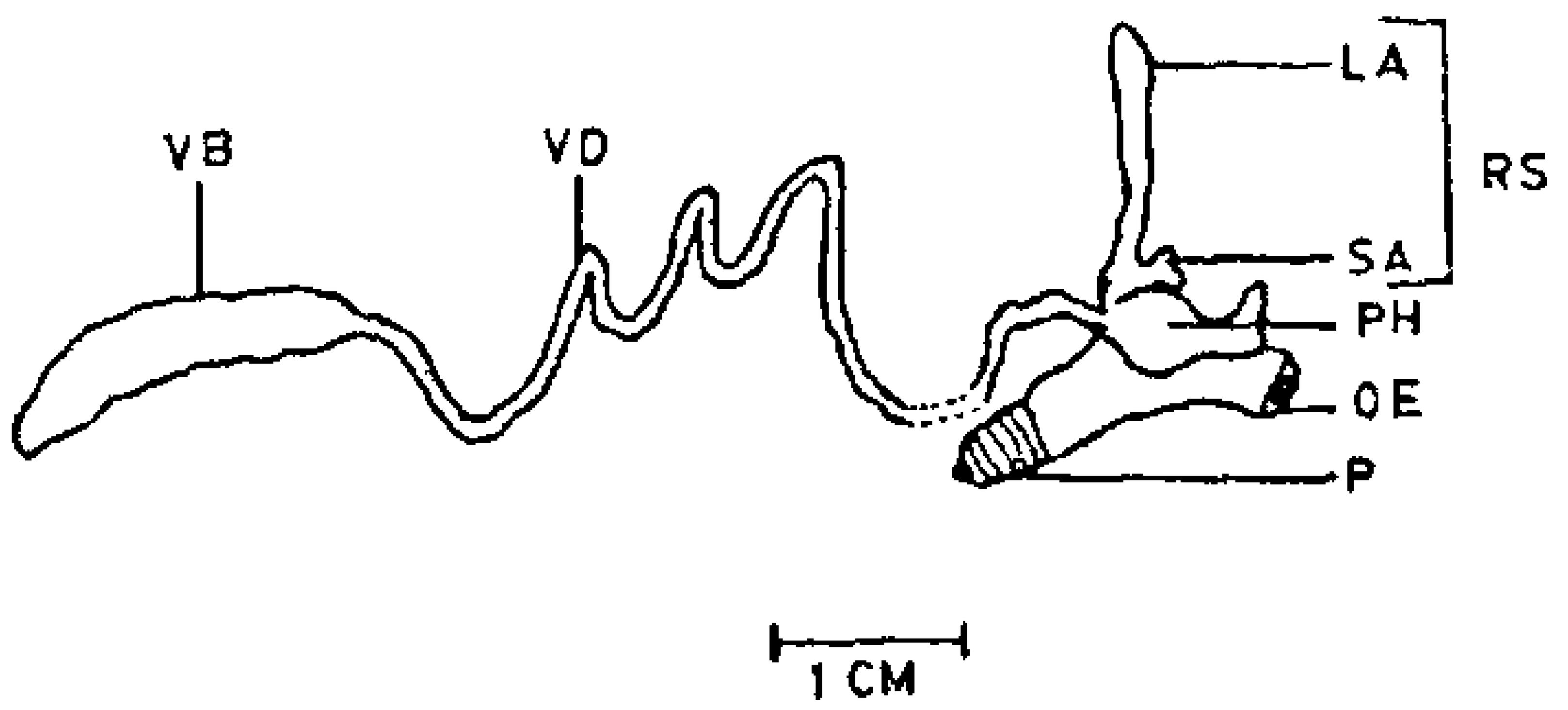

Figure 1. The venom apparatus of *Conus amadis.* LA-Long arm; OE-Oesophagus; P-Proboscis; PH-Pharynx; RS-Radular sheath; SA-Short arm; VB-Venom bulb; VD-Venom duct.

leaving from the bulb is flexible and generally flattened. The duct continues with a diameter of about 0.1 cm and passes ventrally to the right side of the pharynx to which it joins. The total length of the venom duct is approximately 27 cm in a cone having a length of 7.45 cm.

The radular sheath below the bulb is divided into an elongated dorsal long arm (0.35 cm) and ventral short arm (figure 2). Instead of having centrals, laterals and marginals as in other gastropods, this animal has all the radular teeth modified as harpoon-shaped spears (Toxoglossan type) helping in making punctures upon the tissue of the victim. The radular teeth are arranged one by one in proboscis; the first and foremost tooth points forward like a spear. While stinging, the proboscis extrudes from which the radular tooth rushes out. Hashimoto[7] reported that each tooth is used only once and if it fails to shoot the prey, a new one from the radular sheath is charged with poison. The sting of *Conus* is normally used by the animal to paralyze the prey before feeding.

The effects of toxins varied from species to species[7].

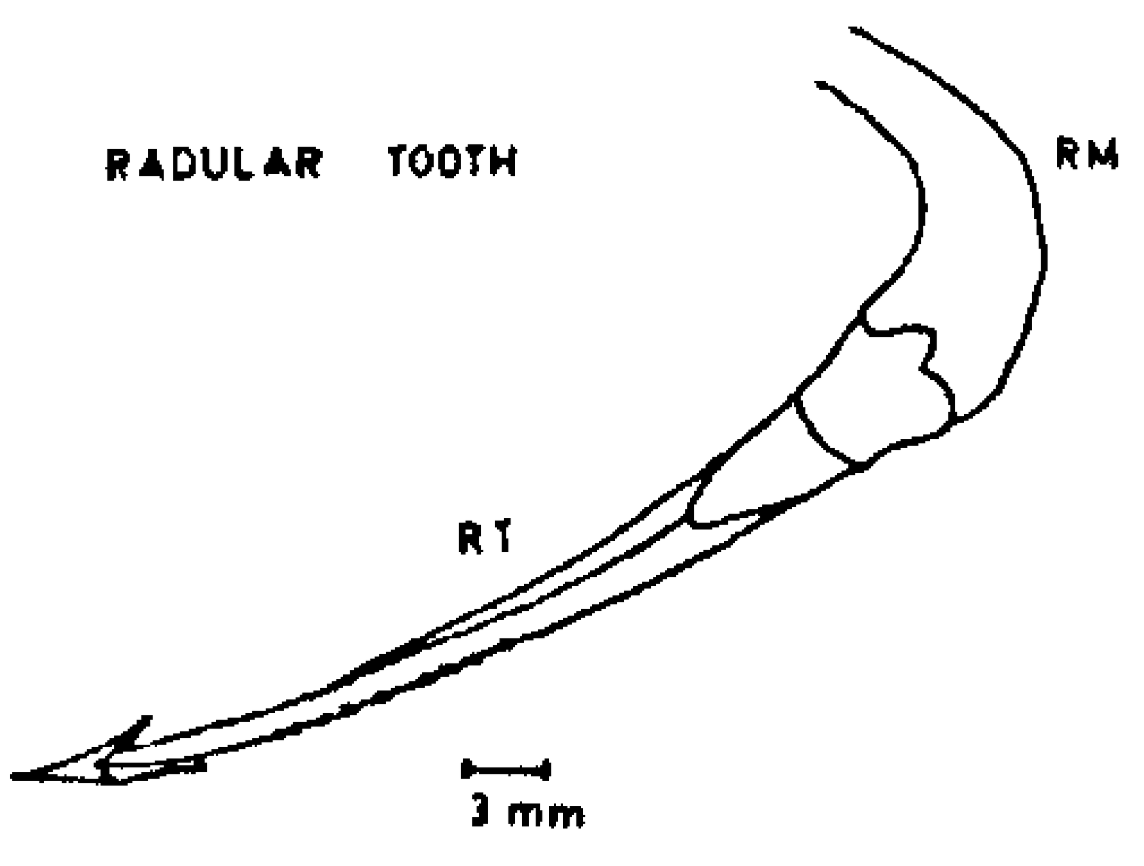

Figure 2. Figure showing a radular tooth. RT-Radular tooth; RM-Radular muscle.

The chemistry of the *C. amadis* toxin and its effects on the animals such as rat, fishes and other molluscs are being carried out.

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INHERITANCE OF 2,4-D TOLERANCE IN WHEAT

A. S. RANDHAWA, H. S. DHALIWAL, S. K. SHARMA and D. S. MULTANI
Punjab Agricultural University, Regional Research Station, Gurdaspur 143 521, India.

A number of herbicides are now commercially used for selective weed killing in many crops. 2,4-Dichlorophenoxy acetic acid (2,4-D) is also recommended for controlling broad leaf weeds in cereals. 2,4-D has, however, been found to be phytotoxic to a high yielding wheat (*Triticum aestivum* L em Thell) variety[1] HD 2009. The present study was, therefore, conducted to investigate the inheritance of 2,4-D tolerance in wheat.

The materials comprising of three 2,4-D tolerant varieties (WL 711, CPAN 1874 and CPAN 1922); two susceptible varieties (HD 2009 and PBW 94); 24 F_3 plant progenies derived randomly from a cross WL 711 × HD 2009; F_1 and F_2 generations of the crosses HD 2009 × CPAN 1874 and PBW 94 × CPAN

Table 1 *Frequency distribution of the wheat plants tolerant and susceptible to the application of 2,4-D in different generations*

Cross generation	No. of plants progenies Tolerant (T)	Segregating (Seg)	Susceptible (S)	Genetic ratio (T:S)	χ^2 value	*P* value
HD 2009 × CPAN 1874						
HD 2009	0		99	S		
CPAN 1874	106		0	T		
F_1	40		0	T		
F_2	455		152	3T:1S	0.005	0.50–0.95
PBW 94 × CPAN 1922						
PBW 94	0		93	S		
CPAN 1922	96		0	T		
F_1	38		0	T		
F_2	480		147	3T:1S	0.80	0.20–0.50
WL 711 × HD 2009						
WL 711	116		0	T		
F_3 progenies	9	7	8	3T:2Seg:3S	0.28	0.50–0.95

1922 which were grown in a randomized complete block design with three replications in *rabi* 1984–85. Four rows of each of the parents, two of the F_1, 12 of the F_2 and one of each F_3 plant progeny, were grown in each replication. Rows were 2.25 m long spaced 25 cm apart. Plant to plant distance was 15 cm. After 45 days of sowing the crop was sprayed with 800 ppm of 2,4-D (600 g of 98% pure 2,4-D in 750 l of water/ha). Data were recorded on all the plants either as susceptible or tolerant. Plants having condensed and branched spikes were categorized as susceptible. Probable segregation ratios were worked out and χ^2 test was applied to confirm the goodness of fit.

Application of 2,4-D perfectly controlled broadleaf weeds. There was no symptom of phytotoxicity on wheat until heading. HD 2009 and PBW 94 (sensitive varieties) had serious spike deformities, delayed emergence, condensed and branched spikes. Singh and Sharma[2] also observed phytotoxic effects of 2,4-D on HD 2009. WL 711, CPAN 1874 and CPAN 1922 had no visual symptoms of phytotoxicity. The F_1 generation of both the crosses (HD 2009 × CPAN 1874 and PBW 94 × CPAN 1922) behaved like the tolerant parents indicating thereby the dominance of tolerance to 2,4-D over susceptibility. In the F_2 generation a segregation ratio of 3 tolerant: 1 susceptible plants was recorded (table 1). A good fitness of the χ^2 values revealed that tolerance of wheat varieties CPAN 1874 and CPAN 1922 to 2,4-D appeared to be under the control of a single dominant gene. In the F_3 plant progenies of the cross WL 711 × HD 2009, a segregation ratio of 3:2:3 for tolerant: segregating: susceptible progenies was recorded which further confirmed the monogenic inheritance of tolerance to 2,4-D.

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ASSOCIATION OF GREEN ISLANDS WITH RICE BLAST LESIONS AND ITS UTILITY IN VARIETAL SCREENING

URMILA DHUA
Division of Plant Pathology, Central Rice Research Institute, Cuttack 753 006, India.

THE rice blast pathogen induces lesions of various sizes[1] and colours[2] on the host leaves. The colour is not described as shade numbers and proper weightage to these visual symptoms is not given in the existing disease quantification methods[3,4]. This made it difficult to differentiate the varietal reaction on the basis of these symptoms. The green island formation is observed in the rust pustules[5]. The present communication reports the association of green islands