

## Contribution of some phycologists

### 1) Felix Eugen Fritsch(26-4-1879---2-5-1954)

E. Fritsch, though a British biologist, started his career in the University of Munich,. Fritsch is best known internationally for his comprehensive two volumes — ***“The structure and Reproduction of the Algae***, F.E fritsch is also known as father of phycology. The **classification** is published in this book .

he had contributed to providing important information doing research on algae and phytoplankton (microscopic plant).

- He gave many details in the field of botany.
- In 1929, Fritsch founded the Freshwater Biological Association ,it gradually developed into the best freshwater biological organization of the world.
- Fritsch was the founder chairman of the FBA’s Council till his death in 1954.
- After his death, J.W.G Lund (1961) published his illustrations as ***“Fritsch’s Collection of Illustrations of Freshwater Algae”***. Another institution owes its existence in large part to Fritsch: The Culture Collection of Algae and Protozoa

### 2..Gilbert Morgan Smith(6-1-1885-----11-6-1959)

- Smith is best known for his books, particularly the *‘Freshwater Algae of the United States’* *‘The Marine Algae of Monterey Peninsula’* and the two volumes of *‘Cryptogamic Botany’* published in 1938 and 1955, respectively. In *‘Cryptogamic Botany’* he proposed a system of taxonomy of Cryptogams.
- Smith devoted most of his time in the study of the physiology of the sexual reproduction in *Chlamydomonas*.
- Several genera (e.g., *Smithiella*, *Smithimastix*, *Smithora*) and species (e.g., *Gymnogongrus smithii*, *Hymenena smithii*, *Chlamydomonas smithiana*, *Dactylococcopsis smithii*, *Tetrademus smithii*, *Debarya smithii*, *Gloeochloris smithiana*) have been named in honor of G.M. Smith.

### 3) Professor Ram Nagina Singh (2-8-1915-----9-3-1977)

- Professor Ram Nagina Singh, a scholar from Banaras Hindu University, was the student of Prof. Y. Bhardwaj.
- He started his work as a classical phycologist, studying the distribution, identification, cytology, ecology and life-histories of algae.
- His major area of interest was the study of blue-green algae.
- He described the life-history of *Fritschiella tuberosa* and *Draparnaldiopsis indica*.
- Prof. Singh focussed his attention on studying the physiology, biochemistry, morphogenesis and genetics of nitrogen fixing blue-green algae.
- He also investigated the genetics of cyanophages.
- . He was the first scientist to experiment with the use of blue-green algae in agriculture found that soils which were highly alkaline were unfit for conventional agriculture.
- The blue-green algae were able to change the soil chemistry thus making the soil fertile. He published a detailed account on the *“Role of blue- green alga in N2 economy of Indian agriculture*

### 4) Professor M.O.P. Iyengar(1886---1960)

- Professor M.O.P. Iyengar, the **father of modern algology of India**,
- He set up a leading algal centre of research at Madras.
- Iyengar (1933) **made an important contribution to our knowledge of the Volvocales of South India.** & introducing many new genera Like *Fritschiella* (1932), *Ecballocystopsis* (1933), *Characiosiphon* (1936) and *Cylindrocapsopsis* (1957). These include papers dealing with *Hormidiella*, *Heterotrichopsis*, *Triplastrum* and *Gloeotilopsis*. Working on the cell division in *Cylindrocapsopsis* and other green algae,
- Iyengar (1960) **proposed a new concept, of the origin of the filamentous condition in the green algae.**
- He also described a number of interesting and new members of the Zygnematales.

- **Contributions of Thamarapu vedantha Desikachary T.V. Desikachary (1919---2005)**

- T. V.Desikachary was one of the leading Indian phycologists who played a significant role in developing Madras as one of the centers of Indian Phycology.
- He had interest in diverse algal groups.
- Some of the books written/edited by him include '*A Monograph on the Cyanophyta*', '*Taxonomy and Biology of Blue-Green Algae*' and '*Marine Plants*'. Along with Prof. Iyengar, Desikachary wrote a monograph on '*Volvocales*'.
- One of his greatest contributions was the "*Atlas of Indian Diatoms*" in five volumes in association with his colleagues.
- He organized international symposia on '*Taxonomy and Biology of Blue-Green Algae*' in 1970 and on '*Taxonomy of Algae*' in 1974 at the University of Madras.
- Desikachary was the first Indian algologist to undertake electron microscopic studies of both living and fossil diatoms He was also the first to initiate numerical methods in the taxonomy of blue-green algae
- . He established several genera to commemorate the contribution of Prof. Iyengar; some of them are *Iyengariella* (Cyanophyceae), *Iyengariomonas*, *Papenfussimonas*, *Mantoniella* (Chlorophyceae) and *Rossiella* (Bacillariophyceae).
- Desikachary also strongly supported the Iyengar's view regarding the origin and evolution of filamentous habit and that the development of parenchymatous thalli in many algae are modifications of the palmelloid habit.

He was a member of the Botanical Nomenclature Committee He served as editor of the journal *Phykos*. In 2005 he was honoured by American Phycological Association for his life-time contribution Prof. Desikachary passed away in 2005 while preparing the manuscript for the volume on Dinoflagellates and keys for diatom atlas.

