range from 5·5 to 11·5 μm by 3·5 to 5·5 μm; optimum temperature between 30° and 40° C. Besides the study of morphology, its ability to decompose cellulose, hemicellulose and keratin was also tested. It was found to be a good keratinolytic fungus, growing profusely on strands of human hairs, but was a weak utilizer of cellulose and hemicellulose.

The genus is being reported for the first time in India.

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A NEW LEAF SPOT DISEASE OF AILANTHUS EXCELSA ROXB.

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A SERIOUS leaf spot disease of *Ailanthus excelsa* Roxb. (Family Simaroubaceae) was observed in August, 1979. The infection started from the middle part of the leaf-lets as small discoloured spots. Later, the spot became circular to irregular, light brown, surrounded by reddish halo. The spots were restricted by the midrib and chief veins. In advanced stage the diseased spot separated from the healthy lamina thus resulting in shot hole (figure 1).

Figure 1. Infected leaf of *Ailanthus excelsa*.

The causal organism was isolated on potato-dextrose-agar medium and was identified as a species of *Phoma* (figure 2). The cultural studies[1] were made on malt-agar, oat-agar and rice-agar and the following character were noted.

Figure 2. Pycnidia and psycnidiosporues of *Phoma medicaginis* var. *pinodella*.

Colonies on malt-agar attain a diameter of 7-8 cm after days; mycelium brownish black; pycnidia scattered, brown to black, parenchymatous, superficial to immersed, subglobose to globose, 93–233 μm in dia; pycnidiospores single-celled, hyaline cylindrical in oat-agar, globose to ovoid in malt-agar and rice-agar, 7·5 × 3·7 μm. Chlamydospores abundantly produced in chains and were highly guttulated. The characters of the present isolate agrees well with *Phoma medicaginis* var. *pinodella* Boerema, Dorenbosch and Leffring[2].

The pathogenicity of the fungus was tested by spraying the spore suspension prepared in sterile water on the foliage of two months old plants. Test leaves were covered with polythene bags to maintain high humidity for the first 24 hours. Typical leaf spot symptoms were descernible after 10 days. Reisolations yielded the same fungus identical in all respects with the original culture. The disease appears to be a new record on *Ailanthus* and described for the first time from India[3]. The culture and specimen have been deposited in herbarium of Botany Department, Govt. Science College, Jabalpur as P.P.F. No. 510.

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BASAL WOUNDING TO IMPROVE ROOTING AND ROOT GROWTH OF TEA (*CAMELLIA* L. SPP.) CUTTINGS

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VARIOUS methods, such as basal wounding, grafting and pretreatment of the propagation material with mineral nutrients, root promoting hormones, and vitamins have been in use to enhance the success of vegetative propagation of shy rooting cultivars of several orchard and plantation crops[1]. Since basal wounding of the propagation material is relatively inexpensive and has been found to improve the rooting of cuttings of apple, apricot, olive and plum[2-5], its usefulness in the rooting of tea cuttings was investigated.

The experiment was carried out using single leaf and internode cuttings of a difficult-to-root clone, UPASI-8, and an easy-to-root clone, UPASI-10, and the effect of the following treatments was investigated: (i) one split of the basal part of the internodes to a length of 1 cm at the centre of the bottom cut end; (ii) two splits of the basal part of the internodes, each split being at right angles to the other; and (iii) unwounded, control. The basal part of the internodes of cuttings was split using a sharp razor blade. The experiment was of a randomised block design, with five replications per treatment and 50 cuttings in each replication. The cuttings under the different treatments were kept for rooting on 10 October 1980 and were raised according to standard nursery practices[6].

Observations on the percentage of rooted cuttings under different treatments were recorded at the end of 12 weeks from striking, by examining 10 cuttings at random in each replicate. Additionally, the number of roots in each rooted cutting, length of roots, length of the axillary shoot, and the dry weights of root and shoot systems were recorded in five cuttings, selected at random, in each replicate.

The results indicated that in the case of the difficult-to-root clone, UPASI-8, the percentage of rooted cuttings was significantly higher under both the treatments of basal wounding, when compared with that of the unwounded, control (table 1); however, the difference between the two treatments of basal wounding was not significant. In the case of the easy-to-root clone, UPASI-10, differences in the percentage of rooted cuttings were not significant between either of the treatments of basal wounding and unwounded, control (table 1).

The number of roots per cutting, length of roots, length of the axillary shoot and the dry weights of root

TABLE 1

Effect of basal wounding on rooting and root growth of UPASI-8 and UPASI-10 cuttings

Treatments / Rooting and growth parameters	Unwounded, Control		One split at basal cut end		Two splits at basal cut end		C.D. at $P=0{\cdot}01$	
	UPASI-8	UPASI-10	UPASI-8	UPASI-10	UPASI-8	UPASI-10	UPASI-8	UPASI-10
% of rooted cuttings	40	78	76	80	78	79	34	N.S.
Mean number of roots per cutting	4	7	11	14	12	15	6	6
Mean length of each root per cutting (cm)	4·4	4·2	9·0	8·0	8·8	9·2	3·8	2·2
Mean length of shoot per cutting (cm)	4·8	5·0	9·2	8·6	9·8	7·4	3·0	2·2
Mean dry weight of the root system per cutting (mg)	31	50	54	76	63	79	21	18
Mean dry weight of the shoot system per cutting (mg)	28	49	44	82	41	84	4	25

N.S. = Not significant.