Table 3 *Effect of detaching lower leaves following treatment with Aerva sanguinolenta (AS) extract at various intervals on the production of local lesions in upper leaves*

*Lower leaves treated with AS extract, or DW and detached after different intervals	†Average number of local lesions/leaf	
	Treated with water (control)	Treated with AS
5 min	101	83
1 hr	134	64
2 hr	106	33
4 hr	104	18
8 hr	250	11
10 hr	155	5
24 hr	160	1

*Virus (SRV) was inoculated in the top leaves after 24 hr treatment of lower leaves with AS extract.
†Average number of local lesions on 10 leaves of *Cyamopsis tetragonoloba*.

siderable was not so high. In CA-TMV combination, no antiviral effect was noticed (table 2).

The inhibitory stimulus of AS leaf extract could move from treated to untreated leaf of the same plant within an hour after application (table 3). However, the movement sufficient to cause more than 90% inhibition required about 4 hr.

Thus, resistance to virus infection induced by AS extract is systemic and of long duration. Investigations are in progress to isolate and identify the antiviral principle and study its mechanism of action.

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A NEW GENUS AND SPECIES OF FERN INFESTING THRIPS (*THYSANOPTERA: INSECTA*) WITH FURTHER NOTES ON *MYCETEROTHRIPS NILGIRIENSIS* (ANAN.)

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SPORANGIOTHRIPS Genus Novo

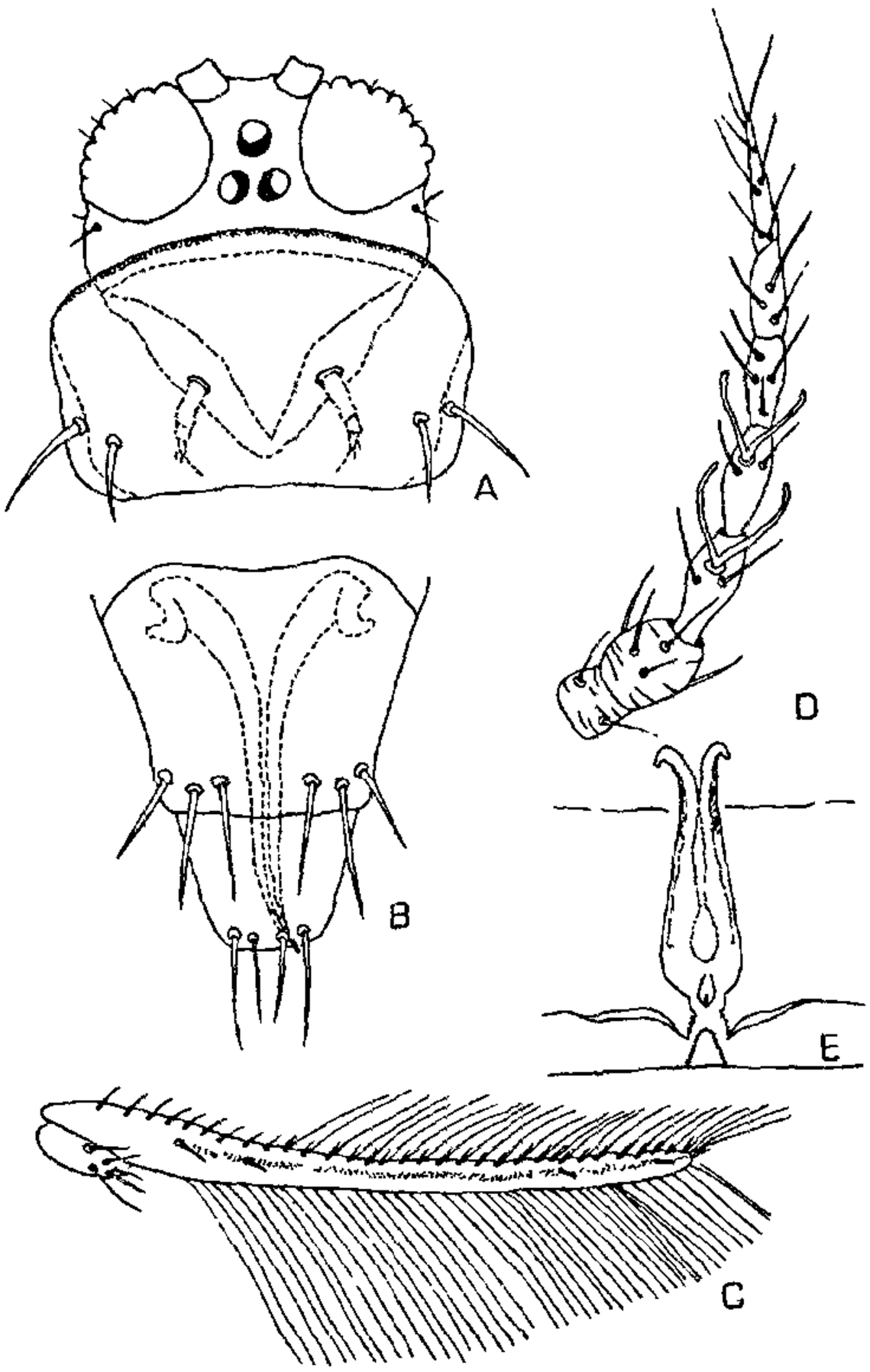
Head *Anascirtothrips*-like, transverse, slightly produced in front of eyes in the form of an interantennal projection separating the antennal bases. Antenna thin and slender, seven-segmented, with long, slender, forked, sense cones on segments 3 and 4; segment 2 barrel-shaped; segment 7 forming a very long style, very much longer than segment 6. Eyes very large, larger than cheeks. Mouth cone broad across basal third, tending to be triangular, almost reaching the posterior margin of the pronotum; maxillary palp 3-segmented. Pronotum longer and wider than head, with two pairs of postangulars, the outer longer than the inner, posteromarginals absent; metathoracic furcula distinctly 'vase' shaped; mesothoracic furcula absent. Fore wings with numerous microsetulae, upper vein with four scattered short setae, two at base, one at the distal one third, and one at apex; lower vein absent. Abdomen without fine microsetulae; segment IX of abdomen with well developed setae, B_1, B_2, B_3, and segment X with B_1 and B_2.

Genus type: *Sporangiothrips acuminatus* gen. et. sp. nov.

This new genus approaches *Anascirtothrips*[1] in general body build, head structure and the number of antennal segments, but is distinguished from it by the presence of two pairs of conspicuous postangulars, absence of densely set rows of fine microsetulae on the abdomen, specialised furcula on the metathorax and also by the nature of the antenna. In *Anascirtothrips* antennal segment 7, forming the style is shorter than the segment 6, but in this new genus the antennal segment 7 is very much longer than segment 6. The nature of antennal segments 3 and 4 is also completly different from those of *Anascirtothrips*. In *Anascirtothrips* the sense cones though forked, are stout, whereas in this genus they are also forked, but long and slender. This genus has only the upper vein in the fore wing, with only four scattered setae.

Sporangiothrips acuminatus sp. nov.

Female (Macropterous): General body colour



Figures 1 A–E. *Sporangiothrips acuminatus* n. gen. n. sp. **A.** Head and prothorax, dorsal view of ♀. **B.** Abdominal segments IX and X of ♀. **C.** Fore wing of ♀. **D.** Antenna of ♀. **E.** Metathoracic furcula of ♀.

pale orangish yellow with all antennal segments (2 and 3 segments with a lighter shade at base) and fore wings dark brown. Hind wings with a median longitudinal brown streak. Eyes dark, ocelli reddish. Apex of the mouth cone dark brown. Body setae hyline.

Head 63.6–74.2* long, 127.2–137.8 wide across eyes, and 116.6–126.1 across cheeks. Eyes large, 53 long and 42.4 wide. Ocelli cresent-shaped, 12.7 wide, and interocellar distance 4.2–6.5. Mouth cone 74.2–84.5 long, 84.8–100.7 wide at base, 42.4–53 at apex long, antenna 7 segmented, segments 3 and 7 longer than other segments and almost subequal. Antennal segments length (width): 18.4–18.8 (20.9–21.2); 27.0–27.6 (26.2–26.5); 33.9–34.5 (19.8–20.1); 32.3–32.8 (15.0–15.9); 27.3–27.6 (12.7–13.0); 27.6–28.2 (10.1–10.6); 34.5–34.8 (8.5–9.0), segments 3–4 pedicellate, 5 sub-pedicellate.

Pronotum longer and wider than head, 84.8–95.4 long, 148.4–159.0 wide at middle. Outer prothoracic postangulars 31.3–33.9, longer than inner 21.2–26.8 long. Postero-marginals absent. Pterothorax 210.6–212.2 long, maximum width at the anterior one third 212.0–212.8, at the posterior one third 200.4–205.7. Metathoracic furcula 'vase'-shaped, mesothoracic furcula absent. Fore wings with numerous microsetulae, 625.4–657.2 long, 63.6 wide at base, 42.4 at middle and 31.8 at apex. Costa with 30–33 setae, upper vein with four scattered short setae, two at base, one each at the distal one third, and apex.

Abdomen 169.6–212.0 wide at base, 185.3–243.8 at middle and 53.0–74.2 at the three fourth distal end, B_1, B_2, B_3 of IX abdominal segment 41.3, 42.4 and 37.5 long respectively; B_1 and B_2 of X abdominal segment 37.5 and 47.5 long.

Total body length 0.69–0.74 mm.

Material: Holotype ♀, Paratypes 29 ♀, ♀ 30 females collected from the fern host *Pteris argyrarea* at Kodaikanal (1,800m) and Coonoor (1,900m), Tamil Nadu, India on 28 & 29.2.1984. (Type material in the collections of the Entomology Research Institute, Loyola College, Madras-600 034, India)

Mycterothrips nilgiriensis (Ananthakrishnan)

1960. *Rhopalandrothrips nilgiriensis* Ananthakrishnan[2]
1969. *Rhopalandrothrips nilgiriensis* Ananthakrishnan[3]
1969. *Mycterothrips nilgiriensis* Bhatti[4]
1980. *Mycterothrips nilgiriensis* Ananthakrishnan[5]

The occurrence of *M. nilgiriensis* in large numbers on the mature *fronds* (which bear sporagia) of *Blechnum orientale* and *Pteris quadriaurata* confirms this species as typically fern inhabiting. 96 females and 43 males were collected from Ooty (2,400m.), Kodaikanal (1,800) and Yercaud (1,600m.). The distribution of this species is highly restricted to montane areas above 1,600m. Out of the 139 specimens collected, nearly 70% was collected from *Blechnum orientale* revealing its preference towards this host plant. The sex ratio is 2:3 (Female:Male).

Males exhibit a remarkable intance of sexual dimorphism of the antennae. The 6th antennal segment of the male is nearly five times as long as that of the

* Measurements are in μ unless otherwise mentioned.

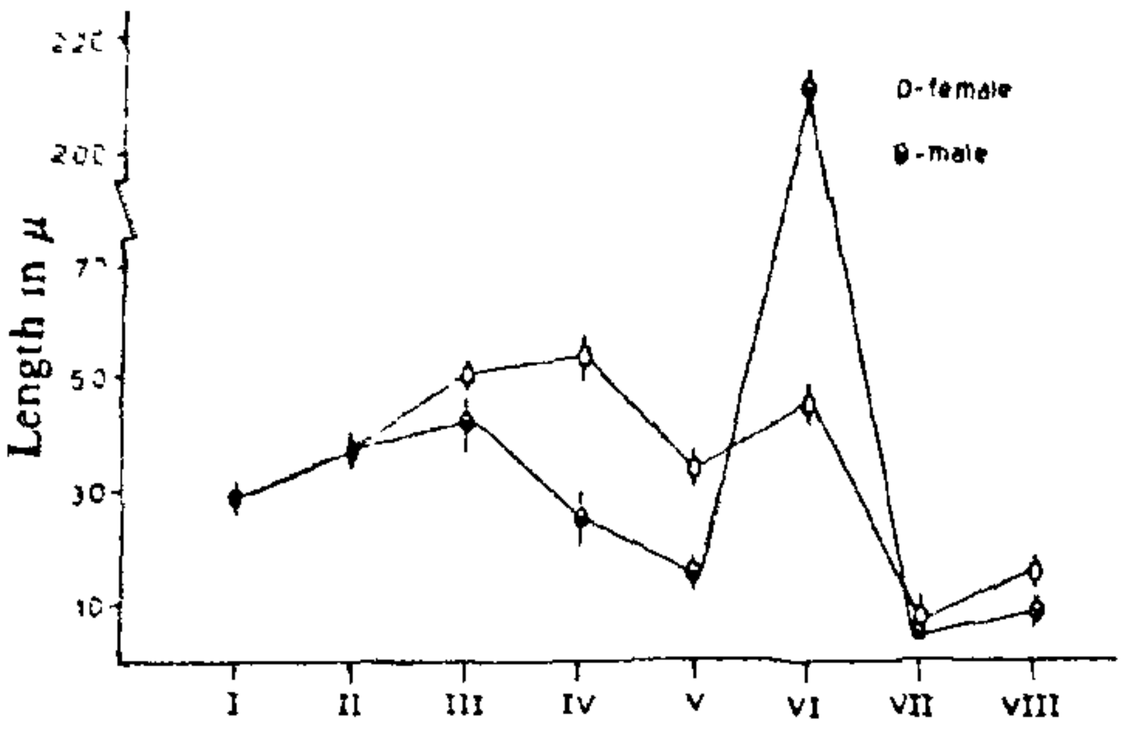


Figure 2. Variation observed in the length of the antennal segments of males and females.

female and much longer than the combined lengths of the other segments. Graph indicates the variation observed in the length of the antennal segments of males and females of *M. nilgiriensis*. No differences were evident between the sexes with respect to the first and second antennal segments. However statistical analysis shows significant differences between the sexes for the 4 and 5 segments at 5% level and 6th segment at 1% level.

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ACID PHOSPHATASE ACTIVITY IN THE TESTIS OF THE ERI SILKWORM: *PHILOSAMIA RICINI* (Hutt.)—A HISTOCHEMICAL STUDY

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ACID phosphatase is known to provide phosphate to the tissues having high energy requirements especially during development, growth and maturation[1]. Acid phosphatase activity has been reported in the testis of a few species of insects[2–4]. The present work deals with the distribution of acid phosphatase activity in various components of the testis of larva, pupa and adult *Philosamia ricini*

Eri silkworms reared in the laboratory were used in the present work. The fresh frozen sections of the testis, from IV and V instar larva, pupa and adult, were fixed in cold acetone, incubated in freshly prepared incubation medium for 2 hr and mounted in glycerol jelly. Naphthol As-phosphate azo dye method of Burstone (1962) was followed[5]. The substrate used was naphthol AS-TR, obtained from Sigma Chemical Company, USA. The sections incubated in the medium lacking the substrate served as controls.

Acid phosphatase activity in the cells was indicated by AS-TR positive red deposits in the form of granules or needle-like crystals or both. The enzyme activity was observed in the cytoplasm of peritoneal sheath cells, epithelial cells, apical cells and spermatogonial cells of the testis of IV and V instar larva, pupa and adult. The enzyme activity was extended to the primary and secondary spermatocytes in the testis of V instar larva (figure 1) (spermatogenesis progressed only up to these stages in V instar larva) and to the primary and secondary spermatocytes, spermatids and spermatozoan bundles in the testis of pupa and adult (figure 2). The enzyme activity was not observed in the nuclei of these cells. The sections incubated in the medium lacking the substrate did not show any reaction.

The presence of acid phosphatase activity has been histochemically demonstrated in the cytoplasm and nucleus of the testicular cells of the larva and pupa of *Phormia regina*[2] and biochemically shown in the testis of pupa and adult *Bombyx mori* and *Samia cynthia*[4]. In the present study acid phosphatase activity is