

order number with each bifurcation in a branch system. For similar reasons, it was concluded¹¹ that any ordering system which does not keep track of the actual physical dimensions of a tree cannot be used to investigate the principle of its mechanical design. Recently on the basis of mathematical modelling on *Tabebuia rosea*, Borchert and Slade¹² have questioned the usefulness of bifurcation ratio in trees as an adaptive strategy. However, our results on *Schima* species prove that bifurcation ratio could be a highly variable feature depending upon the species and the environment in which it grows; therefore, it cannot be used for obtaining ecological generalizations on tree growth and adaptation.

The discussions with Professor Rolf Borchert of the University of Kansas, U.S.A., are gratefully acknowledged. The study was supported by the Department of Science and Technology, Government of India.

21 December 1981

1. Horton, R. E., *Bull. Geol. Soc. Am.*, 1945, 56, 275.
2. Holland, P. G., *New Phytol.*, 1969, 68, 411.
3. Oohata, S. and Shidei, T., *Jpn. J. Ecol.*, 1971, 21, 7.
4. Whitney, G. G., *Bull. Torrey Bot. Club*, 1976, 103, 67.
5. Niklas, K. J., *Ann. Bot.*, 1978, 42, 33.
6. Steingraeber, D. E., Kascht, L. J. and Franck, D. H., *Am. J. Bot.*, 1979, 66, 441.
7. Pickett, S. T. A. and Kempf, J. S., *New Phytol.*, 1980, 86, 219.
8. Halle, F., Oldeman, R. A. A. and Tomlinson, P. B., *Tropical trees and forests : An architectural analysis*, Springer, Berlin, 1978.
9. Strahler, A. N., *Trans. Am. Geophys. U.*, 1957, 38, 913.
10. Motomura, I., *Physiol. Ecol.*, 1947, 1, 55.
11. McMahon, T. and Kronauer, R. E., *J. Theoret. Biol.*, 1976, 59, 443.
12. Borchert, R. and Slade, N. A., *Bot. Gaz.*, 1981, 142, 394.

A NEW POWDERY MILDEW FROM MADHYA PRADESH

A. K. SAXENA AND S. B. SAKSENA
School of Studies in Botany, Jiwaji University,
Gwalior 474 011, India

DURING an extensive survey of plant parasitic fungi of Madhya Pradesh, the authors collected a powdery mildew on *Jasminum officinale* var. *grandiflorum* Bailey¹(=*J. grandiflorum* L.)², family-Oleaceae. This

appears to be the first report of powdery mildew on this host genus, hence the present fungus has been accommodated in a new species.

Oidium jasminii: Saxena and Saksena sp. nov.

Mycelium external, hyaline, septate 3.2–6.0 μm (4.2 μm) wide; haustoria simple; conidial apparatus non-chain forming, *Oidium* type; conidiophores erect, simple, cylindrical, septate, 78.0–110.0 \times 5.5–6.5 μm (95 \times 6.0 μm); conidia unicellular, hyaline, highly vacuolated, ellipsoid to cylindrical, borne singly on conidiophores, germinating immediately after getting released by simple germ tube, 26.0–34.0 \times 15.6–18.0 μm (30.0 \times 16.5 μm). Perithecial stage absent.

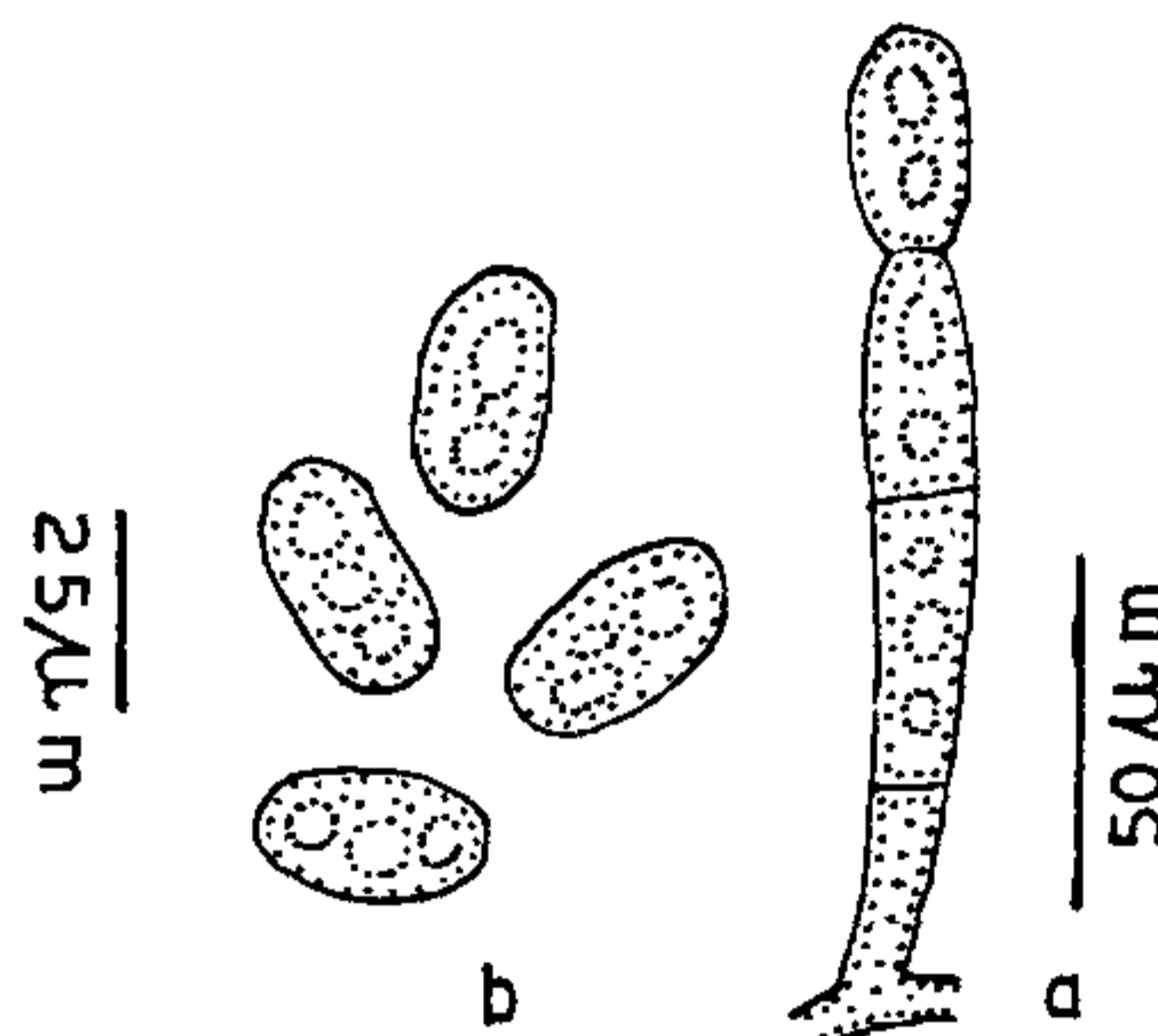


Figure 1. *Oidium jasminii*; a. Conidiophore and b. Conidia.

Habitat : On living leaves of *Jasminium officinale* var. *grandiflorum* Bailey (Family-Oleaceae), Motijheel, Gwalior, March 1981, leg. S. B. Saksena and A. K. Saxena

Type specimen has been deposited in Herbarium Cryptogamiae Indiae Orientalis (HCIO 33574).

Oidium jasminii : Saxena et Saksena sp. nov.

Mycelium superficiale, hyalinum, septatum. 3.2–6.0 μm (4.2 μm) latum; haustoria simplicia; conidiophora erecta, cylindrica, septata, 78.0–110.0 \times 5.5–6.5 μm (95 \times 5.0 μm); conidia unicellularia, hyalinum, ellipsoidea vel cylindrica, solitaria in conidiophora, 26.0–34.0 \times 15.6–18.0 μm (30.0 \times 16.5 μm); status perithecialis ignotus.

Habitatio : In foliis vivis *Jasminum officinale* var. *grandiflorum* Bailey (Family-Oleaceae), Motijheel, Gwalior, India, March, 1981, leg. S. B. Saksena et A. K. Saxena.

Typus positus in Herbarium Cryptogamiae Indiae Orientalis (HCIO 33574).

The authors wish to express their gratefulness to

Prof. R. R. Das, Head of the University, for necessary laboratory facilities.

14 December 1981

1. Bailey, L. H., *Manual of cultivated plants*, The MacMillan Company, New York, 1951, p. 797.
2. Collett, H., *Flora simlensis*, Bisen Singh Mahendra Pal Singh, Dehra Dun (III Impression), 1971, p. 307.

TRANSFER OF SOME OLD WORLD SPECIES OF *CENTRATHERUM* CASS. TO *PHYLLOCEPHALUM* BL.

B. M. NARAYANA
University of Mysore,
No. 1, Vivekananda Road, Yadavagiri,
Mysore 570 020, India

In a recent world revision of the genus *Centratherum*¹, it has been pointed out that the genus *Centratherum*, as defined by Bentham² has in fact two types of pollen grains "geographically correlated with chromosome numbers" thus suggesting that the genus is heterogeneous. DeCandolle³ had excluded the old world species from *Centratherum* and placed them under the genus *Decaneurum*. Blume⁴, a few years earlier, had however, erected the genus *Phyllocephalum*, with the same circumscription and as such Blume's name has to be adopted for the old world species of this genus.

Kirkman¹ however, recognizes only two species from South Indian region viz., *Phyllocephalum scabridum* (DC. in Wight) Kirkman and *P. indicum* (Less) Kirkman, reducing all other species to synonymy under either of these two. During a detailed study of various aspects of morphology, anatomy and cytology of these species, the present author obtained evidence to support the retention of most of them under their original specific identity (table 1) and the following new combinations are proposed; the respective basionyms are given as required under the Rules of Nomenclature.

New Combinations:

1. *Phyllocephalum courtallense* (Wight) Narayana, Comb. nov. *Decaneurum courtallense* Wight, Icones Plantarum Indiae Orientalis, t. 1081. 1846.
2. *Phyllocephalum mayurii* (C.E.C. Fischer) Narayana, Comb. nov. *Centratherum mayurii* C. E. C. Fischer, Kew Bull. 1940: 45. 1940.
3. *Phyllocephalum phyllolaenum* (DC.) Narayana, comb. nov. *Decaneurum phyllolaenum* DC. Prodr. 7: 264. 1838.
4. *Phyllocephalum rangacharii* (Gamble) Narayana, Comb. nov. *Centratherum rangacharii* Gamble, Kew Bull. 1920: 38. 1920.
5. *Phyllocephalum ritchiei* (Hook. f.) Narayana, Comb. nov. *Centratherum ritchiei* Hook. F., Fl. Brit. India 3: 228. 1881.
6. *Phyllocephalum sengaltherianum* (Narayana) Narayana, Comb. nov. *Centratherum*

TABLE I
Main distinguishing characters of *Phyllocephalum* species and their distribution

Species	Habit	Leaf and bract characters	Cypsela	Pappus	Cytology, somatic chromosome types	Distribution
<i>P. courtallense</i>	Perennial	Lower leaves serrate and upper leaves entire, linear lanceolate Bracts Coarsely hairy	Ribbed, 2 mm long	Very few, short	7 pairs 'm' type 2 pairs 'sm' type microsatellite in one pair	Courtallum and Anamalai Hills
<i>P. mayurii</i>	Annual	Leaf margin slightly recurved	Ribbed, less than 2 mm long	Copious, long	1 pair 'sm' type 8 pairs 'm' type No satellite in chromosomes	Karnataka State, Kemmangundi Hills, Sakaleshpur and Hassan
<i>P. phyllolaenum</i>	Annual	Leaf margin not recurved Bracts with moniliform hairs	Ribbed, 3 mm long	Copious, shorter than corolla	5 pairs 'm' type 4 pairs 'sm' type No satellite in chromosomes	All over South India

Contd. to next page