APPENDIX 1

GPS location, vegetation and physical characteristics of the studied sites

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| HI | Site no. | Location name  | GPS location  | Vegetation (Dominant trees) | Site characteristics |
| U | G | R | F  |
|
| gp1 | 1 | Civil lines, Kamla Nehru Ridge | 28° 68’ N,77°21’ E | *Acacia karoo,* *Capparis decidua, Azadiracta indica, Acacia -otica, Ziziphus mauritiana, Eucalyptus* sp. | - | - | - | + |
| gp1 | 2 | Central Delhi Ridge | 28°60’ N, 77°18’ E | *Acacia -otica, Cassia fistula, Prosopis juliflora, Leucaena leucocepala* | - | - | - | + |
| gp1 | 3 | Sanjay Van, South Delhi Ridge | 28° 54’ N, 77°17’ E | *Prosopis juliflora, Anogeissus pendula, Acacia -otica, Capparis decidua, Butea monosperma* | - | - | - | + |
| gp2 | 4 | Buddha Jayanti Park, Central Delhi ridge | 28°61’ N, 77°17’ E | *Syzygium cumini, Acacia karoo, Acacia -otica, Delonix regia, Cassia fistula, Capparis deciduas* | - | + | + | + |
| gp2 | 5 | Hauz Rani Forest Stand, south Delhi Ridge | 28° 51’ N, 77° 20’ E | *Syzygium cumini, Morus alba, Acacia -otica, Eucalyptus* sp*., Mangifera indica, Ficus religiosa* | - | + | + | + |
| gp2 | 6 | Kamala Nehru Ridge ( behind HRC DU) | 28° 68’ N, 77° 21’ E | *Acacia karoo, Capparis decidua, Azadiracta indica, Acacia -otica,* *Ziziphus mauritiana, Eucalyptus* sp*.* | - | + | + | + |
| gp3 | 7 | Police wireless station Karol Bagh, cental delhi ridge | 28°65’ N, 77° 19’ E | *Acacia karoo,* *Capparis decidua, Azadiracta indica, Acacia -otica, Ziziphus mauritiana, Eucalyptus* sp. | + | + | + | + |
| gp3 | 8 | Anand Vihar | 28° 58’ N, 77° 25’ E | *Acacia -otica,Cassia fistula, Prosopis juliflora, Leucaena leucocepala* | + | + | + | + |
| gp3 | 9 | Adjoin Okhla Bird Century | 28°54’ N,77°30’ E | *Prosopis juliflora, Anogeissus pendula, Acacia -otica, Capparis decidua, Butea monosperma* | + | + | + | + |

Site characteristics U-urine, G-garbage, R-recreation, F-fencing.

APPENDIX 2

Sporocarpic fungi isolated from rhizosphere of *Acacia -otica*



a-c *Sclerocystis sinuosum* b. *Divrsispora aurentia* and *Glomu*s sp. (where sp- spore, p-peridium, sw-sporewall, sh- subtending hyph, a shw1 and shw2 - subtending hyphae wall layers).

APPENDIX 3

Values of mean and standard errors for different soil environment parameters

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| UD group | pH | soil moisture | temp | % C  | % N | P (PPM) |
| gp1 | Mean | 8.17a | 11.16a | 13.33 | 37.29a | 0.06a | 26.70a |
| SEM | 0.06 | 0.14 | 0.12 | 36.22 | 0.00 | 1.04 |
| gp2 | Mean | 8.01b | 10.04b | 13.33 | 0.78a | 0.05b | 20.37b |
| SEM | 0.02 | 0.22 | 0.05 | 0.02 | 0.00 | 1.70 |
| gp3 | Mean | 6.35c | 18.94c | 16.00 | 0.47a | 0.05b | 9.34c |
| SEM | 0.09 | 1.39 | 0.00 | 0.02 | 0.00 | 0.42 |

Letters indicate statistical difference according to Tukey’s HSD multiple comparison tests.

APPENDIX 4

Maximum likelihood phylogenetic tree based on nuclear small subunit full (SSU)-5.8S-large subunit (LSU) rDNA of sequences isolated in present study and selected sequences of species from Glomeromycota



Bootstrap values are given for branches among different NCBI accession numbers. *Acaulospora koskei* sequences were used as outgroup. Multiple sequence alignment was done with Clustal w and phylogenetic tree was drawn with RaXml. The scale bar indicates the number of substitutions per site. Branches with < 60 % bootstrap support were collapsed to polytomies, The scale bar indicates the number of substitutions per site. Treeview 1.6.6 is used for drawing the tree.

**APPENDIX 5**

Effect of urban disturbance on spore density (A) and (MIP) of AM fungi isolated from nine sites located at Delhi Ridge



APPENDIX 6

Venn diagram (plotted on the basis of presence absence of species) depicting distribution of Glomeromycotean species within three UD groups



1-*Glomus microaggregatum* N. C. Schenck & G. S. Sm; 2- *Glomus microcarpum* Tul. & C. Tul {= *Endogone microcarpa* (Tul. &C. Tul.) Tul. & C. Tul. =*Endogone neglacta* Rodway}; 3- Glomus sp1; 4-Unidentified sp2; 5-Unidentified sp5; 6-unidentified sp.1; 7-*Glomus invermianum* R. Hall; 8-*Diversispora aurantia* (Blaszk., Blanke, Renker & Buscot) C. Walker & A. Shussler (= *Glomus auronatium* Blaszk., Blanke, Ranker & Buscot); 9-*Rhizophagus aggregates* (N.C. Schenck & G.S. Sm.) C. Walker; 10-*Glomus ambisporum* (G.S. Sm. & N.C. Schenck); 11-*Glomus* sp2; 12-*Glomus tenebrossum* S.M. Berch (=*Endogone tenebrosa* Thaxt.); 13-*Rhizophagus intraradices* (N.C. Schenck& G.S. Smith) C. Walker & A. Schüßler); 14-Unidentified sp3; 15-Unidentified sp4;16-*Rhizophagus fasciculatus* (C. Walker & A. Schüßler); 17-*Glomus macrocarpum* Tul.& C. Tul; 18-*Enterophospora* sp. (R. N. Ames & R.W. Schneid); 19-*Entrophospora infrequens* (I.R. Hall ) R.N. Ames & R.W. Schneid.(= *Glomus infrequens* I.R. Hall); 20-*Glomus albidum* C. Walker & L.H. Rhodes; 21-*Glomus austral* Berk.) S.M. Berch (= *Endogon eaustralis* Berk.); 22-*Funneliformis geosporum* T.H. Nicolson & Gerd.) C. Walker & A. Schüßler; 23-*Funneliformis mosseae* T.H. Nicolson & Gerd.) C. Walker & A. Schüßler; 24-*Acaulospora* sp.; 25*-Acaulospora laevis* Gerd & Trappe; 26-*Scutellospora calospora* (T.H. Nicolson & Gerd) C. Walker & F. E.; 27-*Glomus constrictum* (Trappe); 28-*Gigaspora* sp.; 29-*Gigaspora gigantean* (T.H. Nicolson & Gerd.)