

# Economic Importance of Gymnosperms

## **Ornamental value:**

A number of gymnosperms are grown as ornamental plants, e.g., *Cycas*, *Araucaria*, *Thuja* etc.

## 2. Food Value

- i. 'Sago' starch obtained from pith and cortex of stem of *C. revolute*, *C. rumphi* etc.
- ii. 'Seed starch' obtained from seeds of *Cycas rumphii*, *Dioon edule* etc. It is prepared into flour and cooked before eating.
- iii. Seeds of *Pinus gerardiana* (chilgoza) are edible.
- iv. 'Kaffir bread' prepared from the stem pith of *Encephalartos*.
- v. Young leaves of *Cycas* cooked as vegetables.

### 3.Medicinal value

- i. Ephedrine (alkaloid) extracted from Ephedra used in treating asthma, cough, cold, bronchitis etc.
- ii. Tincture of Ephedra is a cardiac stimulant.
- iii. The juice extracted from young leaves of *Cycas revoluta* is used for curing blood vomiting and flatulence.

## 4. Industrial Use

- i. Gum-Cycas gum used as adhesive, antidote for snake bites and using malignant ulcers.
- ii. Tannins – Tannins extracted from bark of Araucaria, Pinus, Sequoia etc. used in leather industry.
- iii. Canada balsam – It is turpentine obtained from Abies balsamea and used as a mounting medium in biological preparations.
- iv. Amber (fossil resin) – obtained from Pinus succinifera. Wood of Pinus is used for doors, poles, beams, railway wagon flooring etc.
- v. Plywood prepared from Podocarpus.
- vi. Papers like newsprints, writing and printing papers are being prepared from the wood pulp of Pinus, Picea, Abies, Gnetum etc.
- vii. The leaves of cycads are used for preparing baskets, mats, hats, brooms etc.
- viii. The fibres obtained from the leaves of Cycas and Macrozamia are used for stuffing pillows and making mattresses.

## 5. Source of oils

- i. Oils extracted from seeds of *C. revoluta*, *Macrozamia reidleyi*, *Pinus cembra* and *Cephalotaxus drupacea* are used as edible oils.
- ii. Red cedar wood oil extracted from the heart wood of *Juniperus virginiana* is used for cleaning microscopic preparations and for oil immersion lenses.
- iii. Oils obtained from *Cedrus deodara*, *Ciypthomeria japonica* and *Cupressus serm-perivirens* are used in preparations of perfumes.