



FLORISTIC COMPOSITION AND ECOLOGICAL CHARACTERISTICS (LIFE FORM, LEAF SIZE AND PLANT HABIT) OF THE VASCULAR FLORA OF GOKAND VALLEY, DISTRICT BUNER, KHYBER PAKHTUNKHWA, PAKISTAN

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ABSTRACT

The present research has explored the floristic composition and ecological characteristics (life form, leaf size and plant habit) of the previously unexplored vascular flora of Gokand Valley District Buner. The present research revealed that a total of 344 vascular species belonging to 106 families are growing in the valley. These include 12 pteridophytes, 3 gymnosperms and 329 angiosperms. The dicotyledons were represented by 81 families with 283 species while monocotyledons by 15 families and 46 species. Based on the number of species Poaceae with 25 species was the dominant family followed by Asteraceae with 24, Lamiaceae with 19, Papilionaceae and Rosaceae with 15 each, Brassicaceae with 13, Amaranthaceae with 11, Solanaceae with 10, Polygonaceae and Plantaginaceae with 8 each, Moraceae with 7, Cucurbitaceae and Euphorbiaceae with 6 each, Apiaceae, Malvaceae, Nyctaginaceae, Ranunculaceae, Rhamnaceae, Urticaceae with 5 species each were the major families. Remaining families either included 4 or less than 4 species. There were 224 (65.11%) species of herbs, 58 (16.86%) of trees and 46 (13.37%) of shrubs while climbers were represented by 16 species (4.65%). Life form showed that Therophytes with (146 species) was the dominant class followed by Megaphanerophyte (56 spp.), Nanophanerophyte (56 spp.), Geophyte (36 spp.), Hemicryptophyte (25 spp.), Chamaephyte (16 spp.) and Microphanerophyte (6 spp.) respectively. The dominant leaf size class was Microphyll (146 spp.) followed by Nanophyll (91 spp.), Mesophyll (59 spp.), Leptophyll (29 spp.) and Macrophyll (12 spp.) respectively. *Psilotum nudum* (L.) P. Beauv., *Cuscuta reflexa* Roxb., *Equisetum arvense* L. and *Opuntia dillenii* Haw. were aphyllous species. The findings of the present research will provide baseline information for future research endeavors in the field of plant taxonomy, ecology and conservation studies.

Keywords: Floristic composition, ecological characteristics, unexplored, vascular flora, Gokand Valley, Buner, Khyber Pakhtunkhwa, Pakistan.



INTRODUCTION

Gokand is a lush green valley dominated by lofty mountains from all sides apart from extreme south. It is 19 km away from Daggar (head quarter of district Buner). It is located on $34^{\circ} 33'$ to $34^{\circ} 41'$ north latitudes and $72^{\circ} 30'$ to $72^{\circ} 34'$ east longitudes on the globe. The valley is bounded by Pir baba and Qadir Nagar on the west, Jambail Kokarai on the north, Alpuri on the northeast and Chgarzai on the east. The climate is sub tropical type in the lower part and temperate in the upper regions. Summer monsoon is common throughout the area which is followed by dry months of September and October. The winter months extend from November to February. In winter snowfall starts at the end of November and continues till end of February. Lower limit of snowfall is 1212 meter altitude. Below 1818 meters it does not stay long and melts away rapidly, except on cool northern aspects in sheltered places. It melts almost completely from most of the hill sides at the end of April. March and April are the most pleasant months. The weather is hot in June and July but at the onset of monsoon rains in July and August diminishes the hot spell and once again weather becomes cool and refreshing till the end of October. The rocks of Gokand valley include garnet bearing calcareous schist and calcite marble. The composition of these rocks is impure limestone and sandstone. Soil has fine texture which is fed by springs and rain water drainage is generally dendritic. The area possesses different topographic conditions including barren hillside, steep, narrow rocks called terraces clinging to the slopes surrounding the scattered villages. Loe Sar is the highest point in the area with of 2334 meter and Hissar is the lowest place with 1200 meters altitude. Although most of the area is hilly but level of ground is variable. Cold winters, mild summers, short springs and autumn seasons are characteristic of the area. The maximum rain fall occurs in the month of February, March and April while December and January are the driest months. Winter rains generally have a low intensity but of long durations. During the monsoon season, rains are of high intensity but of short durations. 28.01% of the year precipitations fall in February to March and 54% of the yearly precipitations fall in July to September. During the winter months, precipitation occurs in the form of snow which may stay on mountain top for several weeks but in the valley it disappears within one day (Khan *et al.*, 2003).

PROBLEM STATEMENT AND NOVELTY

The valley selected for the present research is situated in northern part of the country and it is evident from the literature review and Flora of Pakistan that many areas in the country are not yet thoroughly explored and intensive studies are required for further exploration of many species which are not yet documented. Pakistan has a great altitudinal and topographic variation ranging from 0 meter at sea level to 8611 meters at the second highest peak of the world K-2 and the three famous mountain series of the world i.e. Karakoram, Hindukush and Himalaya met within the northern part of the country. This variation has provided diversified habitat conditions, which are supporting more than 6000 plant species with around 428 endemic and more than 500 medicinal species. Majority of the endemic species are distributed in the northern part of the country and came under the unique Sino Japanese floristic/phytogeographic region. Since this area is situated in northern part of the country and it is completely



unexplored therefore, this research was conducted to document the vascular flora of the valley and its ecological characteristics which will provide baseline information for future research endeavors in the field of plant taxonomy, ecology, restoration, conservation and documentation of indigenous and indicator species growing in the valley. Further, in the present scenario of the changing environmental conditions and global climate change this data may be used for creating Carbon sink centres in future to play a vital role in the Carbon mitigation and sequestration at local level to cope with the global climate change.

MATERIALS AND METHODS

Regular field visits were arranged to Gokand valley for plant collection along with field data in all four seasons during 2018-2019. Plants were collected, dried, preserved and mounted on herbarium sheets. The identification was carried out with the help of Flora of Pakistan (Nasir & Ali, 1970-1989; Ali & Nasir, 1989-1991; Ali & Qaiser, 1993-2019). A complete floristic list of the vascular plant species growing in the valley was prepared. Plant species were classified into leaf size and life form classes according to Raunkiaer (1934) and Hussain (1989). Biological spectrum was determined following the standard procedures of Raunkiaer (1934); Hussain (1989) and Badshah *et al.* (2013). Proper voucher specimens were prepared and deposited in the herbarium of Department of Botany, University of Peshawar (PUP).

RESULTS AND DISCUSSION

The following results were acquired in light of the intensive floristic study and study of the ecological characteristics (life form, leaf size and plant habit) during the present research. The results obtained are enumerated and discussed as under.

1. Floristic composition

Floristic composition of a region is the total of the plant species within its boundaries, whether wild or cultivated, which is a reflection of vegetation, plant resources of the region, prevailing climatic conditions, edaphic characteristics, anthropogenic pressure and other natural stresses Badshah *et al.* (2013). The floristic composition of Gokand valley, District Buner comprised of 344 species related to 106 families including 12 species of pteridophytes, 3 gymnosperms, 46 monocots and 283 dicots (Table 1 & Figure 1). Poaceae with (25 spp.), Asteraceae (24 spp.), Lamiaceae (19 spp.), Papilionaceae and Rosaceae (15 spp. each), Brassicaceae (13 spp.), Amaranthaceae (11 spp.), Solanaceae (10 spp.), Polygonaceae and Plantaginaceae (8 spp. each), Moraceae (7 spp.), Cucurbitaceae and Euphorbiaceae, (6 spp. each), Apiaceae, Malvaceae, Nyctaginaceae, Ranunculaceae, Rhamnaceae, Urticaceae (5 spp. each) were the major families while some families either included 4 or less than 4 species (Table 1.2). In the present work Poaceae with (25 spp.), Asteraceae (24 spp.), Lamiaceae (19 spp.) and Papilionaceae with (15 spp.) as reported by other researchers from other areas i.e., Saand *et al.* (2019); Ali *et al.* (2018); Amjad *et al.* (2016); Khan *et al.* (2017); Badshah *et al.* (2016); Saleem *et al.* (2013); Sher *et al.* (2011); Sher *et al.* (2014); Ali *et al.* (2016); Shaheen *et al.* (2016); Sultan-Ud-Din *et al.* (2016).

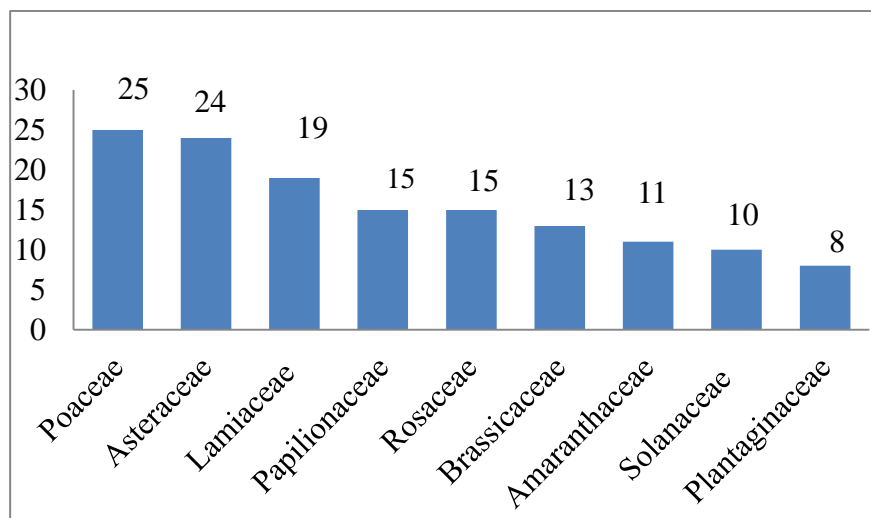


Fig. 1: Leading families showing number of species

2. Ecological Characteristics

A) Life form classes

The life form reproduces physiognomy of the flora and vegetation depends upon all life processes in combination with environment. It helps in the recognition of ecological elucidation of vegetation (Zeb *et al.*, 2017). Life form classification of Raunkiaer (1934) is more reliable, which is based on position of perennating structures during unfavorable conditions. Using Raunkiaerian classification, it was found that most abundant life form was Therophytes with (146 species) followed by Nanophanerophyte (56 species), Megaphanerophyte (56 species), Geophyte (36 species), Hemicryptophyte (25 species), Chamaephyte (16 species) and Microphanerophyte (6 species) respectively (Table 1 & Figure 2). Similar trend regarding prevalence of therophytes and Megaphanerophyte was described by Khan *et al.* (2011) in Coal Mine area of Darra Adam Khel. Current findings are describing therophytes and nanophanerophyte as the abundant life forms (Ahmad *et al.*, 2019; Shaheen *et al.*, 2016; Badshah *et al.*, 2016; Shah *et al.*, 2014). The dominance of Therophytic life form shows that the study area is under heavy anthropogenic pressure due to unsustainable use, over grazing and deforestation (Badshah *et al.*, 2016).

B) Leaf size classes

Leaf classes were checked according to Raunkiaer's diagram having six types of leaf classes. First class is the lowest having 25 sq. mm in size and then every next class is greater than the previous class nine times. Leaf size spectra are important keys in exploring the flora



of an area during the floristic survey as they are considered as symbol or direction of shallow or deep climate. Therefore, study of leaf size is an important tool for vegetation description.

Leaf size spectra of Gokand valley District Buner showed that microphyll were dominant class (146 species) followed by nanophyll (91 species), mesophyll (59 species), leptophyll (29 species) and macrophyll (12 species) aphyllous (4 species viz; *Psilotum nudum*, *Cuscuta reflexa*, *Equisetum arvense* and *Opuntia dillenii* (Ali *et al.*, 2018; Ali *et al.*, 2016) respectively (Table 1 & Figure 3). The dominance of microphylls Shah *et al.* (2014) and Khan *et al.* (2016) and with nanophylls Iqbal *et al.* (2018); Sher *et al.* (2011); Ali *et al.* (2015); Khan *et al.* (2014) was prevalent in the area. Microphylls and nanophylls are the major leaf size classes as reported by Al-Yemeni and Sher (2010); Shaheen *et al.* (2016); Khan *et al.* (2011); Badshah *et al.* (2013); Hussain *et al.* (2015) in various studies.

C) Plant Habit

Based on the plant habit 224 (65.11%) species were herbs, 58 (16.86%) species of trees and 46 (13.37%) species of shrubs while climbers (4.65%) shared 16 species (Table 1 & Figure 4) Our findings are comparable with those of Ali *et al.* (2018) also investigated herb as the most diverse group while studying hazar Nao hills.

Conclusion

It was concluded that the valley is rich in vascular diversity and 344 species distributed among 106 families including 12 pteridophytes, 3 gymnosperms and 329 angiosperms were reported and documented. It is noteworthy to mention that the findings of the present research will provide baseline information for future research endeavors in the field of plant taxonomy, ecology, restoration and conservation studies in the valley and surrounding areas with similar climatic and ecological conditions. It was observed during the present research that therophytic life form is dominant which shows that the study area is under heavy anthropogenic pressure and some direct and indirect reasons including unsustainable use of natural resources, over grazing, habitat loss, soil erosion, natural areas conversion, terrace farming and deforestation are changing the natural composition of the flora growing in the area. The research will be extremely helpful in identification of indicator species and establishment of Carbon sink centres in future to cope with the global climate change and play a role in Carbon mitigation.

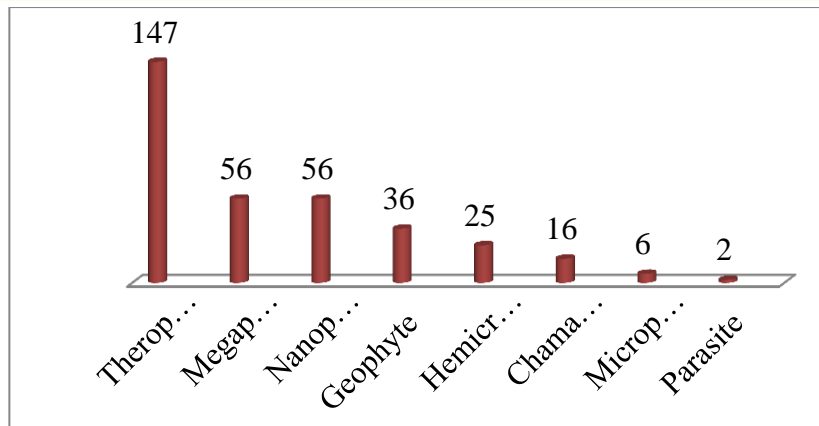


Fig: 2 Life form classes showing their number of species.

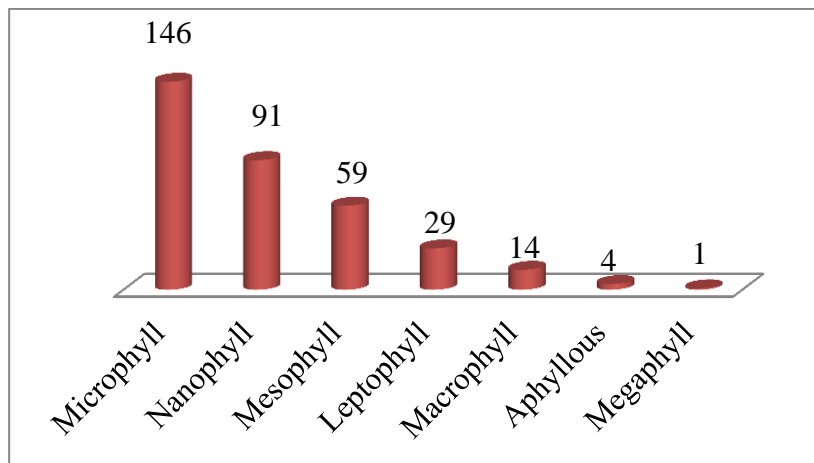


Fig: 3 Different leaf size classes showing number of species.

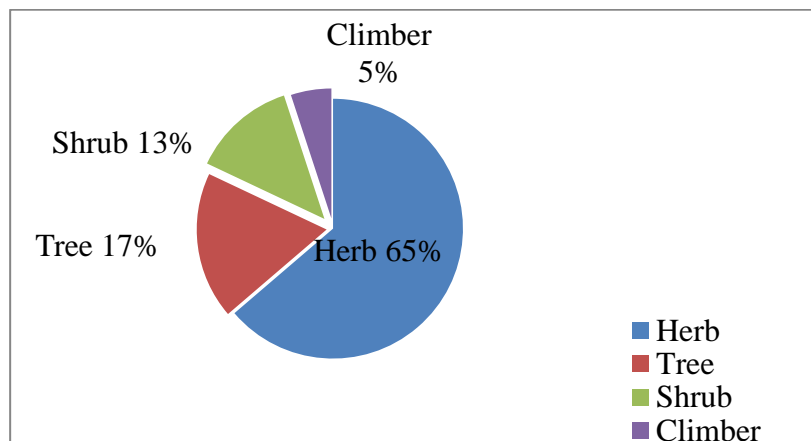


Fig. 4: Sowing number species of various plant habits.

Table 1: Florist list and ecological characteristics showing family, botanical and local name, life form, leaf size and habit of the species growing in the valley.

| Family | No. | Botanical name | Local name | Life form | Leaf size | Habit |
|----------------------|-----|---|--------------|-----------|-----------|---------|
| Pteridophytes | | | | | | |
| Adiantaceae | 1. | <i>Adiantum caudatum</i> L. | Sumbal | Hem | Na | Herb |
| | 2. | <i>Adiantum capillus-veneris</i> L. | Sumbal | G | Na | Herb |
| Athyriaceae | 3. | <i>Athyrium filix-femina</i> (L.) Roth | Lewny konjae | G | Mic | Herb |
| Dryopteridaceae | 4. | <i>Dryopteris filix-mas</i> L.Schott. | Konjae | G | Mic | Herb |
| | 5. | <i>Dryopteris jaxtaposta</i> Christ. | Konjae | G | Mic | Herb |
| Equisetaceae | 6. | <i>Equisetum arvense</i> L. | Bandakai | G | Aph | Herb |
| Marsileaceae | 7. | <i>Marsilea quadrifolia</i> L. | Salorpana | G | Na | Herb |
| | 8. | <i>Cheilanthes acrostica</i> (Balb.) Tod. | Shenboty | G | Mic | Herb |
| Psilotaceae | 9. | <i>Psilotum nudum</i> (L.) P. Beauv. | Kamrdaky | G | Aph | Herb |
| Pteridaceae | 10. | <i>Pteris cretica</i> L. | Shenbotay | Hem | Mic | Herb |
| | 11. | <i>Pteris vittata</i> L. | Shenbotay | Hem | Mic | Herb |
| Selaginellaceae | 12. | <i>Selaginella sp.</i> P. Beau | - | G | Lep | Herb |
| Gymnosperms | | | | | | |
| Cupressaceae | 13. | <i>Cupressus sempervirens</i> L. | Sarwa | Micp | Lep | Tree |
| Pinaceae | 14. | <i>Pinus roxburghii</i> Sargent. | Nahtar | Megp | Na | Tree |
| | 15. | <i>Pinus wallichiana</i> AB. Jackson | Paiwoch | Megp | Na | Tree |
| Monocotyledon | | | | | | |
| Araliaceae | 16. | <i>Hedera nepalensis</i> K Koch. | Palol | Np | Mes | Climber |
| Alliaceae | 17. | <i>Allium cepa</i> L. | Piaz | G | Mic | Herb |
| | 18. | <i>Allium sativum</i> L. | Oga | G | Mic | Herb |
| Amaryllidaceae | 19. | <i>Narcissus tazetta</i> L. | Gule nargis | G | Mic | Herb |
| Araceae | 20. | <i>Acorus calamus</i> L. | Skha waja | G | Mes | Herb |
| | 21. | <i>Arisaema jacquemonti</i> . Blume. | Marjary | G | Mes | Herb |
| | 22. | <i>Calocasia esculentua</i> L. | Kachalo | G | Mac | Herb |
| Arecaceae | 23. | <i>Phoenix dactylifera</i> L. | Kajora | Megp | Mes | Tree |
| Asphodelaceae | 24. | <i>Asphodelus tenuifolius</i> Cav. | Shela | G | Mes | Herb |
| Canaceae | 25. | <i>Canna indica</i> L. | Kelaboty | Ch | Meg | Herb |
| Colchicaceae | 26. | <i>Colchicum luteum</i> Bake. | Qyamat guly | G | Na | Herb |
| Commelinaceae | 27. | <i>Commelina benghalensis</i> L. | Narhe | Th | Mic | Herb |
| Cypraceae | 28. | <i>Cyperus rotundus</i> L. | Dela | G | Na | Herb |
| | 29. | <i>Pycurus flavidus</i> (Retz.) | Gaya | G | Na | Herb |
| Hyacinthaceae | 30. | <i>Scilla griffithii</i> Hochr. In Bull. | - | G | Lep | Herb |



| | | | | | | |
|-----------|--------------------------------|--|-------------|-----|------|------|
| Iridaceae | 31. | <i>Iris ensata</i> Thunb. | Oogakai | G | Mes | Herb |
| Liliaceae | 32. | <i>Aloe barbadensis</i> Mill. | Manzrepanra | Ch | Mac | Herb |
| | 33. | <i>Asparagus officinalis</i> L. | Tindoray | Ch | Lep | Herb |
| | 34. | <i>Asparagus spp.</i> | Jokay | Ch | Lep | Herb |
| | 35. | <i>Tulipa stellata</i> Hk.f. | Ghantol | G | Lep | Herb |
| Musaceae | 36. | <i>Musa × paradisiaca</i> L. | Keela | Meg | Mac | Herb |
| Poaceae | 37. | <i>Agrotis viridis</i> Gouan. | Waha | Hem | Na | Herb |
| | 38. | <i>Apluda mutica</i> L. | Tala | Hem | Lep | Herb |
| | 39. | <i>Arthraxon hispidus</i> Thunb. | Nare gia | Th | Na | Herb |
| | 40. | <i>Arundo donax</i> L. | Nal | NP | Mac | Herb |
| | 41. | <i>Avena sativa</i> L. | Jamdar | Th | Na | Herb |
| | 42. | <i>Brachiaria reptans</i> L. | Waha | Th | Na | Herb |
| | 43. | <i>Chrysopogon aucheri</i> (Bioss.) Stapf. | Barwoza | Hem | Lep | Herb |
| | 44. | <i>Cenchrus ciliaris</i> L. | Pisholum | Th | Na | Herb |
| | 45. | <i>Cymbopogon distans</i> (Nees ex Steud.) Watson. | Sargary | Hem | Na | Herb |
| | 46. | <i>Cynodon dactylon</i> L. | Kabal | Hem | Na | Herb |
| | 47. | <i>Eleusine indica</i> L. | Dela | G | Na | Herb |
| | 48. | <i>Echinochloa colona</i> (L.) Link | Waha | Th | Na | Herb |
| | 49. | <i>Dactyloctenium aegyptium</i> L. | Ghat waha | Th | Na | Herb |
| | 50. | <i>Dichanthium annulatum</i> Forssk. | Naram wakha | Hem | Na | Herb |
| | 51. | <i>Hordeum vulgare</i> L. | Verbashy | Th | Na | Herb |
| | 52. | <i>Imperata cylindrica</i> L. | Pesholakai | Th | Lep | Herb |
| | 53. | <i>Oryza sativa</i> L. | Sholy | Th | Mic | Herb |
| | 54. | <i>Phalaris minor</i> Retz | Spin wage | Th | Na | Herb |
| | 55. | <i>Poa infirma</i> H.b.k. | Shamoha | Th | Na | Herb |
| | 56. | <i>Polypogon monspeliensis</i> L. Desf. | Pesholam | Th | Mic | Herb |
| | 57. | <i>Saccharum bengalense</i> Retz. | Kahay | Hem | Mes | Herb |
| 58. | <i>Saccharum spontaneum</i> L. | Shur ghashay | Hem | Mic | Herb | |
| 59. | <i>Sorghum halepense</i> L. | Dadum | Hem | Mic | Herb | |
| 60. | <i>Triticum aestivum</i> L. | Ghanam | Th | Mic | Herb | |
| 61. | <i>Zea mays</i> L. | Jowar | Th | Mes | Herb | |



| Dicotyledon | | | | | | |
|---------------|-----|--|------------|------|-----|-------|
| Acanthaceae | 62. | <i>Barleria cristata</i> L. | Toor boty | Ch | Lep | Herb |
| | 63. | <i>Catharantus roseus</i> L. | Sadabahar | Ch | Na | Herb |
| | 64. | <i>Justicia adhatoda</i> L. | Baikar | Np | Mic | Shrub |
| Aceraceae | 65. | <i>Acer cappadocicum</i> Gled. | Spinkay | Megp | Mac | Shrub |
| Amaranthaceae | 66. | <i>Achyranthes aspera</i> L. | Ghishkay | Th | Na | Herb |
| | 67. | <i>Amaranthus caudatus</i> L. | Chalwairay | Th | Mic | Herb |
| | 68. | <i>Amaranthus spinosa</i> L. | Chalwairay | Th | Mic | Herb |
| | 69. | <i>Amaranthus viridis</i> L. | Gunhar | Th | Mic | Herb |
| | 70. | <i>Alternanthera pungens</i> Forssk. | Sqaboty | Th | Lep | Herb |
| | 71. | <i>Aerva javanica</i> . Burm. | Splenzar | Ch | Lep | Herb |
| | 72. | <i>Aerva sanguinolenta</i> L. | Splenzar | Ch | Lep | Herb |
| | 73. | <i>Celosia argentea</i> L. | Surguly | Th | Na | Herb |
| | 74. | <i>Celosia argentea</i> var. <i>cristata</i> L. | Palsh gul | Th | Na | Herb |
| | 75. | <i>Digera muricata</i> L. | Bambly | Th | Na | Herb |
| | 76. | <i>Pupalia lappacea</i> (L.) Juss. | Ghety | Th | Na | Herb |
| Anacardiaceae | 77. | <i>Mangifera indica</i> L. | Amm | Megp | Mic | Herb |
| | 78. | <i>Pistacia chinensis</i> Bunge. | Shnai | Np | Mic | Tree |
| Apiaceae | 79. | <i>Ammi visnaga</i> L. | Ghra gazra | Th | Lep | Herb |
| | 80. | <i>Coriandrum sativum</i> L. | Dhanyal | Th | Lep | Herb |
| | 81. | <i>Foeniculum vulgare</i> Miler. | Kaga | Th | Na | Herb |
| | 82. | <i>Scandix pecten-Veneris</i> L. | Ghanghaia | Th | Mic | Herb |
| | 83. | <i>Trachyspermum ammi</i> L. Sprague. | Sperkai | Th | Lep | Herb |
| Apocynaceae | 84. | <i>Caralluma tuberculata</i> N.E. Brown. | Pamunkay | Hem | Na | Herb |
| | 85. | <i>Nerium indicum</i> Mill. | Gundairay | Np | Mes | Tree |
| | 86. | <i>Calotropis procera</i> Aiton. | Spalmay | Ch | Mes | Shrub |
| | 87. | <i>Tylophora hersuta</i> L. | Gilo | Th | Mic | Herb |
| Asteraceae | 88. | <i>Achillea millifolium</i> L. | Jarai | Hem | Lep | Herb |
| | 89. | <i>Artemisia maritima</i> L. | Juakay | Ch | Lep | Herb |
| | 90. | <i>Artemisia scoparia</i> Walds & Kit. | Tarkha | Th | Na | Herb |
| | 91. | <i>Artemisia vulgaris</i> L. | Tarkha | Ch | Mic | Herb |
| | 92. | <i>Bidens cernua</i> L. | - | Th | Mic | Herb |
| | 93. | <i>Calendula arvensis</i> (Vaill.) L. | Zair gulae | Th | Mic | Herb |
| | 94. | <i>Calendula officinalis</i> L. | Zair gulae | Th | Mic | Herb |



| | | | | | | |
|---------------|------|---|-------------------|------|-----|-------|
| | 95. | <i>Cichorium intybus</i> L. | Kasni | Th | Mic | Herb |
| | 96. | <i>Conyza bonariensis</i> L. | Nenzak boti | Th | Na | Herb |
| | 97. | <i>Conyza canadensis</i> (L.) Gonquist. | Nenzak boti | Th | Mic | Herb |
| | 98. | <i>Cirsium vulgare</i> (Savi) Ten. | Jhara | Th | Na | Herb |
| | 99. | <i>Filago hurdwarica</i> (Wall. ex DC.) | Kamarboty | Hem | Na | Herb |
| | 100. | <i>Helianthus annuus</i> L. | Norparas | Th | Mac | Herb |
| | 101. | <i>Lactuca serriola</i> L. | - | Th | Mic | Herb |
| | 102. | <i>Launea procumbens</i> Roxb. | Shodapai | Hem | Mic | Herb |
| | 103. | <i>Parthenium hysterophorus</i> L. | Ghandaboty | Th | Mic | Herb |
| | 104. | <i>Sonchus arvensis</i> L. | Shodapai | Th | Mic | Herb |
| | 105. | <i>Sonchus asper</i> L. | Shodapai | Th | Mic | Herb |
| | 106. | <i>Sonchus oleraceus</i> L. | Shodapai | Th | Mic | Herb |
| | 107. | <i>Tagetes erecta</i> L. | Hamisha | Th | Na | Herb |
| | 108. | <i>Tagetes minuta</i> L. | Lewany hamisha | Th | Na | Herb |
| | 109. | <i>Taraxacum officinale</i> Weber. | Bezo laky | Th | Mic | Herb |
| | 110. | <i>Tagetes patula</i> L. | Hamisha | Th | Na | Herb |
| | 111. | <i>Xanthium strumarium</i> L. | Ghishkay | Th | Mes | Shrub |
| Balsaminaceae | 112. | <i>Impatiens balsamina</i> L. | Gule mehandi | Th | Mes | Herb |
| Berberidaceae | 113. | <i>Berberis lyceum</i> . Royle. | Kowaray | NP | Na | Shrub |
| Betulaceae | 114. | <i>Alnus nitida</i> (Spach) | Gairay | Megp | Mes | Tree |
| | 115. | <i>Betula utilis</i> D.Done. | Birch | Megp | Mes | Tree |
| Boraginaceae | 116. | <i>Buglossoides arvensis</i> L. | Bashka | Th | Na | Herb |
| | 117. | <i>Cynoglossum lanceolatum</i> Forssk. | Geshy | Hem | Na | Herb |
| | 118. | <i>Ehretia obtusifolia</i> H.ex Dc. | Tasa | Np | Mic | Tree |
| | 119. | <i>Lithospermum arvense</i> L. | Torabashka | Th | Na | Herb |
| Brassicaceae | 120. | <i>Alliaria petiolata</i> M. Bieb. | Sagoogakai | Th | Na | Herb |
| | 121. | <i>Brassica campestris</i> . L. | Sharsham | Th | Mic | Herb |
| | 122. | <i>Brassica napus</i> L. | Taepar | Th | Mes | Herb |
| | 123. | <i>Capsella bursa-pastoris</i> (L.) Medik. | Bambaisa | Th | Mic | Herb |
| | 124. | <i>Cardamine hirsuta</i> L. | Spinguly | Th | Na | Herb |
| | 125. | <i>Coronopus didymus</i> L. | Sqaboti | Th | Na | Herb |
| | 126. | <i>Eruca sativa</i> L. | Jamama | Th | Mic | Herb |



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|-----------------|------|--|--------------|------|-----|---------|
| | 127. | <i>Lepidium sativum</i> L. | Alam | Th | Na | Herb |
| | 128. | <i>Nasturtium officinale</i> W. T Alton | Talmeera | G | Na | Herb |
| | 129. | <i>Neslia paniculata</i> (L) Desv | Bashka | Th | Lep | Herb |
| | 130. | <i>Raphanus raphanistrum</i> L. | Sharshm boty | Th | Mic | Herb |
| | 131. | <i>Raphanus sativus</i> . L. | Moli | Th | Mic | Herb |
| | 132. | <i>Sisymbrium officinale</i> (Linn.) | Pinsawara | Th | Na | Herb |
| Buddlejaceae | 133. | <i>Buddleja crispa</i> Benth | Dasky | NP | Mic | Shrub |
| Buxaceae | 134. | <i>Sarcococa saligna</i> (Dcne) Duel. | Alatar | NP | Mic | Shrub |
| Cactaceae | 135. | <i>Opuntia dilleni</i> Haw. | Towar | Np | Aph | Herb |
| Caesalpinaceae | 136. | <i>Bauhinia variegata</i> L. | Kulyar | Megp | Mes | Tree |
| | 137. | <i>Caesalpinia decapitata</i> (Roth) Alston. | Jara | Np | Mic | Tree |
| | 138. | <i>Senna occidentalis</i> (L.) Link. | Ziar guly | Th | Mic | Herb |
| Canabanaceae | 139. | <i>Cannabis sativa</i> L. | Bhang | Th | Mic | Herb |
| Caprifoliaceae | 140. | <i>Viburnum cotinifolium</i> D. Don. | Chamyarai | Np | Mic | Shrub |
| Caryophyllaceae | 141. | <i>Sielene conoidea</i> L. | Mangotay | Th | Na | Herb |
| | 142. | <i>Stellaria media</i> L.Gy. | Olalai | Th | Lep | Herb |
| Celastraceae | 143. | <i>Gymnosporia royleana</i> Wall ex Lawson. | Soor Azghay | NP | Mic | Shrub |
| Chenopodiaceae | 144. | <i>Chenopodium album</i> L. | Sarmai | Th | Mic | Herb |
| | 145. | <i>Chenopodium ambrosioides</i> L. | Kharawa | Th | Mic | Herb |
| | 146. | <i>Chenopodium botrys</i> L. | Skha Kharawa | Hem | Na | Herb |
| | 147. | <i>Chenopodium murale</i> L. | Chalwairay | Th | Mic | Herb |
| Convulvuaceae | 148. | <i>Convovulus arvensis</i> L. | Prewati | Th | Mic | Climber |
| | 149. | <i>Ipomoea hederacea</i> Jacq. | Marazboty | Th | Mes | Climber |
| Cucurbitaceae | 150. | <i>Citrullus lanatus</i> Thumb. | Hendwana | Th | Mes | Climber |
| | 151. | <i>Cucurbita pepo</i> L. | Kado | Th | Mic | Climber |
| | 152. | <i>Cucumis sativus</i> L. | Dengora | Th | Mac | Climber |
| | 153. | <i>Luffa cylindrica</i> (L.) Roem. | Torai | Th | Mac | Climber |
| | 154. | <i>Momordica charantia</i> . L. | Karela | Th | Mes | Climber |
| | 155. | <i>Solena amplexicaulis</i> (Lam.) Gandhi. | Kakora | Th | Mic | Climber |
| Casuarinaceae | 156. | <i>Casuarina equisetifolia</i> L. | - | Megp | Lep | Tree |
| Cuscutaceae | 157. | <i>Cuscuta reflexa</i> Roxb. | Marazboty | Th | Aph | Climber |
| Ebenaceae | 158. | <i>Diospyrus kaki</i> L. | Tor amluk | Megp | Mic | Tree |



| | | | | | | |
|------------------|------|--|----------------|------|-----|-------|
| | 159. | <i>Diospyrus lotus</i> L. | Ziar amluk | Megp | Mes | Tree |
| Elaeagnaceae | 160. | <i>Elaeagnus angustifolia</i> L. | Ghanam ranga | Np | Mic | Herb |
| | 161. | <i>Elaeagnus umbellata</i> Thunb. | Ghanam Ranga | Np | Mic | Herb |
| Ericaceae | 162. | <i>Rhododenron arborium</i> Smith. | Gul e nameer | Megp | Mes | Shrub |
| Euphorbiaceae | 163. | <i>Andrachne cordifolia</i> (Dene) Muell. | Spin krachi | NP | Mic | Herb |
| | 164. | <i>Euphorbia cyathophora</i> Murray. | Zahr boty | Th | Mes | Herb |
| | 165. | <i>Euphorbia helioscopia</i> Mewski. | Piryano doolai | Th | Na | Herb |
| | 166. | <i>Euphorbia prostrate</i> Aiton. | Warmagha | Th | Na | Herb |
| | 167. | <i>Mallotus philippensis</i> Muell. | Kambela | Megp | Mes | Tree |
| | 168. | <i>Riccinis communis</i> L. | Randa | NP | Mes | Shrub |
| Fagaceae | 169. | <i>Quercus baloot</i> Griffith. | Banj | Megp | Mic | Tree |
| | 170. | <i>Quercus dilatata</i> Lindley. | Spin Banj | Megp | Mic | Tree |
| | 171. | <i>Quercus incana</i> Roxb. | Toor Banj | Megp | Mic | Tree |
| Fumariaceae | 172. | <i>Fumaria indica</i> Hausskn. | Papra | Th | Lep | Herb |
| | 173. | <i>Fumaria officinalis</i> L. | Papra | Th | Lep | Herb |
| Gentianaceae | 174. | <i>Swertia ciliata</i> (G. Don) B. L. | Spin guly | Th | Mes | Herb |
| Geranaceae | 175. | <i>Geranium wallichianum</i> Oliv. | Sra zaila | Th | Mic | Herb |
| | 176. | <i>Geranium collinum</i> Steph | Badersat | Th | Mes | Herb |
| | 177. | <i>Geranium rotundifolium</i> L. | Srakasa | Th | Mic | Herb |
| Hemameledaceae | 178. | <i>Parrotiopsis jacquemontiana</i> Decne. Rehde. | Beeranj | Np | Mes | Tree |
| Hippocastinaceae | 179. | <i>Aesculus indica</i> (Wall ex Camb) H.K.F. | Jawaz | Megp | Mes | Tree |
| Juglandaceae | 180. | <i>Juglans regia</i> L. | Chaghzai | Megp | Mes | Tree |
| Lamiaceae | 181. | <i>Ajuga bractiosa</i> Wall.Benth. | Khwaga bootei | Th | Mic | Herb |
| | 182. | <i>Ajuga parviflora</i> Benth. | Tarha botei | Th | Mic | Herb |
| | 183. | <i>Anisomeles indica</i> L.kuntze. | Gada boty | Ch | Mic | Herb |
| | 184. | <i>Lycopus europaeus</i> L. | Dise Podina | G | Mic | Herb |
| | 185. | <i>Mentha longifolia</i> L. Huds | Velanai | G | Mic | Herb |
| | 186. | <i>Mentha arvensis</i> L. | Desy velani | G | Mic | Herb |
| | 187. | <i>Mentha spicata</i> L. | Poodina | G | Mic | Herb |



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|----------------|------|--|------------------|------|-----|-------|
| | 188. | <i>Clinopodium nepeta</i> L. | Hwar boty | Th | Mic | Herb |
| | 189. | <i>Colebrookea oppositifolia</i> L. | Barpna | NP | Mic | Shrub |
| | 190. | <i>Isodon rugosus</i> (Wall. ex Benth.) Codd. | Krachi | Np | Na | Herb |
| | 191. | <i>Micromeria biflora</i> (Buch.-Ham. ex D. Don) Benth | Varkoti Shamakay | Ch | Lep | Herb |
| | 192. | <i>Ocimum basilicum</i> L. | Kashmalu | Ch | Na | Herb |
| | 193. | <i>Origanum vulgare</i> L. | Shamakay | Ch | Mic | Herb |
| | 194. | <i>Otostegia limbata</i> (Benth.) Bioss. | Pishkanar | Np | Mic | Shrub |
| | 195. | <i>Otostegia persica</i> L. | Pishkanar | Np | Mic | Shrub |
| | 196. | <i>Salvia lanata</i> Roxb. | Kiann | Th | Mic | Herb |
| | 197. | <i>Salvia mcroftiana</i> Wall. | Khar dug | Ch | Mes | Herb |
| | 198. | <i>Salvia nubicola</i> Wall. ex Sweet. | Shinky | Th | Mic | Herb |
| | 199. | <i>Teucrium royleanum</i> Wall. ex Benth. | Krachai | Np | Na | Herb |
| Linaceae | 200. | <i>Reinwardtia indica</i> Dumort. | Merangy | Np | Mic | Shrub |
| Lythraceae | 201. | <i>Ammannia auriculata</i> Willd. | Ghra boty | Th | Na | Herb |
| | 202. | <i>Woodfordia fruticosa</i> (L.) Kurz. | Btenzer | NP | Mic | Herb |
| Malvaceae | 203. | <i>Abelmoschus esculentus</i> (L.) Moench. | Bandi | Th | Mic | Herb |
| | 204. | <i>Alcea rosea</i> L. | Papeta | Th | Mic | Herb |
| | 205. | <i>Malva neglecta</i> Waller. | Panerak | Th | Mic | Herb |
| | 206. | <i>Malva officinalis</i> (L.) Schimp. & Spenn. | Panerak | Th | Mic | Herb |
| | 207. | <i>Malvastrum coromandelianum</i> L. | Ziarguly | Th | Na | Herb |
| Meliaceae | 208. | <i>Cedrela serrata</i> Royle. | Meem | Megp | Mic | Tree |
| | 209. | <i>Melia azedarach</i> L. | Tor baknra | Megp | Mic | Tree |
| Menispermaceae | 210. | <i>Tinospora cordifolia</i> (Thunb.) Miers. | Gilo | Mes | Lep | Herb |
| Mimosaceae | 211. | <i>Acacia modesta</i> Wall. | Palosa | Megp | Lep | Tree |
| | 212. | <i>Acacia nilotica</i> (L.) Delile | Kikar | Megp | Lep | Tree |
| | 213. | <i>Mimosa himalayana</i> Gamble. | Kikaray | Np | Lep | Shrub |
| | 214. | <i>Leucaena leucocephala</i> (Lam.) | Srikh | Megp | Mic | Tree |



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|---------------|------|--|------------------|------|-----|---------|
| Moraceae | 215. | <i>Broussonetia papyrifera</i> (L.) L'Herit. | Gultoot | Megp | Mes | Tree |
| | 216. | <i>Ficus carica</i> L. | Inzar | Megp | Mac | Tree |
| | 217. | <i>Ficus palmata</i> Forssk. | Baghi Inzar | Megp | Mes | Tree |
| | 218. | <i>Ficus recemosa</i> L. | Oormal | Megp | Mac | Tree |
| | 219. | <i>Ficus religiosa</i> Roxb. | Peepal | Megp | Mes | Tree |
| | 220. | <i>Morus alba</i> L. | Spin Toot | Megp | Mes | Tree |
| | 221. | <i>Morus indica</i> L. | Toor Toot | Megp | Mes | Tree |
| Myrsinaceae | 222. | <i>Myrsine africana</i> L. | Marorang | NP | Na | Herb |
| Myrtaceae | 223. | <i>Eucalyptus camaldulensis</i> Dehnh. | Lachii | Megp | Mic | Tree |
| | 224. | <i>Myrtus communis</i> L. | Manoo | Megp | Lep | Tree |
| | 225. | <i>Psidium guajava</i> L. | Amrod | Megp | Mic | Tree |
| Nyctaginaceae | 226. | <i>Bougainvillea glabra</i> Choisy. | Ghany botay | Np | Mes | SHrub |
| | 227. | <i>Bougainvillea spectabilis</i> Willd. | Ghany botay | Np | Mes | Shrub |
| | 228. | <i>Boerhavia diffusa</i> L. | Ensuat | Th | Mic | Climber |
| | 229. | <i>Boerhaavia procumbens</i> L. | Ensuat | Th | Mic | Climber |
| | 230. | <i>Mirabilis jalapa</i> L. | Gul-e-Nazak | Np | Mes | Shrub |
| Oleaceae | 231. | <i>Jasminum humile</i> L. | Rambail chambail | Np | Mic | Shrub |
| | 232. | <i>Jasminum officinale</i> L. | Rambail chambail | Np | Mic | Shrub |
| | 233. | <i>Olea ferruginea</i> Royle. | Khoona | Megp | Mic | Tree |
| Onagraceae | 234. | <i>Epilobium hirsutum</i> L. | Gadabotay | Np | Na | Herb |
| | 235. | <i>Oenothera rosea</i> L'Hér. ex Ait | Surguly | Hem | Mic | Herb |
| Oxalidaceae | 236. | <i>Oxais corniculata</i> L. | Tarookay | Th | Na | Herb |
| | 237. | <i>Oxalis pes-caprae</i> L. | Tarookay | Th | Na | Herb |
| Paeoniaceae | 238. | <i>Paeonia emodi</i> Wall. Hkf. | Mamaekh | G | Mes | Herb |
| Papaveraceae | 239. | <i>Argemone mexicana</i> L. | Kareza | Th | Na | Shrub |
| | 240. | <i>Papaver nudicaule</i> L. | Zangali kashkash | Th | Mic | Herb |
| | 241. | <i>Papaver rhoeas</i> L. | Surgulai | Th | Mic | Herb |
| Papilionaceae | 242. | <i>Dalbergia sisso</i> Roxb. | Shawa | Megp | Mic | Tree |
| | 243. | <i>Desmodium elegans</i> DC. | Krachay | Np | Mes | Shrub |
| | 244. | <i>Indigofera heterantha</i> L. | Ghoureja | Np | Lep | Shrub |
| | 245. | <i>Lathyrus aphaca</i> L. | Kurkamany | Th | Na | Herb |



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|----------------|------|--|---------------------|------|-----|-------|
| | 246. | <i>Lathyrus cicera</i> L. | Mrgy hpa | Th | Na | Herb |
| | 247. | <i>Lathyrus pratensis</i> L. | Chilo | Th | Na | Herb |
| | 248. | <i>Lathyrus sativus</i> L. | Ghatachilo | Hem | Mic | Herb |
| | 249. | <i>Lespedeza juncea</i> (L. f.) Pers. | Ghanam Ranga | Np | Mic | Herb |
| | 250. | <i>Medicago minima</i> (L.) Grub. | Grub Shpishty | Hem | Na | Herb |
| | 251. | <i>Medicago polymorpha</i> L. | Shpaishtay | Th | Na | Herb |
| | 252. | <i>Robinia pseudoacacia</i> L. | Dag ghouraja | Megp | Mic | Shrub |
| | 253. | <i>Vicia bakeri</i> Ali. | Chilo | Th | Na | Herb |
| | 254. | <i>Vicia sativa</i> L. | Marghyhpa | Th | Na | Herb |
| | 255. | <i>Trifolium alexandrinum</i> L. | Shautal | Hem | Na | Herb |
| | 256. | <i>Trifolium repens</i> L. | Shautal | Hem | Na | Herb |
| Plumbaginaceae | 257. | <i>Plumbago zeylanica</i> L. | Jawlanak | Np | Mac | Shrub |
| Plantaginaceae | 258. | <i>Kickxia ramosissima</i> (Wall.) Janchen | Ziar guly | Th | Mes | Herb |
| | 259. | <i>Kickxia spuria</i> (L.) Dumort. | Ziar guly | Th | Mes | Herb |
| | 260. | <i>Plantago lanceolata</i> L. | Jabai | Th | Mic | Herb |
| | 261. | <i>Plantago major</i> L. (forss.k) | Sat | Th | Mes | Herb |
| | 262. | <i>Plantago ovata</i> Forssk. | Jabi | Th | Mes | Herb |
| | 263. | <i>Veronica anagallis-aquatica</i> L. | Hwar boty | Mip | Mic | Herb |
| | 264. | <i>Veronica biloba</i> . Linn | Shen boty | Th | Na | Herb |
| | 265. | <i>Veronica polita</i> Fr. | Chergkolma | Th | Na | Herb |
| Plantanaceae | 266. | <i>Platanus orientalis</i> L. | Chinar | Megp | Mac | Tree |
| Polygonaceae | 267. | <i>Bistorta amplexicaulis</i> (D. Don) Green. | Tarva panra | Hem | Mic | Herb |
| | 268. | <i>Fagopyrum esculentum</i> Moench. | Spinguly | Th | Na | Herb |
| | 269. | <i>Persicaria capitata</i> (Willd.) M. Gome. | Sorbotai | Th | Mes | Herb |
| | 270. | <i>Polygonum aviculare</i> L. | Bandakai | Th | Mic | Herb |
| | 271. | <i>Polygonum barbatum</i> L. | Polpulak | Th | Mic | Herb |
| | 272. | <i>Polygonum serrulatum</i> L. | Polpulak | Th | Mic | Herb |
| | 273. | <i>Rumex dentatus</i> L. | Shulkhay | Th | Mic | Herb |
| | 274. | <i>Rumex hastatus</i> L. | Da dako Tarookay | Th | Mic | Herb |
| Portulacaceae | 275. | <i>Portulaca olearacea</i> L. | Warkharay | Th | Na | Herb |
| Primulaceae | 276. | <i>Anagallis arvensis</i> L. | Gulbotay | Th | Na | Herb |



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|---------------|--------------------------|---|--------------------|------|-------|-------|
| Punicaceae | 277. | <i>Punica granatum</i> L. | Anar | Megp | Na | Tree |
| Ranunculaceae | 278. | <i>Aconitum violaceum</i> Jacque. Staff. | Zahar mora | G | Na | Herb |
| | 279. | <i>Clematis grata</i> Wall. | Ghrazelay | NP | Mic | Shrub |
| | 280. | <i>Clematis oreintalis</i> L. | Zelay | G | Mic | Shrub |
| | 281. | <i>Ranunculus muricatus</i> L. | Ziar guly | G | Na | Herb |
| | 282. | <i>Ranunculus sceleratus</i> L. | Jaghagha | G | Na | Herb |
| Rhamnaceae | 283. | <i>Rhamnus triquetra</i> L. | Zir lakhty | Megp | Mic | Tree |
| | 284. | <i>Sageretia thea</i> L. | Mamana | NP | Na | Shrub |
| | 285. | <i>Ziziphus jujuba</i> Mill. | Baira | Megp | Na | Tree |
| | 286. | <i>Zizyphus nummularia</i> (Burm. f.)Wight. | Karkanda | NP | Na | Shrub |
| | 287. | <i>Zizyphus oxyphylla</i> Edgew. | Elanai | Megp | Na | Shrub |
| Rosaceae | 288. | <i>Cotoneaster nummularia</i> Fischer & C.A.Meyer. | Kharawa | NP | Mic | Shrub |
| | 289. | <i>Eriobotrya japonica</i> Thunb. Lindl. | Alookat | Megp | Mes | Tree |
| | 290. | <i>Fragaria indica</i> Andrew. | Da zmakay tot | Th | Mic | Herb |
| | 291. | <i>Potentilla nepalensis</i> Hook. | Daghar shalkhay | Th | Mic | Herb |
| | 292. | <i>Prunus cornuta</i> (Wall. ex Royle) Steud. | Harango | Micp | Mic | Tree |
| | 293. | <i>Prunus armeniaca</i> L. | Hobani | Micp | Mes | Tree |
| | 294. | <i>Prunus domestica</i> L. | Alocha | Micp | Mes | Tree |
| | 295. | <i>Prunus persica</i> (L.) Batch. | Shaltalu | Micp | Mic | Tree |
| | 296. | <i>Pyrus pashia</i> Ham Ex. D. Done. | Tangai | Megp | Mic | Tree |
| | 297. | <i>Rosa webbiana</i> Wall. Ex.Royle. | Spin gulab | NP | Mic | Shrub |
| | 298. | <i>Rosa moschata</i> J.Herm | Zangali gulab | NP | Mic | Shrub |
| | 299. | <i>Rubus ellipticus</i> Smith. | Karwara | NP | Mic | Shrub |
| | 300. | <i>Rubus fruticosus</i> L. | Karwara | NP | Mic | Shrub |
| | 301. | <i>Rubus ulmifolius</i> Schott. | Goraj | NP | Mic | Shrub |
| 302. | <i>Rubus irritans</i> L. | Goraj | NP | Mic | Shrub | |
| Rubiaceae | 303. | <i>Gallium aparine</i> L. | Jawlank | Th | Na | Herb |
| | 304. | <i>Galium tetraphyllum</i> Nazim. & Ehrend. | Ghat Jawlank | Th | Na | Herb |



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|------------------|------------|--|------------------------|----------|------|-------|
| | 305. | <i>Rubia cordifolia</i> L. | Jawlank | Th | Na | Herb |
| Rutaceae | 306. | <i>Citrus aurantium</i> L. | Malta | Megp | Mes | Tree |
| | 307. | <i>Citrus lemon.</i> L. | Nembo | Np | Mic | Shrub |
| | 308. | <i>Skimmia laureola</i> (DC.) Steph. | Nazar panra | Np | Mes | Herb |
| | 309. | <i>Zanthoxylum armatum</i> DC. | Dambara | NP | Mic | Shrub |
| | Salicaceae | 310. | <i>Populus alba</i> L. | Spairdar | Megp | Mes |
| 311. | | <i>Populus caspica</i> Bornm. | Spairdar | Megp | Mes | Tree |
| 312. | | <i>Salix babylonica</i> L. | Wala | Megp | Mic | Tree |
| 313. | | <i>Salix tetrasperma</i> Roxb. | Wala | Megp | Mic | Tree |
| Sapindaceae | 314. | <i>Dodonea viscosa</i> (L.) Jacq. | Ghwarskay | Np | Mic | Shrub |
| Saxifragaceae | 315. | <i>Bergenia ciliata</i> (Haw) Sternb. | Kamar panra | G | Mes | Herb |
| Scrophulariaceae | 316. | <i>Verbascum thapsus</i> L. | Kharghwug | Th | Mes | Herb |
| Simarubaceae | 317. | <i>Ailanthus altissima</i> Mill. | Asli bhikyana | Megp | Mic | Tree |
| Solanaceae | 318. | <i>Atropa accuminata</i> Royle ex Mier k. | Barghak | Micp | Mic | Shrub |
| | 319. | <i>Capsicum annum</i> L. | Marchaky | Th | Mic | Herb |
| | 320. | <i>Capsicum frutescens</i> L. | Ghat marchaky | Np | Mes | Herb |
| | 321. | <i>Datura innoxia</i> Mill. | Batora | Th | Mes | Herb |
| | 322. | <i>Lycopersicon esculentum</i> Miller. | Tamatar | Th | Na | Herb |
| | 323. | <i>Physalis divaricata</i> D. Don. Prodr. | Zahr boty | Th | Mic | Herb |
| | 324. | <i>Solanum melongena</i> L. | Batengan | Th | Mic | Herb |
| | 325. | <i>Solanum nigrum</i> L. | Kamachoo | Th | Mic | Herb |
| | 326. | <i>Solanum surratense</i> Burm.f. | Maraghony | Th | Mic | Herb |
| | 327. | <i>Withania somnifera</i> (L.) Dunal. | Kutilal | Ch | Mes | Herb |
| Thymeleaeceae | 328. | <i>Wikstroemia canescens</i> Meisn. | Zair gulai | Np | Na | Shrub |
| Tiliaceae | 329. | <i>Grewia optiva</i> Drum.ex.Burret. | Pastawoone | Megp | Mic | Tree |
| Ulmaceae | 330. | <i>Celtis caucasica</i> Willd. | Tagha | Megp | Mic | Tree |
| | 331. | <i>Celtis tetrandra</i> Roxb. | Sor krachy | Megp | Mic | Shrub |
| Urticaceae | 332. | <i>Debrrgesia salicifolia</i> D.Done. | Ajalai | Megp | Mic | Tree |
| | 333. | <i>Girardinia palmata</i> (Forssk. Gaudich | Sezonky | Hem | Mes | Shrub |
| | 334. | <i>Lecanthus peduncularis</i> (Royle) Wedd | Jalbhang | Hem | Mes | Herb |
| | 335. | <i>Pilea umbrosa</i> Blume. | - | Th | Na | Herb |



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|----------------|------|--------------------------------------|-----------|------|-----|---------|
| | 336. | <i>Urtica dioica</i> L. | Jalbhang | Th | Mic | Herb |
| Valerianaceae | 337. | <i>Valeriana jatamansii</i> Jones. | MushkBala | G | Mic | Herb |
| Verbenaceae | 338. | <i>Lantana camara</i> L. | Amrduguly | Np | Mic | Shrub |
| | 339. | <i>Vitex negundo</i> L. | Marwandai | Np | Mic | Shrub |
| Violaceae | 340. | <i>Viola odorata</i> L. | Banafsha | Hem | Mic | Herb |
| | 341. | <i>Viola canescens</i> Wall.ex.Roxb. | Banafsha | Hem | Mic | Herb |
| Vitaceae | 342. | <i>Vitis jacquemontii</i> R. Parker. | Gedarkwar | Megp | Mes | Climber |
| | 343. | <i>Vitis vinifera</i> L. | Angor | Megp | Mes | Climber |
| Zygophyllaceae | 344. | <i>Tribulus terrestris</i> L. | Markundai | Th | Na | Herb |

Life form: Th= Therophytes, G= Geophytes, Ch= Chamaephytes, Hem= Hemicryptophytes, Np= Nanophanerophytes, Micp= Microphanerophytes, Mes= Mesophanerophytes, MP= Megaphanerophytes, P= Parasite.

Leaf size: Lep= Leptophylls, Na= Nanophylls, Mic= Microphylls, Mes= Mesophylls, Meg= Megaphylls, Mac= Macrophylls

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