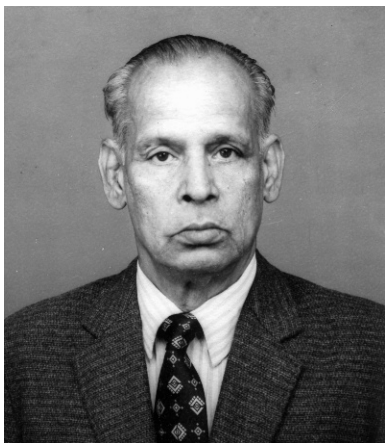


## IN MEMORIAM

**T.V. DESIKACHARY**  
(18 September 1919–5 November 2005)



Pioneering phycologist reached new depths. T.V. Desikachary studied algae with passion and was uncompromisingly committed to quality research and quality publication.

Thamarapu Vedantha Desikachary was a genteel phycologist of particular importance and significance for the Phycological Society of India since its foundation in 1960 and formed a valuable and interesting link with the past. Professor Desikachary lived to be one of the oldest surviving members of the society. From the beginning, he took an active interest in the society's formation and its gatherings, and as time went on, he served in it various official capacities. He was the chief editor of its journal *Phykos* until 1973, vice president for two years (1984 and 1985), and president for many years (1985–1998). He was elected a Fellow of the Indian Academy of Sciences in 1956 and elected to the Indian National Academy of Sciences in 1966. Professor Desikachary also served on the editorial boards of many journals, including *Phycologia* (10 years), *Phykos*, *Hydrobiologia*, the *Indian Journal of Marine Sciences*, and *Indian Council of Agricultural Research (ICAR) Monographs*. In addition to his many other associations and distinctions, in August 2005, in the twilight of his life, at the joint meetings of the Phycological Society of America (PSA) and the International Phycological Society (IPS) at the International Phycological Congress, which he could not attend because of his failing health, Desikachary received the PSA award of excellence, a tribute greatly appreciated and valued. He was delighted to have joined the elite club of phycologists recognized by the PSA for their individual contributions to phycological teaching and research. Fortunately, because of this award, 'Others may,' according to Charles Yarish, 'come to appreciate the

tremendous depth of his knowledge and his many contributions to the field of phycology'.

Desikachary was born on 18 September 1919 in Thiruppathi (a small temple town in Madras state, now Andhra Pradesh) and died at a Melbourne (Australia) hospital on 5 November 2005 in his 87th year. Professor Desikachary's death removed from our midst one of the last of a generation of academic pioneers who established the study of modern phycology in Indian institutions of higher learning. At the time of his death, Desikachary was recovering from hip surgery after a fall when his condition suddenly became critical, and he died of organ failure, said his younger son, Tam Sridhar of Monash University, Australia. His widow, Mrs. Chellammal Desikachary (80); two sons, T. Srikrishnan of Williamsville (NY) and T. Sridhar of Melbourne (Australia); four grandchildren; and two great-grandchildren survive him.

A shared sense of purpose continued to mark Desikachary's relationship with many of his former students, colleagues, and friends, a number of whom chose to honor him with a volume on the occasion of his 75th birthday. D.J. Chapman and R. Subrahmanyam, representatives of two generations of phycologists, published a summary of Desikachary's academic achievements in the resulting festschrift (*Beiheft Nova Hedwigia* 112 [1996]). Earlier, his longtime friend and colleague, the late Professor M.S. Balakrishnan, paid his tribute to Desikachary (*Phykos* 1984), and more recently Anand (*Current Science* 2006, p. 591) and Subramanian (*Current Science* 2006, p. 592) have done so.

'Desi' or 'Chary', as Desikachary graciously allowed himself to be called, knowing that many of his colleagues and friends worldwide were uncertain of the correct pronunciation of his first name, Thamarapu (actually the family name) followed an early interest in the study of algae by enrolling in the Madras University Botany Laboratory in late 1940s, where he came under the tutelage of internationally renowned Professor M.O.P. Iyengar. His long association with Iyengar had an important influence on his development. Like his mentor, Desikachary made significant contributions to both freshwater and marine phycology.

In 1970s, the life of research students in the algology lab, headed by Desikachary at the Center for Advanced Study in Botany (University of Madras), was quite different from what it is today. As one of his graduate students, I did not see the professor often, and to knock on his door was unimaginable, yet his presence was felt at all times. His remarks were brief, and he was quick to point out the essential details that I had always failed to observe; then he would quote some relevant references, with full bibliographic detail, from his remarkable memory. His brilliant

intellect and that amazing memory were often intimidating. Desikachary demanded total dedication, absolute honesty, and hard work – nothing but hard work.

Desikachary set lofty goals for himself: to obtain a thorough knowledge of Indian algae, both micro and macro, and to develop methods both of cultivating microalgae in the laboratory and of applying numerical taxonomical methods to assessment of relationships in laboratory-grown cultures. His unequivocal and uncompromising success was due, in part, to an unusual combination of personal attributes, including a great mental acuity, a visionary outlook, an altruistic nature, indefatigable energy levels, unflinching determination, and strong willpower. Possessing all these, he was able to overcome the daunting academic, social, and economic obstacles that challenged him on the way to his lofty goals. So wide was the extent of his reading and research that it is difficult in a short space to do justice to the volume of his original work.

In preparing to achieve his goals, Desikachary undertook graduate work with Iyengar at Madras University Botany Laboratory (now the Center for Advanced Study in Botany), studying marine Myxophyceae (Cyanophyta) for his PhD, which was awarded in 1953, and his DSc (1963). During the next several years, he collected along the coasts of many countries, obtaining material for many papers that he published in Indian and international journals. With a view to expanding his horizons, he obtained a UNESCO fellowship to visit Papenfuss at the University of California, Berkeley.

In 1970, he organized an international symposium on taxonomy and biology of blue-green algae at Madras (now Chennai), and again, in 1974, he hosted a much larger meeting (Taxonomy of Algae) in Madras, which gave the participants an opportunity to marvel at the scenic and cultural wonders of India and to experience the warmth of southern (Indian) hospitality. He edited their proceedings (*Blue-green algae*, 1972; *Taxonomy of algae*, 1980). In 1975, Desikachary retired prematurely as senior Professor of Botany of the Center for Advanced Study in Botany and continued to serve as professor emeritus until his death.

Realizing the importance of taxonomy, Desikachary continued his systematic study of Indian algae throughout his career. He was assisted by his students (including P. Prema, Srilatha, Hema, D. Sridhar, V.T. Sridharan, S. Gowthaman, and A.K.S.K. Prasad) in the publication of a six-volume *Atlas of diatoms of Indian coasts*. At the time of his death, he was concentrating on completing the descriptive/systematic part of the Indian Ocean diatom volumes and in the production of collaborative volumes, one on the Cretaceous diatom flora with P. Prema and another on the dinoflagellates of Indian coasts with R. Sreenivasan.

Professor Desikachary had few recreations outside phycology. Desikachary and I frequented restaurants during my monthlong annual sojourns in India since 1984. He loved good food, especially sweets and ice creams. Desikachary and I had such wonderful times, talking most of the time about phycology in India, and he was dismayed that interest in critical taxonomic work was fast disappearing. He would pound me with puns, as his face broke into a

smile, which, in an instant, became a devilish grin. Patricia Sims (The Natural History Museum, London, UK) recalls how enormously her botanical colleagues enjoyed Desi's many visits to the British Museum, as they were full of fun and interesting discussions on many topics, diatoms being foremost.

Mrs. Desikachary and their two children are aware of the depth of the admiration and affection in which Desikachary was held by so many. They should also know that those of us in the field of phycology would not be able to do what we do now if not for his vision and scholarly energy. When we were all young, Desikachary was doing much of the heavy lifting even after his premature retirement. His contributions to the development of our phycological profession are an achievement whose legacy will continue to be felt by all phycologists. His contributions to the understanding of Indian algal resources and their management will live on in students, researchers, and managers influenced by his work. Finally, those of us whose lives he touched in a personal way have lost a great friend and a caring mentor.

Desikachary had a remarkable scientific career. The following list of his research publications reveals an astonishing range of interests and quantity of intellectual output.

#### PRIMARY CONTRIBUTIONS

- 1959. *Cyanophyta*.
- 1972. *Taxonomy and biology of blue-green algae*.
- 1980. *Taxonomy of algae* (with V.N.R. Rao).
- 1981. *Volvocales* (with M.O.P. Iyengar).
- 1986–1989. *Atlas of diatoms* (with former students and colleagues).
- 1989. *Oamaru diatoms* (with Sreelatha).
- 1990. *Rhodophyta* (with V. Krishnamurthy & M.S. Balakrishnan) vol. 1.
- 1996. *Silicoflagellates* (Dictyochophyceae) (with Prema).
- 1998. *Rhodophyta v. II* (with V. Krishnamurthy & M.S. Balakrishnan).

#### NEW ORDERS, FAMILIES, NEW GENERA, NEW SPECIES AND NEW NAMES DESCRIBED BY TAMARAPU VEDANTA DESIAKCHARY

##### New Orders

- 1996. Cornuales T.V. Desikachary & P. Prema Order nov.

##### New Families

- 1996. Mesocenaceae T.V. Desikachary & P. Prema family nov.

##### New Genera

##### *Bacillariophyta*

- 1958d. *Rossiella* T.V. Desikachary in Desikachary & Maheswari gen. nov.
- 1987. *Neofragilaria* T.V. Desikachary, A.K.S.K. Prasad & P. Prema gen. nov.
- 1989a. *Pinnulariosigma* T.V. Desikachary, V.N. Raja Rao, & V.T. Sridharan gen. nov. in T.V. Desikachary

1990. *Quadrodiscus* P. Prema & T.V. Desikachary gen. nov.  
1986. *Spinodiscus* T.V. Desikachary & K. A. Ranjitha Devi (new name).

*Chlorophyta*

- 1972a. *Mantoniella* Desikachary gen. nov.  
1972e. *Papenfussiomonas* Desikachary gen. nov.  
1976b. *Schilleriomonas* Desiakchary gen. nov.

*Cyanophyta*

1948. *Camptylonemopsis* Desikachary gen. nov.  
1953a. *Iyengariella* Desikachary gen. nov.

*Dictyochophyceae*

1996. *Buckriella* Desiakchary & Prema gen. nov.

## NEW SPECIES, NEW VARIETIES, NEW FORMS AND NEW NAMES

*Bacillariophyta*

- Actinocyclus ingens* var. *indica* Desikachary & Prema in T.V. Desikachary 1987b var. nov.  
*Actinocyclus srinivasanii* Desikachary & Ranjitha Devi sp. nov., 1986a  
*Amphora neomarina* Desikachary & Prema sp. nov. in T.V. Desikachary 1989a  
*Arachnoidiscus ehrenbergii* var. *nankoorensis* Desikachary & Ranjitha Devi 1986a var. nov.  
*Asterolampra nankoorensis* Desikachary & Ranjitha Devi sp. nov. 1986a  
*Asterolampra wiseii* T.V. Desikachary & P.M. Sreelatha sp. nov. 1989b  
*Asteromphalus roperianus* var. *delicatula* T.V. Desikachary & P.Prema var. nov. in T.V. Desikachary 1987b  
*Aulacodiscus amoenus* Grev. Var. *sparsipunctata* T.V. Desiakchary & P.M. Sreelatha var. nov. 1989b  
*Auliscus caelatus* var. *nankoorensis* T.V. Desikachary & K.A. Ranjitha Devi var. nov. 1986a  
*Auliscus pruinosis* var. *nankoorensis* T.V. Desikachary & K.A. Ranjitha Devi var. nov. 1986a  
*Auliscus sculptus* var. *constrictus* (J. Rattray) T.V. Desiakchary var. nov.  
*Auliscus sculptus* var. *major* T.V. Desikachary var. nov. new name  
*Biddulphia infundibuloides* T.V. Desikachary, S. Gowthaman & Y. Latha 1987a  
*Campylodiscus bifurcatus* var. *minor* T.V. Desikachary & P. Prema var. nov. in T.V. Desikachary 1987b  
*Campylodiscus nankoorensis* T.V. Desikachary & K.A. Ranjitha Devi sp. nov. in Desikachary 1986a  
*Campylodiscus ornatus* var. *indicus* T.V. Desikachary & P. Prema var. nov. in T. Desikachary 1987b  
*Chaetoceros neobulbosum* T.V. Desikachary, S. Gowthaman & Y. Latha sp. nov. 1987a  
*Cocconeis cyclophora* Grun. Var. *schraderi*. T. V. Desiakchary & P. M. Sreelatha var. nov. 1989a  
*Coscinodiscus jacksonii* T.V. Desikachary & P.M. Sreelatha sp. nov. 1989a  
*Coscinodiscus nankoorensis* T.V. Desikachary & K.A. Ranjitha Devi sp. nov. in Desikachary 1986a  
*Coscinodiscus pseudanastomosans* T.V. Desikachary, S. Gowthaman & Y. Latha sp. nov. in Desikachary 1987b  
*Diploneis biseriata* var. *australis* T.V. Desikachary & P. Prema var. nov. in Desikachary 1988a

- Haslea indica* Desikachary & Prema sp. nov. in Desikachary 1988a  
*Hercotheca oamaruensis* T.V. Desikachary & P.M. Sreelatha 1989 sp. nov.  
*Hyalodiscus radiatus* (O'Maera) Grun. In Cle. & Grun. Var. *striata* T.V. Desikachary & P. M. Sreelatha var. nov. 1989  
*Hyalodiscus rossii* T. V. Desikachary & P. M. Sreelatha sp. nov. 1989  
*Leudugeria janischii* (Grun.) V.H. var. *crenulata* T.V. Desiakchary & P.M. Sreelatha var. nov. 1989  
*Mastogloia schraderi* T.V. Desikachary & P.M. Sreelatha sp. nov. 1989  
*Navicula lyra* var. *asymmetrica* T.V. Desikachary & P. Prema var. nov. in Desikachary 1989a  
*Navicula spectabilis* var. *constricta* T.V. Desikachary & P. Prema var. nov. Desikachary 1989a  
*Navicula spectabilis* var. *punctata* T.V. Desikachary & P. Prema var. nov. Desikachary 1989a  
*Neofragilaria nicobarica* T.V. Desikachary, A.K.S.K. Prasad & P. Prema sp. nov. in Desikachary 1989a  
*Nitzschia bilobata* Wm. Sm. var. *oamaruensis* T.V. Desiakchary & P.M. Sreelatha var. nov. 1989  
*Nitzschia carnicobarica* T.V. Desikachary, & Prema in Desiakchary 1987b  
*Nitzschia donahuei* Desikachary, Gowthaman & Y. Latha in Desikachary 1987a  
*Nitzschia kanayae* T.V. Desikachary & S. Gowthaman sp. nov. (new name) in Desikachary 1989a  
*Nitzschia neoconstricta* T.V. Desikachary, S. Gowthaman, & Y. Latha sp. nov. in Desikachary 1987a  
*Nitzschia pseudocapitata* T.V. Desikachary & S. Gowthaman sp. nov. in Desikachary 1989a (new name)  
*Nitzschia subconstricta* T.V. Desikachary & P. Prema in Desiakchary 1987b  
*Perrisonöe pentagona* T.V. Desikachary, S. Gowthaman, S. Hema, A.K.S.K. Prasad & P. Prema sp. nov. 1987  
*Porodiscus minor* P. Prema & T.V. Desikachary sp. nov. 1989 (1990)  
*Porodiscus venkataramanii* P. Prema & T.V. Desikachary sp. nov. 1989 (1990)  
*Pyxidicula reniformis* T.V. Desikachary & K.A. Ranjitha Devi in Desikachary 1987  
*Quadrodiscus indicus* P. Prema & T.V. Desikachary sp. nov. 1989 (1990)  
*Quadrodiscus minutus* (Greville) P. Prema & T.V. Desikachary sp. nov. 1989 (1990)  
*Quadrodiscus gombosii* P. Prema & T.V. Desikachary new name 1989 (1990)  
*Rhaphoneis krusadaiensis* T.V. Desikachary & V.T. Sridharan sp. nov. in Desikachary 1989a  
*Rhaphoneis nodulifer* (Gr. & St.) Schmidt var. *major* T.V. Desikachary & P.M. Sreelatha var. nov. 1989b  
*Rossiella gombosii* ('gombosi') T.V. Desikachary in Desiakchary *et al.* 1983 [1984d]  
*Stictodiscus californicus* Grev. var. *californicus* f. *triangularis* T.V. Desikachary & P.M. Sreelatha f. nov. 1989  
*Stictodiscus haitianus* Traun & Witt var. *major* T.V. Desiakchary & P.M. Sreelatha var. nov. 1989  
*Stictodiscus parallelus* f. *pentagona* T.V. Desiakchary & P.M. Sreelatha forma nov. 1989  
*Triceratium favus* f. *octogonum* ('octogona') T.V. Desikachary & P. Prema forma nov. in Desikachary 1989a  
*Trigonium arcticum* f. *quadratum* ('quadrata') T.V. Desiakchary forma nov. new name 1989a  
*Trigonium arcticum* f. *tetragonum* ('tetragona') T.V. Desiakchary forma nov. 1989a



*Trigonium formosum* f. *tetragonum* T.V. Desikachary forma nov. 1989a

#### Chlorophyta

*Chlamydomonas conformis* var. *minor* M.O.P. Iyengar & T.V. Desikachary 1981

*Dactylococcopsis fascicularis* f. *indica* Desikachary forma nov.

#### Cyanophyta

*Camptylonemopsis iyengarii* T.V. Desikachary sp. nov. 1948

*Camptylonemopsis minor* T.V. Desikachary sp. nov. 1948

*Camptylonemopsis pulneyensis* T.V. Desikachary sp. nov. 1948

*Iyengariella thiurpathiensis* T.V. Desikachary sp. nov. 1953a  
*Phormidium rotheanum* var. *capitatum* T.V. Desikachary new name 1959

*Symploca hydroides* f. *indica* M.O.P. Iyengar & T.V. Desikachary forma nov. 1944

*Symploca hydroides* f. *minor* M.O.P. Iyengar & T.V. Desikachary forma nov. 1944

#### Dictyochophyceae

*Arctyochoa bukryi* T.V. Desikachary & P. Prema sp. nov. 1996

*Bukryella eocaenica* T.V. Desikachary & P. Prema 1996

*Cannopilus desikacharyi* ('desikacharii') P. Prema 1996

*Corbisema perch-nielseniae* T.V. Desikachary & P. Prema 1996

*Corbisema perch-nielseniae* T.V. Desikachary & P. Prema 1996

*Dictyochoa katharinae* T.V. Desikachary & P. Prema 1996

*Dictyochoa lockeri* T.V. Desikachary & P. Prema 1996

*Dictyochoa longa* f. *asymmetrica* T.V. Desikachary & P. Prema forma nov.

*Distephanus bukryi* P. Prema & T.V. Desikachary sp. nov. in Desikachary & Prema 1996

*Distephanus crux* var. *octacanthus* Desikachary & C.L. Maheshwari var. nov. 1956b

*Lyracula bipedicellata* T.V. Desikachary & P. Prema sp. nov. 1996

*Mesocena convexa* T.V. Desikachary, P.M. Sreelatha & P. Prema sp. nov. in Desikachary & Prema 1996

*Nothyocha insolita* f. *quadrangula* T.V. Desikachary & P. Prema forma nov. 1996

#### Rhodophyta

*Audouinella jogensis* Iyengar ex T.V. Desikachary, H.S. Balakrishnan, & V. Krishnamurthy

*Helminthocladia calvadosii* f. *indica* Desikachary forma nov. 1957a

*Helminthora lindaueri* Desikachary sp. nov. 1955b

#### TAXA NAMED AFTER T.V. DESIKACHARY

*Desikacharyella* B. Subramanian gen. nov., *Desikaneis* A.K.S.K. Prasad gen. nov., *Aphanothece desikacharyi* F. Hindák sp. nov., *Arthrospira desikacharyi* ['desikacharyiensis'] Vasishta, *Anabaena desikacharyi* ['desikacharyensis'] Vashista, *Cyclotella desikacharyi* A.K.S.K. Prasad, *Melosira ambigua* var. *desikacharya* A.R. Rao & Awasthi *Ecballosystopsis desikacharyi* A.K.S.K. Prasad, *Gelidiocolax desikacharyi* E. Ganesa, *Batrachospermum desikacharyi* V. Sankaran, *Neogoniolithon desikacharyi* Krishnamurthy & Jayagopal *Surirella desikacharyi* Lange-Bertalot & D. Metzeltin, *Tetraselmis desikacharyi* B. Marin, K. Hoef-Emden and M. Melkonian, *Pyrobotrys desikacharyi* Y.S.R.K. Sarma & R. Shyam, *Cloture desikacharyii* ['desikacharyensis'] Vasishta, *Trachelomonas desikacharyi* N.D. Kamat, *Spirogyra desikacharyi* ['desikacharyensis']

Rattan, *Oedogonium desikacharyi* Gonzales & Jain, *Oedogonium desikachryi* ['desikacharii'] Khan & Kukreti

#### PUBLICATIONS OF PROF. T.V. DESIKACHARY

1944. A systematic account of some marine Myxophyceae of the South Indian Coast. *Journal of Madras University* 16B: 37–68 (with M.O.P. Iyengar).
1945. Note on the reactions of *Gloeotrichia raciborskii* Wolosz., a parasitic attack. *Current Science* 14: 207–208.
- 1946a. On the genus *Nostochopsis* Wood. *Journal of Indian Botanical Society M.O.P. Iyengar Commemoration Volume*, pp. 225–238.
- 1946b. Germination of the heterocyst in two members of the Rivulariaceae, *Gloeotrichia raciborskii* Wolosz. and *Rivularia mangini* Frémy. *Journal of Indian Botanical Society* 25: 11–17.
- 1946c. *Mastigocladopsis jogensis* gen. et sp. nov. a new member of the Stigonemataceae. *Proceeding of Indian Academy of Sciences* 24B: 55–59 (with M.O.P. Iyengar)
- 1946d. On *Johannesbaptistia pellucida* (Dickie) Taylor and Drouet from Madras. *Journal of Indian Botanical Society* 25(3): 117–121 (with M.O.P. Iyengar)
1948. On *Camptylonema indicum* Schmidle and *Camptylonemopsis* gen. nov. *Proceedings of Indian Academy of Sciences* 28B: 35–50.
1952. Electron microscope study of diatom wall structure I. *Journal of Scientific and Industrial Research* 11B: 491–500.
- 1953a. *Iyengariella tirupatiensis* gen. et sp. nov. from South India. *Phytomorphology* 3: 249–253.
- 1953b. Occurrence of three-pored heterocysts in *Brachytrichia balani* (Lloyd) Born. & Flah. *Current Science* 22: 180–181.
- 1954a. Electron microscope study of diatom wall structure III. *Isthmia nervosa* Kuetz. *American Journal of Botany* 41: 616–619.
- 1954b. Electron microscope study of diatom wall structure VI. *Mikroskopie*, Wien 9: 168–178.
- 1954c. The structure of the areolae in Diatoms. *VIII e Congress International Botanique*. Paris. Rapp. et Comm. Sect. 17: 125–126.
- 1954d. On the mode of development of reverse shaped branching in Myxophyceae. *VIII e Congress International Botanique*. Paris. Rapp. Comm. Section 17: 104–106.
- 1954e. Electron microscope study of the diatom wall structure II. Genus *Chaetoceros* Ehrenb. *Journal of Scientific and Industrial Research* 13: 92–94 (with Kanwar Bahadur).
- 1954f. Electron microscope study of the diatom wall structure IV. *Triceratium dubium* Brightwell. *Journal of Scientific and Industrial Research* 13: 240–243 (with Kanwar Bahadur).
- 1954g. Electron microscope study of the diatom wall structure. V. *Transactions of American Microscopical Society* 73: 247–277 (with Kanwar Bahadur).
- 1955a. Electron microscope study of diatom wall structure VII. *Journal of Scientific and Industrial Research* 14C: 42–46 (with A.A. Aleem).
- 1955b. On a *Helminthora* from New Zealand. *American Journal of Botany* 4292: 126–131.
- 1956a. Observations on two species of *Liagora*. *Pacific Science* 10: 423–430.

- 1956b. Fossil silicoflagellates from Colebrook and Nancoori Islands. *Journal of Indian Botanical Society* 35: 25–264 (with C.L. Maheshwari).
- 1956c. Occurrence of *Iyangariella tirupatiensis* in Pachmari. *Current Science* 24: 245–246 (with L.P. Mall).
- 1957a. *Helminthocladia* from India and New Zealand. *Journal of Indian Botanical Society* 36: 441–456.
- 1957b. On a *Liagoropsis* from Andamans. *Revue Algologique* n.s. 3: 51–56.
- 1957c. Electron microscope studies of diatoms. *Journal of Royal Microscopical Society* 76: 9–36.
- 1957d. Electron microscopy and Algology. *Proceedings of Indian Academy of Sciences* 46B: 54–64.
- 1957e. *Taenioma* J. As. from India. *Proceedings of Indian Academy of Sciences* 46B: 336–34 (with M.S. Balakrishnan).
- 1958a. Structure and reproduction of *Pseudogloiophloea fascicularis* (Boergs) comb. nov. *Proceedings of Indian Academy of Sciences* 47B: 168–172 (with A.D. Singh).
- 1958b. Recent trends in plant taxonomy with reference to embryology: taxonomy of algae. *Memoirs of Indian Botanical Society* 1: 52–62.
- 1958c. Post-fertilization development in *Liagora*. *Journal of Indian Botanical Society* 36: 457–471 (with M.S. Balakrishnan).
- 1958d. Fossil diatoms from Colebrook Island. *Journal of Indian Botanical Society* 37: 27–41 (with C.L. Maheshwari).
- 1958e. Modern trends in taxonomy with reference to embryology: taxonomy of algae. Proc. 45th Indian Science Congress [Madras, 1958], Part IV, Late abstracts and discussions, pp. 111–112.
- 1959a. On sexual reproduction in *Tetrasporidium javanicum* Moebius. *Proceedings International Botanical Congress Montreal* 2: 90.
- 1959b. Electron microscopy and algal structures. *Proceedings International Botanical Congress Montreal* 2: 90.
- 1959c. Some aspects of carbohydrate metabolism in algae. *Memoirs of Indian Botanical Society* 2: 88–101.
- 1959d. *Cyanophyta*. Council of Agricultural Indian New Delhi, 700 pp.
1960. Submicroscopic morphology of algae. In: *Proceedings of the Symposium on Algae* (Ed. by P. Kachroo). New Delhi, pp. 70–77.
1961. The chemical composition of diatom frustules. *Proceedings of Indian Academy of Sciences* 53B: 157–165 (with Dweltz).
- 1962a. Biology of phytoplankton. *Proceedings of Summer School of Botany*, Darjeeling, 1960, pp. 69–76.
- 1962b. Electron microscopy of algal structures. *Proceedings of Summer School of Botany*, Darjeeling, 1960, pp. 77–87.
- 1962c. On the post-fertilization stages of *Cumagloia* Setch. et Gardn., and *Dermonema* (Grev.) Harv. *Journal of Indian Botanical Society* 41: 132–147.
- 1962d. The diatoms. *Current Science* 31: 43–45.
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#### A.K.S.K. Prasad\*

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