stine to the liver deposit eggs there, which developed and embryonated and may give rise to the occurrence of larvae in the liver, lungs and heart. Therefore, it is possible that Ascaris ova observed in various stages of development in the different organs by Phan[11] might have entered the general circulation and reached the peripheral blood, as observed during the present parasitic survey. This belief is further confirmed by the findings of Zahawi and Ovanessian[16], who reported an interesting case, in that adult *Ascaris* worm changed its route and entered the general circulation. Similarly, Fulleborn[17] has shown that *Ascaris* larvae were disseminatel by the blood stream and that they reached the arteries from the veins, through the capillaries. Recently, Costa *et al.*[12] and Tiwary and Prasad[13] found adult *Ascaris* in the right ventricle and in common bile duct, respectively. It has also been observed that in very heavy infestation, the larvae may even be excreted in urine. Disturbances have also been reported due to the presence of *Ascaris* larvae in the brain, spinal cord and kidneys.

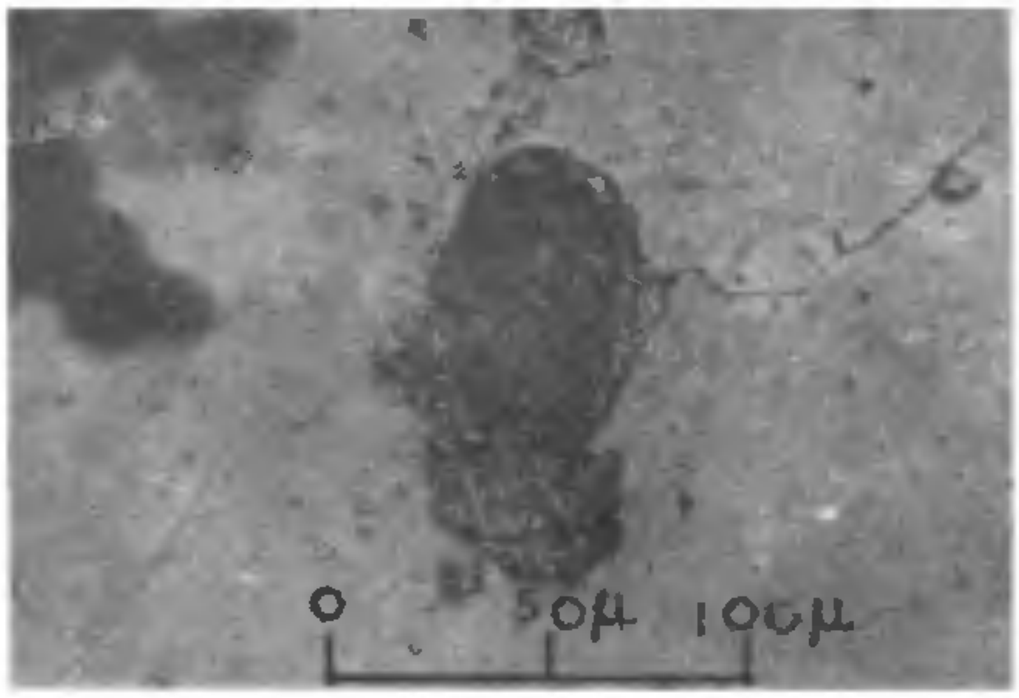

FIG. 1

In view of the fact that 39 out of 400 blood smears examined were containing fragments of *Ascaris* ova, these observations cannot be considered as stray occurrences. But it is not known, why fragments and unfertilised ova of *Ascaris* alone (unlike fertilised ova) are observed in peripheral blood of man. These observations may form the basis for detailed further studies to ascertain whether or not there is any regular life cycle of *Ascaris* in the blood of man. However, it is believed that the discovery of *Ascaris* ova in blood might throw some light in evolving new treatment methods to control the most common helminthic disease of man.

My sincere thanks are due to Dr. Jeyapaul Azariah, Lecturer in Zoology, Zoological Research Laboratory, University of Madras, for the help rendered in the preparation of microphotograph of blood smears.

Medical Biologist,
Water Analysis Department,
King Institute, Guindy,
Madras 600 032,
July 27, 1977.

K. M. VEERANNAN.

1. Linnaeus, In: *Systema helmintum.* Edit: S. Yamaguti, Vol. III, Nematodes of vertebrates. Part I, Interscience Publishers, New York–London, 1961.
2. *W.H.O. Technical Report Series* No. 379. *Control of Ascariasis,* Report of a W.H.O. Expert Committee. Geneva, 1967, pp. 44.
3. Veerannan, K. M., *Ind. Jour. Publ. Hlth.,* 1977, 21, 157.
4. Lysek, H., *Folia. Parasit.,* 1967, 14, 381.
5. Matuda, S., *Volumen Jubilare Pro Professore. Sado Yoshida.,* 1939, 2, 111.
6. Brown, H. W. and Cort, W. W., *Jl. Parasit.,* 1927, 14, 38.
7. Augustine, D. L., Nazmi, M., Helmy, M. and Mc Govran, E. G., *Ibid.,* 1928, 15, 45.
8. Boettiger, C. and Werne, J., *Amer. Med. Ass.,* 1929. 93, 32.
9. Horta, J. S. and Delfim, J., *Gaz. Med. Portuguesa,* 1952, 5, 581.
10. Sprent, J. F. A., *Parasitology.,* 1955, 45, 41.
11. Phan, T., *Pathologia et Microbiol. Basala.,* 1965, 28, 443.
12. Costa, S. V. M., Ferreira, D & Faria, M., *Revista Gomna de Medicina.,* 1972, 18, 215.
13. Tiwary, R. N. and Prasad, S., *The Antiseptic,* 1977, 74, 293.
14. Keller K. E., *Jour. Lab. Clin. Med.,* 1933, 18, 371.
15. Stewart, F. H., *Brit. Med. Jour.,* 1916, 2, 753.
16. Zahawi, E. S. and Ovenessian, G., *Trans. Roy. Soc. Trop. Med. Hyg.,* 1950, 44, 229.
17. Fulleborn, F., *Arch Schiff S–U. Trop. Hyg.,* 1921, 25, 146.

A NEW SPECIES OF *PHYLLACHORA* NKE IN FCKL.

DURING the course of collection of phytopathogenic fungi, the authors have collected infected leaves of *Madhuca indica* Linn. (Fam. Sapoaceae) from Pachmarhi (MP) during December 1976, with numerous, dark black, scattered colonies or tar spots only on the upper surface which coalesce later on (Fig. 1). On microscopic examination, it was found to be a species of *Phyllachora* Nke. in Fckl., which is hitherto undescribed. Since the speciation of *Phyllachora* is mainly based on the host[1,2] and there is no record of the fungus on *Madhuca indica*, the present fungus is described here as a new species, *viz.*, *Phyllachora madhucae*. The material was also examined by Dr. A Sivanesan of C.M.I., Kew, England, who confirmed the identification.

Phyllachora madhucae Rajak & Hasija, sp. nov. (Fig. 2)

FIG. 1

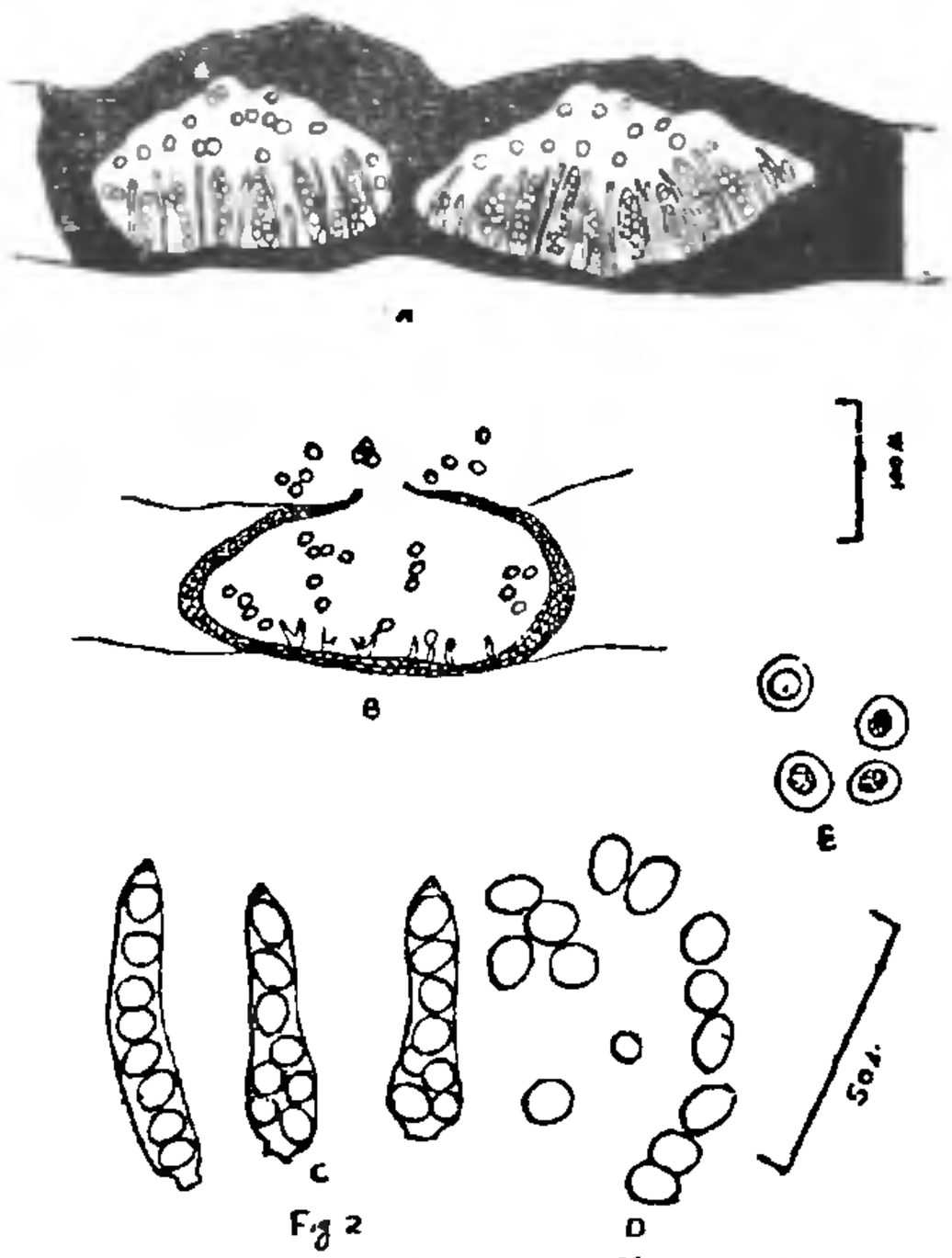

Fig 2

FIG. 1. Showing habit on *Madhuca indica*.

FIG. 2. A. Stroma with Perithecia; B. Pycnidia with Conidia; C. Mature Asci; D. Ascospores; E. Conidia.

Stroma epiphyllous, black, rounded to oval to irregular, subcuticular, scattered, shining, 0·5–3·5 mm in diameter, multiloculate, 2–4 perithecia in a stroma. Perithecia globose ro subglobose, ostiolate, 75–163 × 75–310 μ. Asci cylindrical to obclavate, stipitate, octosporous, unitunicate, paraphysate, with apical pore, 45–68 × 9·5–22 μ. Paraphyses filiform, hyaline, unbranched. Ascospores uniseriate to biseriate, hyaline, globose to subglobose, unicellular 7·5–18·5 × 7·5–18·5 μ.

Pycnidia common, 2–4 in each stroma, dark brownish black, subglobose to oval. ostiole not distinct, 70–160 μ long and 70–300 μ wide, wall plectenchymatous, made up of angular cells. Conidiophores hyaline, branched. Conidia globose to oval, hyaline, unicellular, 6·5–12 × 6–12 μ.

Phyllachora madhucae Rajak & Hasija, sp. nov. (Fig. 2)

Stroma epiphylla, nigra, rotundata vel ovala vel irregularia, subcuticularia, dispersa, glabra, usque ad 0·5–3·5 mm diametro, multiloculata, ex 2–4 perithecia composita. Perithecia globosis vel subglobosis, ostiolatis, 75–163 × 75–310 μ diametro. Asci cylindrici-vel obclavatis, stipitatis, octospori, unitunicatis, paraphysatis, poro edapicum, 45–68 × 9·5–22 μ. Paraphysibus filformibus, hyalinis, non ramosis. Ascosporis uni vel biseriatae, hyalinis, globosis vel subglobosis, unicellulare, 7·5–18·5 × 7·5–18·5 μ.

Pycnidia plerumque, 2–4 per stroma, atra brunneo nigra, subglobosa vel ovala, ostiolum nec distincta, 70–160 × 70–300 μ. Paries plectenchymatica, ex cellulae angulare constitutum. Conidiophora hyalina, ramosa. Conidia globosa vel ovala, hyalina, unicellula 6·5–12 × 6–12 μ.

The material has been deposited in the Commonwealth Mycological Institute, Kew, England, under the accession No. IMI 212442 and in the mycological herbarium of the Botany Department, Govt. Science College, Jabalpur.

The authors are thankful to the Director, C.M.I., England and Dr. A. Sivanesan, Mycologist, C.M.I., Kew, England, for confirming the identification of the fungus and to Dr. M. S. Agarkar and Dr. D. P. Tiwari for their help.

Mycological Laboratory,
Department of Botany,
Govt. Science College,
Jabalpur 482 001,
August 20, 1977.

R. C. RAJAK.
S. K. HASIJA.

1. Ananthanarayan, S., "Studies in Indian Phyllachoraceae—IV," *Mycopathol. mycol. Appl.*, 1964 *a*, 22, 1.
2. —, "Studies in Indian Phyllachoraceae—V," *Ibid.*, 1964 *b*, 22, 8.
3. —, "Studies in Indian Phyllachoraceae—VI," *Ibid.*, 1964 *c*, 23, 346.

4. Awati, J. B. and Kulkarni, U. K., *Curr., Sci.*, 1972, 41, 31.
5. Butler. E. J. and Bisby, C. R., *The Fungi of India*, Published by R. S. Vasudeva, I.C.A.R., New Delhi, 1960, p. 552.
6. Dakshini, K. M. M., Tandon, R. K. and Mukerji, K. G., "A new species of *Phyllachora*," *Mycologia*, 1970, 62, 296.
7. Tandon, R. N. and Chandra, S., *The Fungi of India*, Supplement to the list of Indian Fungi, University Allahabad Studies, Allahabad, 1963, p. 264.
8. Mukerji, K. G. and Juneja, R. C., *Fungi of India*, Supplement to the list of Indian fungi, Emkay Publications. Delhi, 1975, p. 224.
9. Ullasa, B. A., *Indian Phytopath*, 1969, 22, 75.

EFFECT OF CUTTING ON THE GROWTH AND FLOWERING BEHAVIOUR OF *TYPHA ELEPHANTINA* ROXB.

Typha elephantina are serious weeds of waterlogged soils and shallow waters almost throughout North India. The leaves are removed annually for thatching and rope making. Generally, this cutting is practised soon after the flowering is over during November. After cutting, the growth remains negligible during the winter months (up to February). Later, the vegetative growth occurs rapidly. The flowering starts during late June continues up to August.

It has been indicated earlier[1] that repeated cutting of the shoots may help in control of weeds (*Phragmites*). Therefore, an experiment was performed to study the effect of repeated removal of aboveground shoots (leaves) during the growth period on the overall growth and reproduction of this weed.

The study was performed in a naturally occurring large stand of *T. elephantina* at Government Agriculture Farm, Durgapura, Jaipur. A portion of the stand was kept undisturbed and the remaining was subjected to annual cutting during November, 1975. A portion of the annually cut stand was cut for the second time during the second week of June, 1976 just before flowering, and again a part of the twice cut stand was cut for the third time during September, 1976. It was observed that the density in the undisturbed stand decreased, as compared to that in the annually cut stand. In the twice cut stand also the density remained unchanged but in the thrice cut stand it decreased appreciably. The density and biomass of the plants other than *Typha* increased in the twice and thirice cut stands.

The vigor of the plant in the undisturbed and annually cut stand remained normal while it decreased in the twice and thrice cut stands. The height and number of leaves is also reduced[2].

Most interesting observations have, however, been made on the flowering behaviour. In the twice cut stand all the plants flowered synchronously during the end of July 1976 while in the annually cut and undisturbed stand the plants flowered over a long period from late June to August 1976 as is normally observed. The annually cut stand produced normal inflorescences with the male spike borne above the female spike. But in the twice cut stand a number of abnormalities appeared such as production of oniy a male spike, or the replacement of the lower female spike also by the male spike or the development of a very much reduced female spike. In most cases the gap between the male and female spikes was very much increased as compared to that in the undisturbed and annually out stands (Fig. 1).

FIG. 1. Inflorescences showing different degree of abnormality.

The quantitative data on the inflorescence size in the twice cut and annually cut stands, have been given in Table 1.

TABLE 1

Effect of cutting on the size of inflorescence

Inflorescence parameter	Undisturbed and annually cut stand	Stand cut twice
Male spike		
Length (cm)	34·3±4·0	20·9±7·2
Diameter (cm)	2·2±0·3	1·5± ·03
Gap between male and female spike (cm)	7·1±1·2	15·9±7·4* 4·6±1·8
Female spike		
Length (cm)	22·5±3·7	13·4±2·8* 8·2±3·5
Diameter (cm)	2·8±0·03	2·6±0·07

* Two categories were made because of more than 50% differences in their sizes.