9. CONCLUSIONS

Open Scrub Forest

Richness – In total, 629 plant species were recorded from this forest type and of which, 178 species were unique to this habitat. The dominant families were Poaceae, Fabaceae and Asteraceae. *Euphorbia, Cassia, Ipomoea* were the dominant genera recorded.

Diversity and density - OSF of NGR inspite of being a degraded forest, had good varieties (diversity) of tree and shrub forms. It also supported highest density of grasses.

Regeneration potential - The dominance of recruited trees over mature and regenerated ones was a result of stagnation in growing stage. Seasonal cutting and lopping led to the stagnation in the growing stage.

Threatened plants – Of the eight threatened species, six species were found in this habitat. Except *Citrullus colocynthis* the abundance of all other five species was very low.

Tropical Thorn Forest

Richness - Generally poor number of species of plants were recorded in this forest type. A total of 307 plants was recorded, of which two species were unique to this habitat. The dominant families were Poaceae, Fabaceae and Asteraceae. The dominant genera were *Euphorbia, Acacia* and *Cyperus*.

Diversity and density - Compared to other forest types, TTF showed the poor species diversity. However, it supported more number of individuals of trees and herbs. It can be due to the dominance of *Acacia raddiana* (tree), *Indigofera cordifolia* and *Zornia gibbosa* (herbs).

Regeneration potential - Even though this forest type showed highest density of trees, the lowest representation of regeneration and recruitment was noticed. This was due to extensive cutting and lopping pressures.
Phenological pattern of six tree species

Leaf initiation - May to September
Leaf fall - October to November
Flowering - June to August
Fruiting - July to October

Threatened plants – Although TTF supported six species, Anogeissus sericea var. nummularia, Commiphora wightii and Heliotropium rariflorum were with good numbers while Tribulus rajasthanensis, occurred only in this forest type was found with less number.

Dry Deciduous Forest

Richness - Out of 582 species recorded from this forest, 99 species were unique to this habitat type. This habitat is dominated by families viz. Poaceae, Fabaceae, Asteraceae, Acanthaceae. Euphorbia, Acacia, Cassia and Ipomoea were the dominant genera.

Diversity and density - Highest diversity of climbers and grasses was recorded from this forest type while, it also supports more numbers of shrubs.

Regeneration potential - The regeneration potential of this forest type was ‘good’.

Phenological patterns of 13 tree species

Leaf initiation - March to August
Leaf fall - October to November
Flowering - February to May
Fruiting - April to November

Threatened plants - Only four species were found and that too with very few numbers.

Moist Deciduous Forest

Richness - A total of 445 plant species was recorded and of which 88 species were unique to this habitat. Family is dominated by Poaceae,
Fabaceae and Asteraceae. The dominant genera were *Cyperus, Euphorbia, Ficus, Acacia* and *Ipomoea*.

**Diversity and density** - Among the forest types, MDF showed the highest diversity. This is due to persistence moisture and ground surface and soil quality.

**Regeneration potential** - The regeneration potential of this forest type was ‘good’.

**Phenological of nine tree species**
- Leaf initiation: February to August
- Leaf fall: October to November
- Flowering: February to May
- Fruiting: March to November

**Threatened plants** - It supports only two plants which were represented by very few individuals.

**Conservation measures**

Habitat Encroachments, mining activities, removal of fuel wood, cattle pressures, forest fire and tourism activities are the existing threats to the flora of NGR, and thus proper action to be taken to minimize all such activities.

A proper watershed management activity should be promoted in river catchment to retain the moisture yeararound.

Collection, segregation and disposal of solid wastes and mining refuse should be initiated.

Long term and a more systematic survey during appropriate seasons is needed for better understanding and selection of high priority areas.

In-depth study on seed viability, seed germination and dispersal agents of the eight threatened species should be initiated.

*Ex-situ* conservation must be taken up for plants recorded with very low numbers (*Dipcadi erythraeum, Indigofera caerulea* var. *monosperma*, and *Tribulus rajasthanensis*).