4578 kg per hactare in a trial conducted by Germplasm Centre, Baroda (Personal communication) in individual 15 m^2 plots with three replications, with a spacing of 15 cm × 10 cm and a normal fertility level.

FIG. 1. The height of the Nariyal Chudi rice crop.

Under natural conditions of disease and pest pressure, the variety was found to be free from pests and diseases except brown spots (*Helminthosporium oryzae*) in traces. Unlike the surrounding varieties which were devastated by bacterial blight, Nariyal Chudi remained non-infected.

The characters, *viz.*, non-lodging, ability to withstand water-logged conditions, high-yielding and resistance to pests and diseases make the variety a promising one for farmers and a good material for breeding programmes.

The authors are grateful to Dr. R. H. Richharia, Founder-Director of the Institute, for his efforts in collection of rice varieties from different parts of Madhya Pradesh. Thanks are also due to the Director of the Institute for providing facilities and encouragement and Mr. Suresh Sharma, Germplasm Associate, for providing the yield data.

Division of Plant Pathology, and Entomology, and M.P. Rice Research Institute, Raipur 492 006 (M.P.),
November 9, 1979.

RAJU PHILIP.

S. K. SHRIVASTAVA.

1. Richharia, R. H. and Staff, *Adaptive Rice Research Notes*, M.P. Government, 1973, **4**, 1–5.
2. Kumar, L. S. S., Aggarwala, A. C., Arakeri, A. R., Kamath, M. G., Moore, E. N. and Donahue, R. L., *Agriculture in India, Crops*, Asia Publishing House, Bombay–1, 1963, **2**, 1.
3. Richharia, R. H., *Increasing Production in the Environment of M.P. Adaptive Rice Research Notes*, M.P. Government, 1976, p. 3.

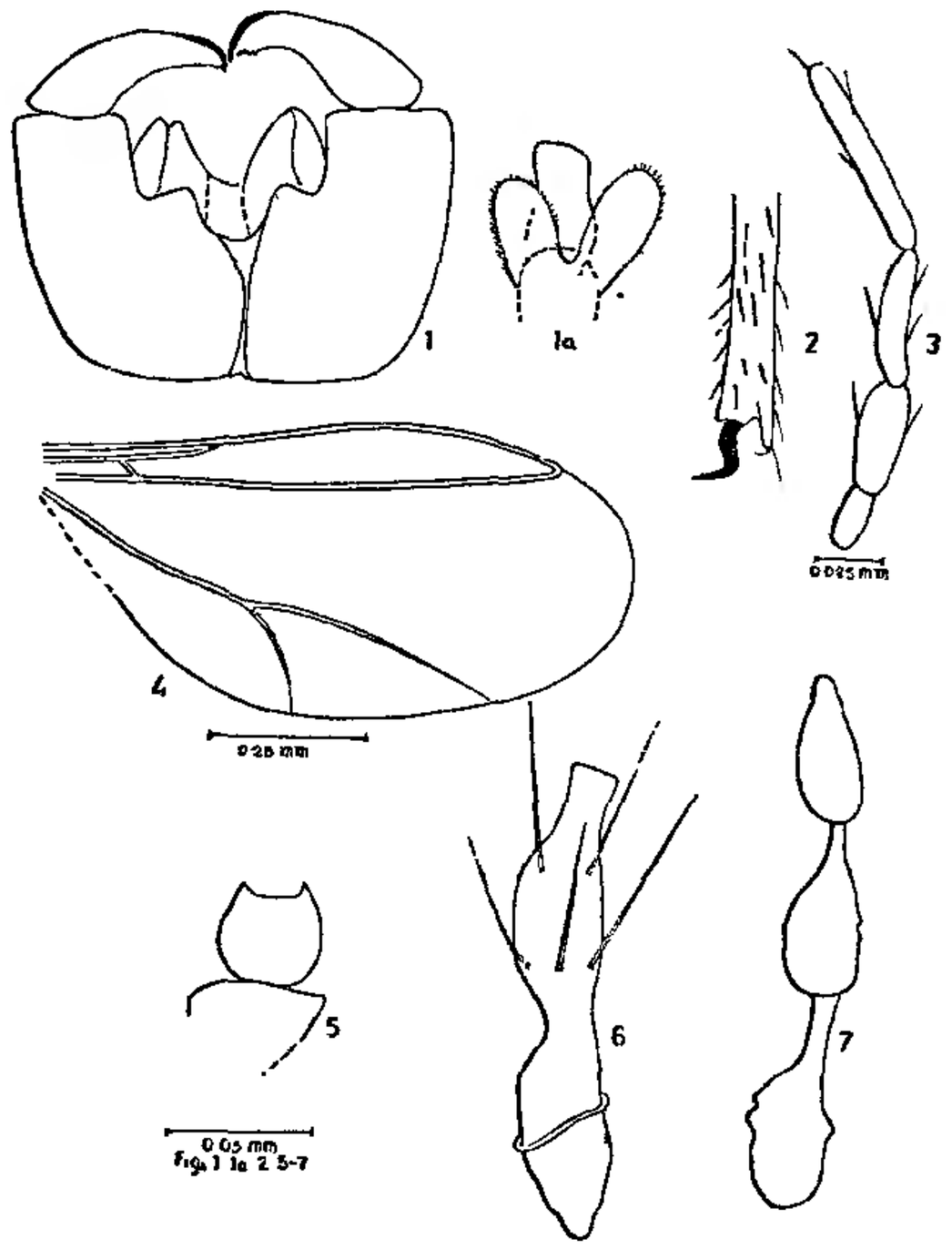
ON A NEW INDIAN GALL-MIDGE SPECIES (DIPTERA: CECIDOMYIIDAE)

THIS article embodies the description of a new gall-midge species *Rabindrodiplosis orientalis* from India.

Rabindrodiplosis orientalis, sp. nov. (Figs. 1–7).

Male : 1·07 mm long. Eyes confluent above. Trophi normal.

Palpus : quadriarticulate, moderately long, sparsely setose; first segment (13 : 5) cylindrical, narrowed basally, length 2·60 × its maximum thickness; second segment (20 : 8) cylindrical longer and thicker than first, length 2·50 × its maximum thickness; third segment (25 : 5) cylindrical, longer and thinner than second, length 5·00 × its maximum thickness; fourth segment (37 : 5) cylindrical, longest of all, 7·40 × as long as thick.



FIGS. 1–7. *Rabindrodiplosis orientalis* sp. nov. ♂. Fig. 1. Genitalia, Fig. 1 *a*. Dorsal, subdorsal plates and aedeagus. Fig. 2. Claw. Fig. 3. Palpus. Fig. 4. Wing. Fig. 5. Scape and pedicel. Fig. 6. Third and fourth antennal segments. Fig. 7. Terminal three antennal segments.

Antenna : slightly longer than body, with 2 + 12 segments, segments cylindrical with long apical stems, enlargements with two whorls of long setae, circumfila ring-like, distal segments becoming shorter and thinner; scape (13 : 17) cup-shaped, wider than long; pedicel (11 : 13) sub-globose, narrower than scape; third segment (31) confluent with and shorter than fourth,

with a very small basal prolongation, enlargement (20 : 11) 0·63 the length of the segment and 1·81 × its maximum thickness, stem (9 : 5) 0·45 the length of the enlargement and 1·80 × its maximum thickness; fourth segment (30) with enlargement (20 : 12) 0·66 the length of the segment and 1·66 × its maximum thickness, stem (10 : 5) half the length of the enlargement and 2·00 × its maximum thickness; fifth segment (33) longer than fourth, enlargement (20 : 12) 0·66 the length of the segment and 1·66 × its maximum thickness, stem (13 : 5) 0·65 the length of the enlargement and 2·60 × its maximum thickness; sixth segment similar to fifth; seventh segment (35) longer than sixth; eighth, ninth and tenth segments similar to each other and as long as seventh; eleventh segment (30) shorter than tenth; twelfth segment (27) shorter than eleventh; penultimate segment (25) shorter than twelfth, enlargement (18 : 13), 0·72 the length of the segment, 1·40 × as long as thick, stem (7 : 3) 0·38 the length of the enlargement and 2·33 × its maximum thickness; terminal segment (19) shorter than penultimate, enlargement (19 : 8) with an apical nipple-like prolongation, length 2·37 × its maximum thickness. *Wing* : (50 : 23) hyaline, costa sparsely hairy, vein R_1 joining costa a little beyond the basal 1/4 of the wing, vein R_s present at an oblique angle, vein R_5 reaching costa before the apex of the wing, vein C_u forked. *Legs* : long, moderately hairy, metatarsus (7) shorter than terminal tarsal segment, second tarsal segment (52) longest of all, shorter than the following segments combined together (62) ; claw simple on all legs, not sharply bent at right angles; empodium rudimentary. *Genitalia* : light-brown, basal clasp segment (39 : 20) quadrate, with a small median triangular lobe, length nearly 2·00 × its maximum thickness; terminal clasp segment (25 : 9) short, stout, gradually tapering and ending in a tooth, extreme end of its lower margin with a few serrations, length 2·77 × its maximum thickness; dorsal plate broadly and deeply incised in the middle, lobes broadly rounded apically, pubescent; subdorsal plate shorter than dorsal, entire, broadly rounded apically; parameres as long as dorsal plate, moderately sclerotized, rest of the details as in figure; aedeagus (17 : 8) straight, broad basally, pubescent, weakly sclerotized, hairy, longer than dorsal plate, length a little more than 2·00 × its maximum thickness, truncate apically.

Female : Unknown.

Holotype : Male dissected and mounted on slide labelled as "at light, Fruit Research Centre, Aurangabad, Maharashtra, India, R. M. Sharma Coll., dated 11.viii.1976."

This species closely resembles *R. champakii* Grover, the only known species, but differs from it in the characters as indicated in the key :

Claw dentate on front legs, simple on hind legs, bent at right angles; empodium shorter than claw; subdorsal plate angulated apically, aedeagus short and rounded ..... *champakii* Grover ♂ ♀

Claw simple on all legs, not sharply bent at right angles; empodium rudimentary; subdorsal plate broadly rounded apically; aedeagus long, broad, truncate apically ..... *orientalis*, sp. nov. ♂

The authors are thankful to Prof. R. Nagabhushanam for providing laboratory facilities and Senior author is grateful to the authorities of Marathwada University, Aurangabad, for awarding a fellowship during his tenure of work.

Department of Zoology,
Marathwada University,
Aurangabad 431 004 (India),
June 4, 1979.

R. M. SHARMA.
S. N. RAO.

1. Gagne, R. J., "Family Cecidomyiidae," In Delfinado, M. D. and Hardy, D. E., eds., *A Catalogue of the Diptera of the Oriental Region*, 1973, **1**, 618.
2. Grover, P., *Marcellia*, 1964, **31** (3), 189.
3. —, *Cecid. Indica*, 1972, **7** (3), 143.
4. —, *Ibid.*, 1975, **10** (1 and 2), 1.

PROTEASE ACTIVITY IN *BRASSICA JUNCEA* PLANTS INFECTED WITH *SCLEROTINIA SCLEROTIORUM*

WHITE ROT caused by *Sclerotinia sclerotiorum* (Lib.) de Bary is a very destructive disease and causes heavy economic losses to *Brassica juncea* crop in north-eastern India[1]. In view of this, various physio-pathological aspects of the disease were taken up and the present paper deals with the production of protease in susceptible and resistant cultivars of *B. juncea* plants at various intervals after inoculation with the isolates of *S. sclerotiorum*.

Experimental

Four isolates of *S. sclerotiorum* markedly differing in the degree of virulence, and different cultivars of *B. juncea* showing maximum and minimum disease reaction against these pathogens were used in this study. Preflowering plants of both the varieties were inoculated by agar disc method of Rai and Dhawan[2]. Infected plant parts were harvested after 5, 10 and 15 days of inoculation. Samples were homogenized with 0·1 M phosphate buffer (pH 7·0) in a ratio of 1 : 5 (w/v), strained and centrifuged at 600 rpm for 15 min.; supernatants were used as crude enzyme preparation.

Enzyme assay—Proteolytic activity was determined by modified method of Davis and Smith[3]. Reaction consisted of 2 volumes of 1% casein in 0·1 M phosphate buffer (pH 7·0), 1 volume of the same buffer