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NOMENCLATURAL CHANGES IN THE GENUS *OIDIUM*

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THE anamorphs of the fungi included in Erysiphaceae have been given various generic names *viz.*, *Acrosporium* Nees ex Gray, *Oidiopsis* Scalia, *Oidium* Link and *Ovulariopsis* Pat. & Har. Of these, the usage of *Acrosporium* and *Oidium* has led to some controversy and several authors[1-6] have discussed the problem. Though the name *Oidium* being commonly used *Acrosporium* was pointed out as[7] the legitimate name for the conidial stages of Erysiphaceae and different workers[8-11] preferred the name *Acrosporium* over *Oidium*. However, proposals[13] were made to conserve the name *Oidium* and the nomenclatural committee voted in the favour of one of it by conserving the name *Oidium* (Taxon 24: 534. 1975). Since the name *Acrosporium* is no more valid the species which were described under it should be transferred to the name *Oidium* in order to make them valid. As such two new combinations are proposed in this paper. In addition a new species of *Oidium* on *Ailanthus excelsa* Roxb., is described.

Oidium dendrophthoae (*Bhagyanarayana & Ramachar*) Bhagyanarayana & Ramachar comb. nov.

Acrosporium dendrophthoae Bhagyanarayana & Ramachar, Curr. Sci. 49: 150-151. 1980

Oidium scopariae (*Sharma & Jain*) Bhagyanarayana & Ramachar comb. nov.

Acrosporium scopariae Sharma & Jain, Cur. Sci. 44: 607-608. 1975.

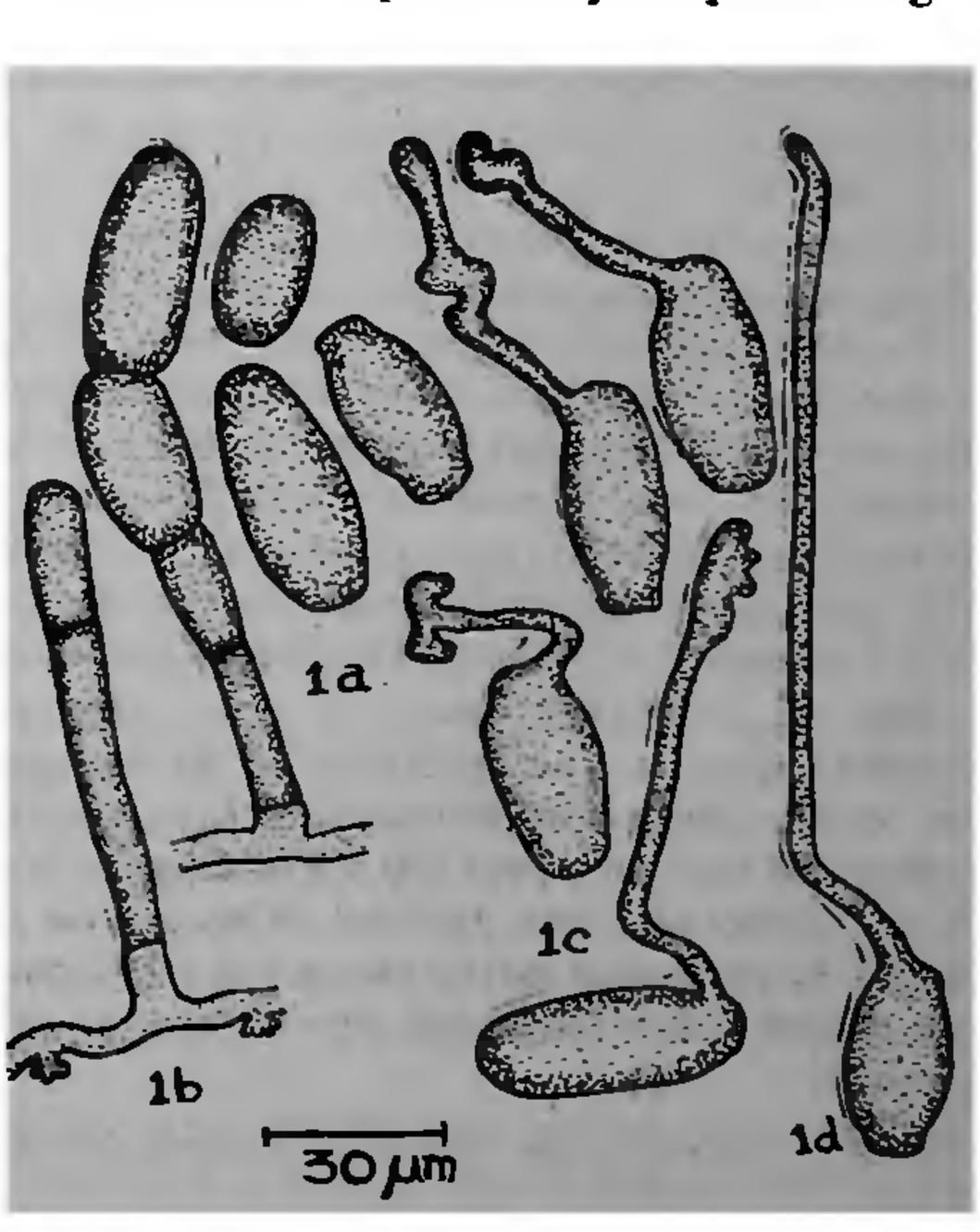
Oidium ailanthi Bhagyanarayana and Ramachar sp. nov.

Maculae infectus circulares, amphigenae, superficiales, albae celeriter effusae, circulares vel irregulariter formatae. Folia severissima infecta cite decidunt. Mycelio superficiale, hyalinum, septatum, 4-6 μm crassa; conidiophora erecta, 1-3 septata, hyalina, magnit 52-125 × 5.6-11 μm; conidia unicellularia, oblonga vel cylindrica, raro ovoidea, hyalino, pariete gracilis, non levis, acrogene producta, catenulata, 26-46 × 12-21.6 μm; conidia germinativis in situ.

Holotypus: In foliis vivis *Ailanthus excelsa* Roxb., (Simaroubaceae) Hyderabad (A.P), January 1981, G. Bhagyanarayan, IMI 254811.

Ailanthus excelsa Roxb., an arborent member of the Simaroubaceae, grows wild in and around Hyderabad and yields soft timber which is used mostly in the toy and match stick industries. Recently a serious powdery mildew was noticed on leaflets, rachis and even on inflorescences axes. Though the infection was found from November to March, it was only severe from December to the middle of February. There is no report of any *Oidium* species on the genus, *Ailanthus* Desf[13]. While making the new species, the range of characters used by Boesewinkel[14] in identifying powdery mildew anamorphs were taken into consideration.

The infected material showed the presence of conidia and conidiophores only. No perfect stage was



Figures 1a-1d. Camera lucida drawings of *Oidium ailanthi*. **1a** Conidiophore and conidia. **1b.** Conidiophore with basal mycelium showing multi lobed haustoria. **1c.** Germinating conidia with germ tubes and variously shaped haustoria. **1d.** Germinating conidium with unusually lengthy germ tube.

found. The fungus makes its appearence as a small circular powdery growth on both surfaces of the leaflets and becomes irregular as it spreads. During severe infection the entire surface becomes covered with the fungus leading to serious defoliation.

Mycelium superficial, creeping, septate, hyaline, 4–6 μm thick, attached to the host by multilobed haustoria (Figure 1b); conidiophores erect, cylindrical, 1–3 septate, hyaline, measuring 52-125 × 5.6–11 μm; conidia single celled, oblong to cylindric, rarely ovoid, hyaline, thin walled, wall not smooth, catenulate, acrogenus, measuring 24-46 × 12-21.6 μm, fibrosin bodies inconspicuous; conidia germinating immediately producing a single germ tube, sometimes upto 145 μm in length (Figure 1d) with an appressorium at the tip. The appressoria are variously shaped (Figure 1c).

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ALL PLANT MYCOPLASMAS ARE NOT *SPIROPLASMA*

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It is true that the most exciting developments in mycoplasmatology during the past ten years have been in the field of plant and insect mycoplasmas. The successful cultivation *in vitro* of the first mycoplasma, the one causing the "Stubborn disease" of citrus[1], led to the addition of the genus *Spiroplasma*[2,3], whose members are charactierized by their helicity and 'cork screw' motility. Later, two more Plant mycoplasmas were identified as spiroplasmas[4-6]. Razin[7] in his review generalized that all plant mycoplasmas fall under the genus *Spiroplasma* and are not species of *Mycoplasma* as believed earlier. We wish to convey through this note, a word of caution against any such generalization.

With a view to ascertaining the nature of causal agent–*Mycoplasma* or *Spiroplasma*,–we have examined the sieve elements of internodes supporting "little leaf" disease of brinjal (*Solanum melongena* L.) of mycoplasmal etiology[8] under transmission electron microscope and phase contrast microscope. The method of Davis and Worley[2,9] was followed in the preparation of the material for electron microscopy. Internodes of the infected brinjal plants were fixed in 3% glutaraldehyde and post fixed in 2% osmium tetroxide and were embedded in Spurr resin. Ultrathin sections were mounted on the formvar coated grids and were stained with uranyl acetate and lead citrate. Electron micrographs were taken on Phillips 400 EM. Thick sections were observed under phase contrast microscope, as the spiral nature is revealed by this technique[9]

The electron micrograph of the infected sieve element (figure 1A) clearly shows the presence of pleomorphic bodies of various sizes, each bounded by unit membrane. No helical filaments could ever be seen in any of the large number of sections of varying thickness examined. Our repeated observations of thick sections of the infected phloem tissue under phase contrast microscope also never showed any helical filaments (figure 1B). Further, the cut pieces of uniformly-thick helical body of a *Spiroplasma* would never be so variable in their diameter. Our attempts to culture the organism in a medium (PPLO broth base 21g/l; yeast hydrolysate 5g/l; fructose 1g/l; glucose 1g/l; sucrose 16g/l; horse serum 100 ml/l[3-5]; have unfortunately not been fruitful.

Under the present circumstances we are encouraged to mention that relegating all plant pathogenic mycoplasmas to *Spiroplasma*, on the basis of a few studies, will be premature.

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