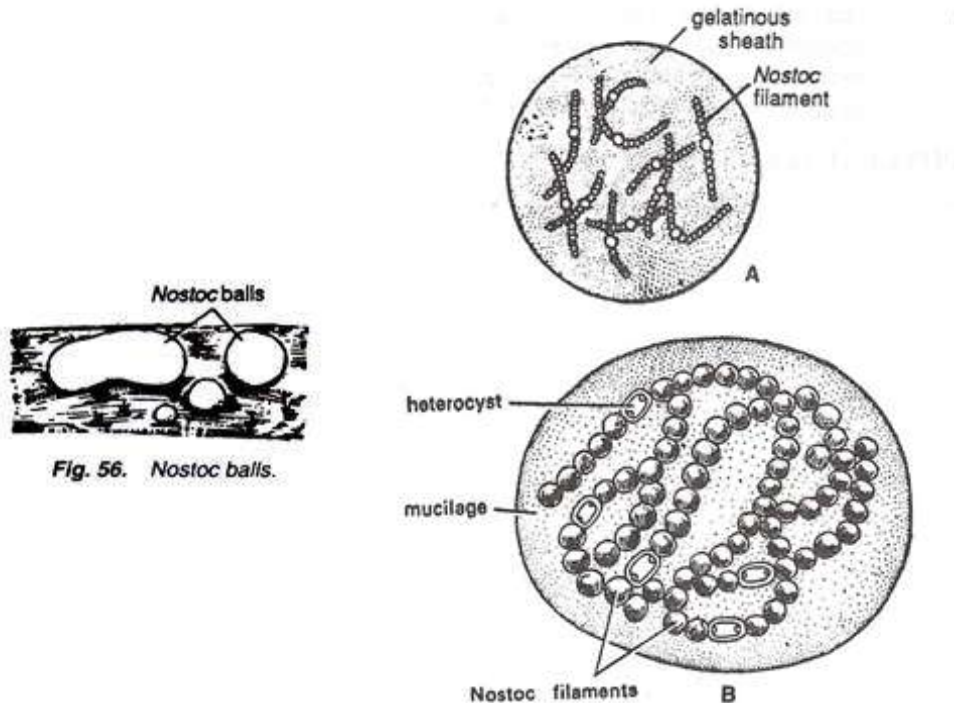


## Nostoc

1. Ball like colony is enveloped by a gelatinous sheath (Figs. 56, 57).



2. Balls are greenish to bluish-green in colour.
3. Each colony contains thousands of straight or twisted filaments or trichomes (Fig. 57).
4. Each trichome is surrounded by its individual sheath and called the filament.
5. A trichome is contorted and consists of many cells arranged in a beaded manner (Fig. 58).
6. Each cell is somewhat cylindrical or spherical in shape.
7. In filaments there are present some large, spherical or cylindrical, colourless empty cells called heterocysts.
8. Heterocysts are generally intercalary but in the young condition, they may be terminal.
9. Two polar nodules are present in each heterocyst (Fig. 59B).
10. Some cells of the filament become enlarged and filled with the food material. These thick-walled cells are called akinetes. Akinetes are generally present in chain.

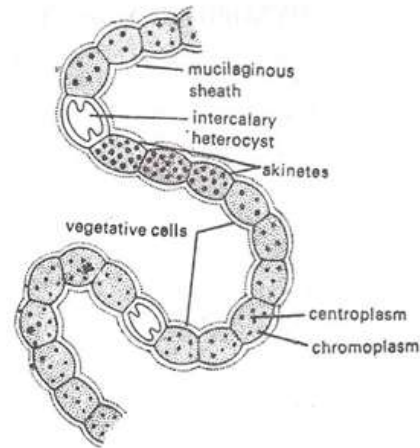


Fig. 58. Nostoc. A single filament.

### A Single Cell:

1. Each cell is surrounded by a cellulose cell wall (Fig. 59A).
2. Protoplast shows the typical Myxophyceean structure, i.e., inner colourless centroplast and outer pigmented chromoplast.
3. In the chromoplast are present pigments, proteinaceous cyanophycin granules and cyanophycin starch granules while in the centroplast is present the incipient nucleus

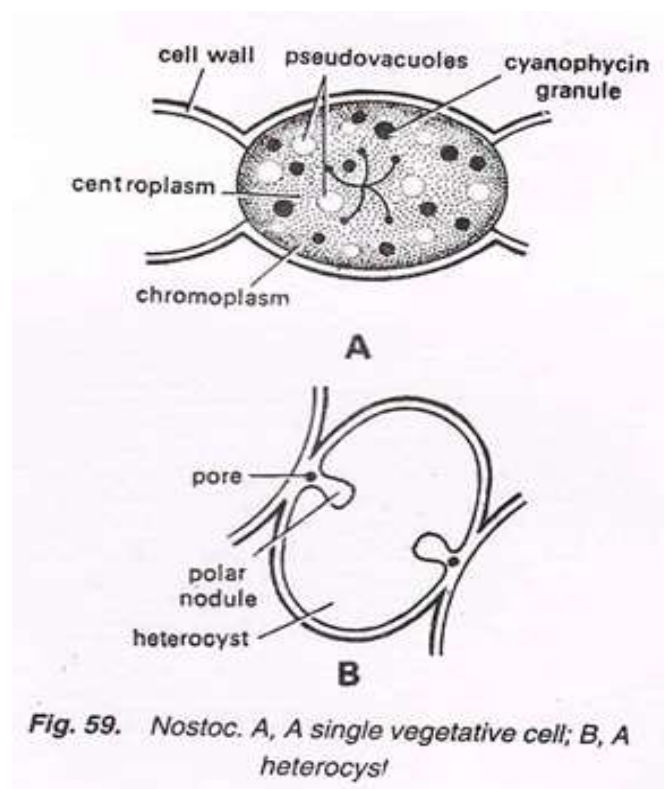


Fig. 59. Nostoc. A, A single vegetative cell; B, A heterocyst