

the three districts was significant. There were no significant differences within varieties in the three districts.

Regression analysis developed on simulated rat damage studies indicated that 13.7% yield was lost to rat depredation. □

Composition of the rice leaffolder complex in Coimbatore, Tamil Nadu, India

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We identified different genera of rice leaffolder or leafroller. Adult moths collected at 2-wk intervals in the wetland ecosystem were sorted based on wing markings. Two genera or species were identified: *Cnaphalocrocis medinalis* and *Marasmia patnalis*. *C. medinalis* accounted for 86% of the moths collected (see table). □

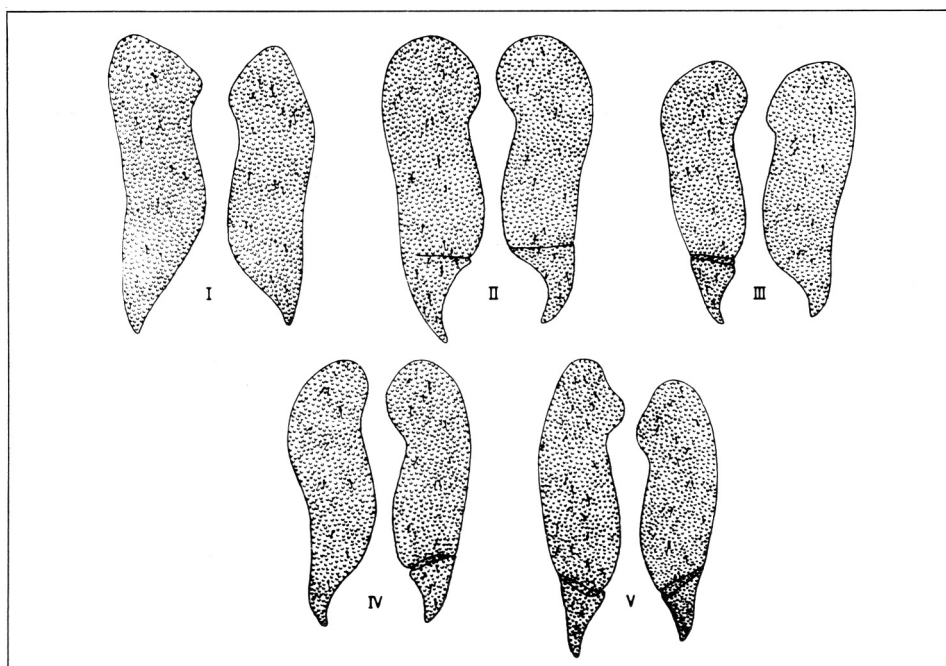
Rice leaffolders in Tamil Nadu, India, 1987.

Collection date	Moths collected (no.)	
	<i>C. medinalis</i>	<i>M. patnalis</i>
1 Jan	25	7
15 Jan	41	9
1 Feb	33	9
15 Feb	23	7
1 Mar	33	3
15 Mar	37	6
1 Apr	32	1
15 Apr	34	2
1 May	26	9
15 May	30	3
1 Jun	29	3
15 Jun	33	6
Total	376	65

Abdominal lateral lobe variations in females of *Nilaparvata lugens* biotypes from Korea

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Three biotypes of *N. lugens* isolated in Korea have been maintained for years on differential rice varieties: biotype 1 on variety Chucheongbyeo (no gene for



Camera-lucida drawings of the types of abdominal lobes in female *N. lugens* biotype populations from Korea. Magnification, 78.75X.

Number of brachypterous (BRAC) and macropterous (MAC) females of 3 Korean biotypes of *N. lugens* with different types of abdominal lobes. IRRI, 1987.

Morph	Biotype	Total insects observed	Insects (no.) with given abdominal lobe types ^a					X ²
			I	II	III	IV	v	
BRAC	1	57	23	14	9	10	1	41.70**
	2	77	19	7	5	19	27	
	3	60	30	3	4	15	8	
MAC	1	60	20	0	6	17	17	11.93
	2	50	8	0	3	19	20	
	3	53	12	0	3	10	28	

^aI — normal lobes; II — right and left lobes with discontinuous cut 0.167 mm from posterior tips; III — right lobe with continuous or discontinuous cut, left lobe normal; IV — right lobe normal, left lobe with continuous or discontinuous cut; V — right and left lobes with distinct cuts 0.167 mm from the posterior tips.

resistance), biotype 2 on Cheongcheongbyeo (*Bph 1* gene), and biotype 3 on Milyang 63 (*bph 2* gene). Female brachypters and macropters randomly collected from stock cultures of the 3 biotypes and fixed in 70% alcohol were brought to IRRI, where 50-77 individuals/ biotype were cleared and mounted on glass slides for morphological investigations.

Among *N. lugens* females, five types of abdominal lobes were observed (see figure). The number of brachypterous females of different abdominal lobe types significantly differed among biotypes (see table). Type I lateral lobe

was most frequently found in biotype 3 and biotype 1 and least found in biotype 2. Type V lateral lobe was more common in biotype 2 females than in biotype 3 and biotype 1 females. The number of macropterous females in each category did not significantly differ among biotypes. □

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