma mutant (a device promoting outbreeding) that we isolated in 1974-75 season in an appressed pod accession of rai germ-plasm collection.

There was substantial intra-plant variation in the degree of stigma advancement (Fig. 1). The Advancement Index (ratio of pistil length above corolla tip/corolla length) ranged from 0.15 to as high as 0.71, with a mean value of 0.503. Unlike normal plants, the flower buds of the mutant displaying protruding stigma in the evening were found as such the next morning, or, if the buds had opened into flowers, corolla and anthers held

the lower levels than their corresponding stigmas. Occasionally, it was observed that the fertilization had taken place; the silique development had started but anthers of that flower had not dehisced yet (Fig. 1). All the flower buds with advanced stigma did not necessarily open into flowers the next day: the time taken for flower opening in some cases was as high as four additional days. Also the flowering sequence in some of the inflorescences did not strictly follow the normal pattern of acropetal succession. The advanced stigma plant was presumably late in flowering and matured three weeks later than the normal plants of the accession.



FIG. 1. Intra-plant variation in the degree of stigma advancement. The leftmost flower with corolla removed shows the failure of anthers dehiscence even after the fertilization has taken place.

Unlike the advanced stigma mutants reported by Singh¹, and Asthana and Singh² where all the flowers uniformly displayed advanced stigmas, the frequency of advanced stigma flowers in this mutant was approximately 67%, which cannot ensure the production of pure hybrid seeds. However, it may foster composite breeding to upgrade the populations for complex traits. In essence, this morphological device would work like the physiological system of partial male sterility reported in barley^{3,4}.

Department of Genetics and
Plant Breeding,
Banaras Hindu University,
Varanasi, May 27, 1975.

K. N. RAI.
R. B. SINGH.

1. Singh, D., *Indian Oilseeds Journal*, 1959, 111, 95.
2. Asthana, A. N. and Singh, C. B., *Sci. & Cult.*, 1964, 29, 151.
3. Suneson, C. A., *Agron. J.*, 1956, 48, 188.
4. Jain, S. K. and Suneson, C. A., *Nature*, 1963, 199, 40 f.

A NEW SPECIES OF *AMORPHOIDEA* (CURCULIONIDAE COLEOPTERA) INFESTING COCONUT INFLORESCENCE

DURING November 1973 small weevils of the genus *Amorphoidea* were found in large numbers on the inflorescence of coconut palms in Coimbatore and adjoining areas. The infestation is generally noticed as dark areas at the points of attachment of the lower spikelets on the central axis of the inflorescence and the grubs develop in such infested patches. The weevil is also seen in large numbers in the affected parts and among the male flowers on the inflorescence. Though slight reduction in the nut yield is attributed to the infestation of the weevil by the growers, yet; it does not appear to be a pest of importance on coconut in South India.

So far, no species of *Amorphoidea* has been reported from India infesting coconut inflorescence. However, Ekanayake² reported the association of a species of *Amorphoidea* with the inflorescence of coconut in Sri Lanka. Dr. R. T. Thompson, of the British Museum (Natural History), London, in his personal communication pointed out that the specimens of *Amorphoidea* from coconut inflorescence may relate to specimens from Sri Lanka determined by him in 1963 and further confirmed that the species has not been described. In this paper the new species has been described under the name *Amorphoidea coimbatorensis*.

Amorphoidea coimbatorensis sp. nov.

Testaceous brown, covered with very short recumbent golden setae.

Male

Rostrum: slender and 0.46 mm long, shorter than pronotum, gently curved, very gradually widening from base to apex; dorsum not flattened and with faint longitudinal striae with confluent punctures. **Antennae**: testaceous brown inserted beyond the middle of the rostrum. **Prothorax**: transverse, 0.63 mm long and 0.46 mm wide, gradually narrowing from base and sharply constricted towards the anterior portion; distinctly constricted at the apex, sub-truncate at the base and apex, the dorsum gently convex longitudinally, with dense fine shallow sub-reticulate punctures throughout. **Elytra**: broadly ovate, with well marked closely punctate striae, the intervals much broader than striae, finely rugulose. **Legs**: devoid of any tooth, all femora expanded, apex of tibiae and tarsi densely hairy. **Sternum**: elevated.

Genitalia (Fig. 1): **Penis**: elongate, chitinized, slightly concave on the dorsal side, twice as long as wide, sides sub-parallel up to apical margin, apical margin gradually sloping and depressed.