INTRODUCTION

Peshawar District lies between 71° 25′ to 72° 47′ E longitudes and 33° 0′ to 34° 31′ N latitudes. It is one of the most historic cities of Pakistan, located near the scenic route of the Khyber Pass, which is visited by a large number of tourists from abroad. Hayatabad Township is situated approximately 15km, south west of the main city centre spread over an area of 3360 acres. The project of Hayatabad Township was started in Oct 1978. There wasn’t any existing population within the site of the Hayatabad Town. After the break-up of one unit the shortage of houses became even more acute, so the urge of residential sites increased. It was named after the then Chief Minister Hayat Muhammad Khan Sherpao. It is close to Khyber agency and is separated from by the hills at phase- VI and -VII. Hayatabad is the place of diverse cultures from all sorts of families from Khyber Pakhtunkhwa and also is a home for Afghani refugees for so many years since the start of cold war. Presently, it consists of seven phases i.e. Phase –I (523 acres), Phase-II (749 acres), phase –III (342 acres), phase- VI (326 acres), phase- V (307 acres) phase- VI (674 acres) and phase- VII (439 acres). Two tributaries of River Kabul are passing through the area naming Narai Khwar and Gandao Khwar. The public has been provided with facilities of parks including Bagh-e-Naran, Tatar Park, Shalman Park and Ladies Park.

The climate of Peshawar is tropical with a mean maximum temperature of 40 °C in summer (May-Aug) and 10 °C in winter (Nov-Mar). The relative humidity varies from 46% in June to 76% in August. The District is almost a fertile plain. The central part of the district consists of fine alluvial deposits. The cultivated tracts consists of a rich, light and porous soil, composed of a pretty even mixture of clay and sand which is good for cultivation. It is approximately 1173 feet (358 m) above sea level (Anonymous, 1998).

According to (Honu et al., 2009) Urbanization has resulted in the destruction of natural ecosystems, followed by conversion of the land into built up structures and other man made logical habitats such as lawns, gardens, parks etc. Previously wild trees were growing in this area but due to town establishment the number of these trees is considerably decreased due to cultivation of ornamental trees like Sterculia diversifolia, Alastonia scholaris, Araucaria columnaris, Cupressus sempervirens which are planted in all the parks, at road sides and in front of houses. Some of the trees like Eriobotrya japonica, Mangifera indica, Prunus domestica are introduced for the aesthetic as well as their fruit value. Trees like Eucalyptus camaldulensis are brought to enhance the aesthetic values of this site but now this tree has dominated as invasive species and growing vigorously in this area near the river/stream banks. Acacia nilotica and Ziziphus nummularia are indigenous tree species growing wildly along with the Acacia modesta, Prosopis juliflora are common in the area but the number has been considerably decreased.
Some the endangered plants like *Cycas revoluta* (a living fossil) and *Magnolia grandiflora* are grown for aesthetic purposes in the parks and houses. *Broussonetia papyrifera* an allergy causing species has already introduced in the area which has now become alien invasive. Although many non-native plant species that has been introduced to Pakistan and has become problematic, *Broussonetia papyrifera* is listed amongst the six worst plants invaders of highly impact species in Pakistan (Khatooon and Ali, 1999). Although the number of plants of *Broussonetia papyrifera* is few but its introduction may cause high allergies in future. The introduction of such species is severely affecting the local flora on one side and destruction of habitat for establishment of housing schemes on the other side. The most alarming threat to the local plant Biodiversity is the introduction of such exotic and ornamental species which ultimately causing global homogenization of biota and eliminating indigenous flora. Further, the clearance of site for construction is causing severe loss to the local species therefore; there is a dire need of carrying environmental impact assessment (EIA) before launching such mega projects to conserve the indigenous flora of such important areas.

**MATERIALS AND METHODS**

To collect information regarding the tree species growing at Hayatabad Township regular study visits were arranged to different phases and several localities from March to June, 2013. Plant specimens including various parts i.e. branches, flowers and fruits were collected, pressed, documented and properly dried. Information related to the trees species including locality, sub locality, flower color, fruit type, shape and distribution in various phases and their impact on the indigenous flora were noted in the field note book. Photography of different parts of the tree species was carried out by using Canon Power Shot A-2200 (14.1 Mega Pixel) Camera. Identification was carried out with the help of Flora of Pakistan and other available literature i.e. (Qureshi and Khan, 1965-67 &1971; Stewart, 1972; Ali and Nasir, 1971-1989; Polunin and Stainton, 1990; Ali and Nasir 1989-1991; Iqbal, 1993; Nasir and Ali, 1991-1993; Sheikh, 1993; Nasir and Rafiq, 1995; Ullah et al., 2005; Ullah et al., 2006a&b and Ali and Qaiser, 1993-2013). The specimens were mounted on standard size Herbarium Sheets and voucher specimens were deposited in University of Peshawar Botanical Garden Herbarium (UPBG).

**RESULTS AND DISCUSSIONS**

One hundred and six species of trees were encountered during the present studies including angiosperms and gymnosperms. Among the 4 gymnosperms *Cycas revoluta* is known as a living fossil and is one of the common ornamental of parks and houses. Thirty nine (39) families of angiosperms were recorded and almost all the trees are cultivated and it is noted that very few are growing naturally. These trees are present in the parks, on road sides, on stream banks and in the streets. Trees in the parks are in good condition due to their regular looking after by the gardeners. Most of the trees are brought from different areas which are used for aesthetic purposes. These trees have invaded the flora as introduced species. For the purpose of construction huge area is cleared from the trees growing wild previously in this area. There is a little knowledge about the importance of local flora among the local residents, only the value of aesthetics is important for the elite class. Trees like *Eucalyptus camaldulensis* were brought at the time when this land was allotted to the people and is now the dominant tree in the area. *Araucaria columnaris*, *Alastonia scholaris*, *Bombax cieba*, *Heterophragma adenophyllum* are the most common road side plantation. *Acacia nilotica*, *Acacia modesta*, *Zizyphus nummularia* are the wildly growing trees. A nursery is developed in the Bagh-e-Naran Park from where the ornamental trees species are supplied to the Peshawar Development Authority (PDA) for beaufitication of the township. In order to enhance the beauty of the area ornamental plants are encouraged and the wilds have been neglected. The habitats of the wild trees have been shrunk and they are limited to very few localities and their population has been reduced enormously.

Tree species are important for the aesthetic and landscaping purpose of the townships but extreme care must be taken before introducing such species which may cause global homogeneity of biota and will ultimately interfere with the indigenous flora. It is feared that some of them may become alien invasive and also cause some health hazards. Due to over population, urbanization, industrialization, infra-structure building number of our native plants are fast disappearing. It is recommended that in the name of construction of buildings, cutting of wild trees should be stopped to save some of the remaining representatives of plant species, so as to conserve local plant biodiversity (Hussain et al., 2010). Before starting such housing projects Environmental Impact Assessment (EIA) has to be carried to reduce the chances of introducing environmental unfriendly species. As an integral component of green infrastructure, key street trees selection is crucial to successfully shaping a better urban environment. Here the term, street trees refer to the tree species, which are widely used on streets and form the style of street landscape (Jim, 1999; Kuruneri and Shackleton, 2011; Li et al., 2011 and Deb et al., 2013).
One species which has taxonomic importance and is considered as a part of Magnolioid complex is *Magnolia grandiflora* which is very common tree and is grown in all the parks for its shiny and hard green leaves and beautiful fragrant flowers. Being majestic ornamental trees *Ficus bengalensis, Ficus benjamina, Ficus elastica* and *Ficus virens* are already planted in the parks and have large canopies (Table-1). Before launching such mega projects preparation of a checklist must be carried out to provide information regarding the indigenous flora of the area. Similarly, the local species must be encouraged to provide a natural gene pool of the local species. Further, some areas must be conserved naturally to provide baseline information for future plantation as indicator species.

<table>
<thead>
<tr>
<th>Species</th>
<th>Location</th>
<th>Plant Age</th>
<th>Plant Height</th>
<th>Plant Diameter</th>
<th>Conservation Issues</th>
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<td>Location 1</td>
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<td>Plant Height 1</td>
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<td>Plant Height 2</td>
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<tr>
<td>Species 5</td>
<td>Location 5</td>
<td>Plant Age 5</td>
<td>Plant Height 5</td>
<td>Plant Diameter 5</td>
<td>Conservation Issues 5</td>
</tr>
</tbody>
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**Conservation Issues:****
- Habitat loss
- Overharvesting
- Climate change
- Pollution
- Invasive species

**Notes:**
- Plant data measurements in centimeters.
- Locality data includes detailed location information.
- Plant age is measured in years.
- Plant height is measured in centimeters.
- Plant diameter is measured in centimeters.

**References:**
<table>
<thead>
<tr>
<th>Tree Species</th>
<th>Conservation Issues</th>
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<tr>
<td><em>Acacia nilotica</em></td>
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<td><em>Anogeissus latifolia</em></td>
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<td><em>Combretum nicolai</em></td>
<td>Overharvesting</td>
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<td><em>Eucalyptus globulus</em></td>
<td>Alien species</td>
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<td><em>Ficus carica</em></td>
<td>Tree disease</td>
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<td>Air pollution</td>
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<td>Soil erosion</td>
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<tr>
<td><em>Gmelina arborea</em></td>
<td>Climate change</td>
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</tbody>
</table>

**Note:** The table above outlines various tree species and their associated conservation issues at Hayatabad, KPK.
REFERENCES


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