

S/o Abdul Hayee
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DR. SOHAIB MUHAMMAD

Objectives:

To work in a competitive environment where I can utilize my educational background to explore the fields of Plant Ecology and Biodiversity Conservation, Restoration Ecology and Plant diversity assessment through multivariate analysis, carbon mitigation potential assessment and tree ring analysis.

Education:

Ph.D. (Botany)

Plant Ecology, Community Ecology and Climate Change

M.Phil. (Botany) 2007 - 2009

GPA/Percentage: 3.38 – 86%

Div/Award: 1st

Government College University, Lahore, Pakistan

M.Sc. (Botany) 2004 - 2006

GPA/Percentage: 3.08/4 - 77%

Div/Award: 1st

GC University, Lahore, Pakistan

B.Sc. (Botany, Zoology, Chemistry) – 2003

Marks/Percentage: 57%

Div/Award: 2nd

Govt. College Gojra, Pakistan

Intermediate (Pre-Medical) – 2001

Marks/Percentage: 58%

Div/Award: 2nd

Govt. College Gojra, Pakistan

Matriculation (Science) – 1999

Marks/Percentage: 70%

Div/Award: 1st

Municipal Committee High School, Gojra.

Job Experience

- National Internship Program (NIP) Internee in Department of Punjab Live Stock and Dairy Development, Pakistan from June 2007 to May 2008
- Higher Education Commission Pakistan (HEC) Internee in Department of Botany, Government College University, Lahore from June 2008 to May 2009
- Senior Research Fellow in Higher Education Commission Pakistan (HEC) project entitled “Conservation Status of Flora of Punjab: Environmental Implications and Plant Red Data list for Punjab” from July 2009 to October 2009
- Research Assistant/ Teaching Assistant (BS-17) in Department of Botany, Government College University, Lahore, Punjab, Pakistan from November 2009 to April 30, 2012.
- Worked as Lecturer (BS-18) from April 26, 2012 to July 10, 2017
- Working as Assistant Professor (BS-19) from July 10, 2017 to date

Teaching Assignments

Class: F.Sc. First & Second Year

Courses: Biology Theory & Practical

Class: B.Sc. (Hons.) Year 2 & 4

Courses: Biodiversity Conservation, Plant Ecology-I & II, Biostatistics, Plant Physiology & Ecology

Class: M.Phil. (Botany)

Courses: Applied Ecology

Class: Ph.D.

Course: Population and Community Ecology

DEPARTMENTAL ASSIGNMENTS

- Incharge Kashyap Botany Museum, Government College University, Lahore. Pakistan.
- Incharge Kashyap Dr. Sultan Ahmed Herbarium, Department of Botany, Government College University, Lahore. Pakistan.
- Member of Kashyap Botany Museum departmental committee
- Organized 2nd Pakistan Botanic Gardens Conference from 02-4 February, 2009 in Government College University, Lahore. Pakistan.
- Organized an International Seminar/Workshop on "Preservation and Enhancement of Biodiversity: Application of Tree Ring data in Pakistan" in October 2009 in Government College University, Lahore. Pakistan.
- Organized 22nd Asian Pacific Weed Science Conference from 08-12 March, 2010 in Government College University, Lahore. Pakistan.
- Organized and participated in Four Day Workshop "Basic Techniques for Botany Teachers" as Resource Person of Plant Ecology from 10-13 March, 2011 in Department of Botany, Government College University, Lahore. Pakistan.
- Organized 2nd Conference on Plant Scientists" under Pakistan Botanical Society from 22-24 February, 2011 in Government College University, Lahore. Pakistan.
- Organized 1st National Phycological Conference from 30-31 March, 2011 in Government College University, Lahore. Pakistan.
- Organized four successive reunions of Botany Alumni Association (BAA), GC University, Lahore.
- Departmental coordinator of F.Sc. Biology
- Member Time Table committee of the Department of Botany
- Organized Two Days phycological Workshop on "Algal Collection & Recent Taxonomy of Chlorophycota" held from 25-26 September, 2012
- Organized Two Days Phycological Workshop on "Algal Collection and Cultural Techniques" held from 19-20 February, 2014 in Department of Botany, GCU Lahore
- Organized International Conference of Plant Sciences at 150th Years of Excellence of GCU Lahore from 22-24 September, 2014
- Organized One Day International Seminar on Application of Phytochemicals for Cancer Treatment held on 28 November, 2019
- Convener tours committee of the department
- Incharge attendance and eligibility
- Secretary Departmental Board of Studies

INTERNATIONAL/NATIONAL WORKSHOPS/ SEMINARS CONFERENCES ATTENDED

- Organized/Participated in 2nd Pakistan Botanic Gardens Conference from 02-4 February, 2009 in Government College University, Lahore. Pakistan.
- Participated in Three Day Cascading Workshop of 16th Master Trainer Faculty Professional Development Programme (MT-FPDP) held from May 23-25,2012
- Participated in One Day Seminar on World Environment Day organized by Punjab forest Department on June 05,2012
- Participated in One Day Seminar on World Environment Day organized by Punjab forest Department at Jallo Forest Park, Lahore on March 21,2013
- Participated in one day training of Presiding and Assistant Presiding Officers organized by the Election of Commission on April 18, 2013
- Participated as presenter international Conference on Plants, People & Climate held from 5-7 November,2013 at NUST Islamabad
- Participated in Online Webinar on Multivariate Data Analysis for Community Ecologists, organized by the Pennsylvania State University, USA from 14-18 September, 2015
- Participated in one day International Workshop on DNA Barcoding (Barcode of Life Data Systems) a joint venture of GC University Lahore Pakistan and University of Guelph, Ontario, Canada held on December 20. 2017
- Participated in Scientific Writing Skills organized by College of Veterinary and Animal Sciences, Jhang Sub Campus UVAS, Lahore held on February 15,2018
- Participated in Cascading Workshop of Master Trainers Faculty Professional Development Training program (MT-FPDP) at Physics Seminar Hall, Government College University Lahore held from 15-19 October, 2018
- Participated in hands on training on Soil Water and Plant Analyses held from 30th October to 01 November,2018
- Participated in National Workshop on Bioinformatics and Statistical Data Analysis held on 12 March, 2019
- Participated on Two days training workshop on Mobilization of plant occurrence data from Pakistan organized by Herbarium of Pakistan (Isl), Quaid-i-Azam University Islamabad held on 13-14 Nomeber, 2019
- Participated in two days training workshop on geo-referencing of plant occurrence data from Pakistan organized by Herbarium of Pakistan (Isl), Quaid-i-Azam University Islamabad held on 9-10 arch, 2020
- Participated in 1st International Conference on Recent Advances and Challenges in Basic & Social Sciences in Contemporary Research held from 12-13 February,2020 organized by Govt. Post-graduate Islamia College (Women) Cooper Road, Lahore
- Participated in International conference on Smart Plantation and ultimate solution to climate change (ICPS-2020) as oral presenter held from 2-4 March 2020 at Department of Botany, Lahore College for Women University, Lahore.
- Participated in 4th International Conference on Applied Zoology (ICAZ 2021) held from 24-25 November, 2021 organized by The Applied Zoological Society of Pakistan (AZSP)
- Participated as Co-chair of the session in 8th International & 17th National Conference on “Advances in Plant Science in the era of Climate Change” held from 26-28 October, 2022
- Participated in Dendrochronology **International Summer Course on Tree Rings, Climate, Natural Resources, and Human Interaction** held from 30th July to 13th August, 2023 at **American Center of Research (ACOR) Amman, Jordan** in collaboration with Laboratory of Tree-Ring Research, The University of Arizona, College of Science, USA.
- Participated in **1st Climate Change & Green Sustainability Conference** Held from 12-13 March, 2025 as Guest Panelist, organized by NESPAK Pakistan.

IT SKILLS

Competent in all Microsoft Office Packages used for academic and work projects. Moreover, Statistical analysis of the biological data through Costat and Minitab software proficiency

CO-CURRICULAR ACTIVITIES

- Participating in **147th Annual Spring Flowers and Rose Show 2005** on behalf of Government College University, Lahore. Pakistan.
- Worked as **Joint Secretary** in Horticultural Society Government College University, Lahore. Pakistan from 2004-2005
- Worked as **Senior Vice President** in Horticultural Society Government College University, Lahore. Pakistan, from 2005-2006
- Selected as **Prefect** of the Executive Council of Government College University, Lahore. Pakistan; NEW Hostel from 2005-2006
- Participated in the Intel Teach to the Future Program and selected as **Master Trainer** in 2005

Research Projects and Publications:

- **M.Sc. (Botany) Research Work:** Investigation of a few quantitative characteristics of weed flora of some fields of wheat, maize and potato of Gojra, Punjab. Pakistan. (2004-2006)
- **M.Phil.(Botany) Research Work:** Impact of automobile exhaust on road side plantations of Lahore city, Punjab. Pakistan. (2007-2009)
- **Ph.D. (Botany) Research Work:** Impact of local climate change on plant biodiversity of Murree Hills (2017)

Report Writings:

- Sheikh, K.H. and **S. Muhammad**. 2011. Presented a lecture in Four Day Workshop “Basic Techniques for Botany Teachers” as Resource Person on “Techniques of Quantitative Study of Vegetation” from 10-13 March, 2011 in Department of Botany, Government College University, Lahore. Pakistan.
- Sheikh, K.H. and **S. Muhammad**. 2011. Study of some tree species in canal bank area — the long green corridor of Lahore (from Mall Road Underpass to Thokar Niaz Baig, Lahore, Punjab; Pakistan). Presented on April 13, 2011 at the Meeting of the “**Mediation Committee Constituted by Supreme Court of Pakistan for the Lahore Canal Road Widening Project**”.
- Khan, Z. and S. Muhammad. 2015. Worked as ecologist for World Bank assessment on “**Ecological Distribution& Conservation Status of Habitat Flora of Tarbela Dam and Its Adjoining Areas**” (A Case Study of Tarbela 5th Extension Project)

Research Thesis Supervised:

B.Sc. (Hons.):

1. Estimation of carbon stock along Lahore Canal Bank, Lahore, Punjab, Pakistan (**Muhammad Waheed: 0076-BH-BOT-08**)
2. Impact of automobile exhaust pollution in different times of the day on roadside plantations of Lahore, Punjab, Pakistan. (**Adeel Ahmed: 0061-BH-BOT-08**)
3. Effect of sodium fluoride pollution on some physiological and biochemical attributes of two varieties of sunflower i.e. SMH -0917 & SMH-0942 (**Ansa Waheed: 0088-BH-BOT-08**)
4. Studies of vehicular exhausts and their effects on growth, transpiration rate and stomatal conductance of four selected roadside plantations of Lahore city (**Hafiza Ayesha Malik: 0062-BH-BOT-09**)
5. Effect of automobile exhausts on chlorophyll contents and clogging capacity of stomata of four selected roadside plantations of Lahore city. (**Rabia Abdur Rehman: 0063-BH-BOT-09**)
6. Impact of automobile exhausts and traffic densities on biomass and stomatal behavior of four selected roadside plantations of Lahore city. (**Mahpara Ali: 0075-BH-BOT-09**)

7. Assessment of Carbon Mitigation Potential of Some Selected Tree Species of Jinnah Garden, Lahore. (Nitasha Ahmad: 0075-BH-BOT-10)
8. Ecological Studies of Weed Flora of Some Selected Crop Fields of Wheat, Maize and Potato of Tehsil Toba Tek Singh (Maheen Mumtaz: 0083-BH-BOT-10)
9. Evaluation of carbon sequestration potential of some selected tree species planted along two roadsides (Mall Road & Gulberg Main Boulevard) of Lahore city (Zainab Ali: 99-BH-BOT-10)
10. Investigation of some ecological attributes of weed flora of some selected crop fields of wheat, rice and sugarcane of Tehsil Muridke, District Sheikhupura (Komal Javed: 1071-BH-BOT-10)
11. Effect of roadside dust pollution on growth and chlorophyll contents of some selected plant species of two roadsides (Wahdat Road & Allama Iqbal Town Road) of Lahore City (Madiha Akhter: 51-BH-BOT-11)
12. Dendrochronological studies of *Pinus roxburghii* Sarg. of Jhika Gali, Tehsil Murree (Malik Athar Iqbal: 55-BH-BOT-11)
13. Phytosociological studies of weeds of some selected crop fields of wheat and maize of Tehsil Karor, District Layyah (Amara Iqbal Shahani: 60-BH-BOT-11)
14. Air Pollution Tolerance Index (APTI) of three tree species growing along Mall Road & Jail Road of Lahore city (Fara Shakeel: 69-BH-BOT-11)
15. Air Pollution Tolerance Index (APTI) of three tree species growing along Two roadsides (Gulberg Main Boulevard & Allama Iqbal Town Road) of Lahore city (Javeria Younas: 87-BH-BOT-12)
16. Dendrochronological studies of *Pinus wallichiana* A.B. Jacks. of Kashmir Point reserve forest of Tehsil Murree (Naveed Shahzad: 88-BH-BOT-12)
17. Dendrochronological potential of *Pinus wallichiana* A.B. Jacks. of Kuldana reserve forest of Tehsil Murree (Muhammad Hasnain: 91-BH-BOT-12)
18. Assessment of Air Pollution Tolerance level of four selected plant species growing along three busiest road-sides of Lahore city (Nimra Akram: 0102-BH-BOT-14)
19. Two-Way indicator species analysis (TWINSPAN) of weed communities of some selected potato and wheat crop fields of Tehsil Sharaqpur (Sarah Maryam Malik: 0112-BH-BOT-14)
20. Age and growth rate studies of *Cedrus deodara* around Kashmir Point reserve forest of Tehsil Murree (Muhammad Tayab: 0118-Bh-BOT-14)
21. Effect of phytotoxic air pollution on amino acid contents and chlorophyll contents of some selected tree species from two busiest road sites of Lahore city (Sara Anum: 0141-BH-BOT-14)
22. Study of current status and cataloguing of Dr. Sultan Ahmad Herbarium, GCU Lahore (Taimoor-ul-Hassan: 0055-BH-BOT-15)
23. Air Pollution Tolerance Index (APTI) of some selected tree species along canal bank road (Dharampura underpass to Thokar Niaz Baig) Lahore (Arshia Azeem:0057-BH-BOT-15)
24. Ecological studies of weed communities of some selected crop fields of maize, potato and wheat of Tehsil Zafarwal (Arslan Ahmad: 0072-BH-BOT-2015)
25. Study of air pollution sensitivity of some selected ornamental plants of Lahore city (Mahrukh: 0062-BH-BOT-16)
26. Phytoecological analysis of weeds of some selected crops fields of maize and wheat of Tehsil Kot Radha Kishan, District Kasur (Deborah Sohrab Rustam Jutt: 0124-BH-BOT-2017)
27. Synecological analysis of vegetation of Kala Shah Kaku Campus, GCU Lahore (Aqsa Babar: 0146-BH-BOT-2017)
28. Impact of air pollution on physic-chemical properties of roadside plants (Sahar Abdul Haq: 0134-BH-BOT-17)
29. Ecological assessment of physico-chemical properties of some selected tree species planted along four different busiest roads of Lahore city (Fiza Fatima: 0130-BH-BOT-18)
30. Age and growth rate studies of *Cedrus deodara* (Roxb. Ex D.G. Don) of Shogran Valley of Tehsil Balakot, Khyber Pakhtunkhwa (Zargham Khan: 0135-BH-BOT-18)
31. Phytosociological studies of weeds of crop fields of maize and wheat of Tehsil Shakargarh, District Narowal (Sehar Fatima: 0007-BH-E-BOT-18)
32. Impact of air pollution on some physicochemical properties of selected plant species along busiest roads of Lahore city (Hafiza Komal Hanif: 0037-BH-E-BOT-18)
33. Age and growth rate studies of some selected conifers of moist temperate forests of Khanaspur (KP), Pakistan (Tahira Khalid: 104-BH-BOT-19)

34. Ecological assessment of carbon sequestration potential of some selected tree species planted along five busiest roads of Lahore city (**Amer Abbas Pirzada: 118-BH-BOT-19**)
35. Dendrochronological studies of some selected gymnosperms of Nathiagali, KP, Pakistan (**Mehar Un Nisa: 106-BH(E)-BOT-19**)
36. Spatiotemporal studies on Normalized Different Vegetation Index and particulate matter accumulation in some selected road-side plants of Lahore city (**Muhammad Zahid: 128-BH-BOT-19**).
37. Assessment of heavy metal content in some selected plant species along the busiest roads of Lahore, Punjab, Pakistan (**Khadija Mazhar: 0110-BH-BOT-20**)
38. Impact of air pollution on physicochemical properties and antioxidant enzyme activities of some selected road side plantations of Lahore, Punjab, Pakistan (**Rabia Akhtar: 0113-BH-BOT-20**)
39. Ecological assessment of carbon sequestration potential of dominant tree species of jinnah Garden Lahore (**Ayesha Mustneer: 0146-BH-BOT-20**)
40. Synecological studies of wild flora of Lahore city (**Arooj Naeem: 0160-BH-BOT-20**)
41. Estimation of carbon sequestration potential of trees of Botanical Garden, GC University Lahore (**Laiba Javed: 0164-BH-BOT-20**)
42. Impact of industrial pollution on some wild plants of Lahore city (**Saira Razzaq: 0109-BH(E)-BOT-20**)
43. Development of tree-ring chronologies of some selected conifer species of District Abbottabad (KP), Pakistan (**Muhammad Tayyab: 0127-BH(E)-BOT-20**)
44. Tree ring studies of some selected conifers of Ayubia National Park, District Abbottabad, KP, Pakistan (**Syeda Nida Fatima: 0229-BS-BOT-21**).
45. Impact of automobile exhaust on phytochemical and antioxidant enzyme activities of some selected road side plants of Lahore city (**Amna: 0239-BS-BOT-21**)

M.Sc. (Evening Programme):

1. Phytosociological studies of weeds of wheat and rice crops of Kala Shah Kaku, District Sheikhpura (**Maria Aslam: 1937-MSc-BOT-14**)
2. Dendrochronological studies of *Pinus wallichiana* of Ayubia National Park, KPK (**Muhammad Ahmad: 1917-MSc-BOT-16**)
3. Phytosociological studies of weeds of some selected crop fields of chickpea, mustard and wheat of Tehsil Isa Khel, district Mianwali Punjab (**Gulshan Riaz: 1913-MSc-BOT-18**)
4. Dendrochronological potential of some selected conifers of Ayubia national Park, Khyber Pakhtunkhwa (**Amir Ali: 1905-MSc-BOT-19**)
5. Dendrochronological studies of *Cedrus deodara* (Roxb. ex D. Don) in Ushu Valley (Ploga) of Kalam Forest Division, Khyber Pakhtunkhwa (**Hassan Nawaz: 1912-MSc-BOT-19**)

M.Phil.:

1. Phytosociological Study of Jhok Reserve Forest, Lahore Division, Punjab (**Shahid Ali: 0055-MPHIL-BOT-11**)
2. Impact of Kamalia sugar mill effluents on some, growth, physiological and biochemical attributes of two Varieties (NARC 2009 & 11) of Wheat (*Triticum aestivum* L.) (**Ayesha Tarteel: 0353-MPHIL-BOT-11**)
3. Impact of paper mill effluent on some morpho-physiological and biochemical attributes of two sunflower varieties i.e., RA-713 and S-278 (**Faiza Asif: 0352-MPHIL-BOT-11**)
4. Phytosociological studies of Daska range forest, District Sialkot, Punjab (**Waqar Shoukat Ali: 0352-MPHIL-BOT-2012**)
5. A phytosociological analysis of Chichawatni reserved forest, District Sahiwal (**Qurat-ul-Ain Akram: 0371-MPHIL-BOT-2012**)
6. Dendroecological studies of *Pinus roxburghii* Sarg. and *P. wallichiana* A.B. Jacks. of Jhika Gali, Tehsil Murree (**Wajeeha Naqvi: 0377 -MPHIL-BOT-2012**)
7. Phytosociological studies of Bhagwanpura Bela forest of Gujranwala Forest division, Punjab (**Muhammad Zahid: 0355-MPHIL-BOT-13**)
8. Dendroecological potential of *Pinus wallichiana* A.B. Jacks. of Burbhan Reserve Forest, Tehsil Murree (**Mahpara Ali: 0359-MPHIL-BOT-13**)
9. Dendroecological studies of *Pinus roxburghii* Sarg. of Ghora Gali Reserve Forest, Tehsil Murree (**Sidra Rafique: 0365-MPHIL-BOT-13**)

10. Impact of moderate heat stress through seed priming in two varieties (Sarsabz & Khirman) of wheat (*Triticum aestivum* L.) under late sown conditions (**Summiya Faisal: 0352-M. PHIL-BOT-14**)
11. Effect of automobile exhaust and traffic density on plantation of some busiest roadsides of Lahore city (**Habiba Saleem: 0355-M. PHIL-BOT-14**)
12. Carbon sequestration potential and air pollution tolerance index (APTI) of some selected roadside plants of Lahore (**Muhammad Ibrar: 354-MPHIL-BOT-16**)
13. Biological assessment of Air Pollution Tolerance Index (APTI) and heavy Metal Accumulation in some related plant species of Lahore city (**Aneela Rasool: 357-MPHIL-BOT-17**)
14. Impact of brick kiln pollution on some selected plant species of Tehsil Sharaqpur (**Sarah Maryam Malik: 362-MPHIL-BOT-18**)
15. Ecological assessment of Air Pollution Tolerance Index (APTI) and Heavy metal Accumulation Index (MAI) of some selected plant species of Gujranwala City (**Hira Younas: 367-MPHIL-BOT-18**)
16. Dendroclimatic investigation of some selected conifers of Kalam Forest division, KP, Pakistan (**Muhammad Tayyab: 0379-MPHIL-BOT-18**)
17. Biological assessment of air pollution on some selected roadsides of Lahore city (**Aleeha Khairdin: 0366-MPHIL-BOT-19**)
18. Study of tree ring chronologies of some selected conifers of Kalam Forest division, KP, Pakistan (**Kashif Rasool: 0358-MPHIL-BOT-19**)
19. Dendrochronological potential of some selected conifers of Shogran Valley, District Mansehra, Khyber Pakhtunkhwa (**Hafiz Amaz Akbar: 0122-MPHIL-BOT-20**)
20. Ethnoecological assessment of plant biodiversity of some selected sites of the Shigar valley (Central Karakorum National Park) of Baltistan, Pakistan (**Muhammad Bilal: 0129-MPHIL-BOT-20**)
21. Biological assessment of air pollutant tolerant plants of some selected roads of Lahore (**Mahrukh: 0353-MPHIL-BOT-20**)
22. Impact of vehicular pollution on some morpho-anatomical and physicochemical attributes of selected plants of Lahore city (**Bushra Munam: 0375-MPHIL-BOT-20**)
23. Dendrochronological assessment of some selected conifers from different sites of Swat, KP, Pakistan (**Muhammad Jawad Tariq Khan: 117-MPHIL-BOT-21**)
24. Dendroclimatic analysis of dominant conifers of Kumrat Valley, District Upper Dir, KP, Pakistan (**Hassan Nawaz: 0125-MPHIL-BOT-21**)
25. Biological assessment of phytoremediation potential of some selected plant species growing along industrial wastewater of Tehsil Wazirabad, Punjab, Pakistan (**Kainat Ijaz: 0129-MPHIL-BOT-21**)
26. Tree ring studies and climatic response analysis of some selected conifers of Nathia Gali (Abbottabad), KPK (**Noor Mirza: 0137-MPHIL-BOT-21**) as **Co-Supervisor**
27. Ecological assessment of heavy Metal Accumulation Index, Air Pollution Tolerance Index and Anticipated Performance Index in some selected plants around the three areas (Johar Town, Township, Model Town) of Lahore (**Sana Ehsan: 0354-MPHIL-BOT-21**)
28. Impact of climatically induced variations on radial growth of some selected conifers of Kalam Forest Sub Division (KP) Pakistan (**Amir Ali: 0365-MPHIL-BOT-21**)
29. Impact of particulate matter pollution on physicochemical attributes of some selected roadside plantation of Lahore city (**Tahniat Sajjad: 0121-MPHIL-BOT-21**)
30. Comparative microstructural studies on the wood of *Syzigium cumini* (L.) Skeels, *Ziziphus mauritiana* Lam., *Z. nummularia* (Burm.f.) Wight & Arn. and *Z. spina-christi* (L.) Willd. (**Muhammad Bilal: 0370-MPHIL-BOT-21**) as **Co-Supervisor**
31. Ecological assessment of air pollution tolerance index, anticipated performance index and membrane stability index of some selected roadside plants of Lahore city, Punjab, Pakistan (**Hafiza Komal Hanif: 0363-MPHIL-BOT-22**)
32. Ecological assessment of physiological, biochemical and socio-economic attributes of plants of industrial zones of Gujranwala city, Punjab, Pakistan (**Lareeb Asghar: 0357-MPHIL-BOT-22**)
33. Evaluation of tree ring chronologies of some conifers of District Abbottabad, Pakistan (**Tahira Khalid: 0352-MPHIL-BOT-2023**).
34. Spatio-temporal analysis of ambient air quality and normalized different vegetation index (NDVI) of Lahore city (**Muhammad Zahid: 0375-MPHIL-BOT-2023**).

Ph.D. Research Supervised:

1. Spatiotemporal analysis of ethnoecologically important plant communities of Gujranwala Forest Division (Punjab), Pakistan (**2019-GCUL-PHD-BOT-89**)

2. Phytomonitoring of trace-element contaminants around brick kilns in peri-urban fringes across Gujranwala Division, Punjab, Pakistan (**Ali Ahmad: 2019-GCUL-PHD-BOT-120**)
3. Comparative analysis of phytodiversity and ethnobotanical evaluation across ecogeographical boundaries of District Khushab, Punjab Pakistan (**Muhammad Waheed: 2021-GCUL-PhD-BOT-137**) as **Co-Supervisor**

Research Publications:

1. **Muhammad, S.**, T.A. Cheema, Z. Bashir and R. Mehmood. 2005. Analytical characteristics of weeds of wheat crop of Tehsil Gojra, Toba Tek Singh, Pakistan. *Pak. J. Pl. Sci.*, 11(1): 57-60.
2. Cheema, T.A., **S. Muhammad**, Z. Bashir and R. Mehmood. 2005. Phytosociological analysis of weeds of Potato crop fields of Tehsil Gojra Toba Tek Singh, Punjab, Pakistan. *Pak. J. Pl. Sci.*, 11(2): 159-162.
3. **Muhammad, S.**, T.A. Cheema, Z. Bashir and R. Mehmood. 2007. Importance Value Index (IVI) of weed flora of some maize fields of Gojra Punjab, Pakistan. *Pak. J. Sci.*, 59(1-2): 14-17.
4. Ajaib, M., Z. Khan, **S. Muhammad** and R. Mehmood. 2008. Biological spectra of Saney Baney Hills of District Kotli Azad Jammu & Kashmir, Pakistan. *Pak. J. Sci.*, 60 (1-2): 53-58.
5. **Muhammad, S.** and Z. Khan. 2009. Kashyap Botany Museum (KBM) Government College University, Lahore. Pakistan. Botanic Garden Research, Education and Public Awareness Program proceedings: 105-110.
6. **Muhammad, S.**, Z. Khan and T. A. Cheema. 2009. Distribution of weeds in wheat, Maize and potato crop fields of Tehsil Gojra, District Toba Tek Singh, Punjab, Pakistan. *Pak. J. Weed Sci. Res.*, 15(1):91-105.
7. Shafiq, A., Z.A. Butt and **S. Muhammad**. 2012. Response of Nickel Pollution on Physiological and Biochemical Attributes of Wheat (*Triticum aestivum* L. VAR. Bhakar-02). *Pak. J. Bot.*, 44(SI): 111-116. **IF= 0.872 (W)**
8. **Muhammad, S.**, Z. Khan, A. Zaheer, M.F. Siddiqui, F. Masood and A.M. Sarangzi. 2014. *Alstonia scholaris* (L.) R.Br.-Planted bioindicator along different road sides of Lahore city. *Pak. J. Bot.*, 46(3): 869-873. **IF= 0.822 (W)**
9. **Muhammad, S.**, A. Shafeeq, M.F. Siddiqui, Z. Khan and Z.A. Butt. 2015. Weed assemblages in four vegetable crops of Tehsil Gojra, District Toba Tek Singh, Pakistan. *Int. J. Biol. Biotech.*, 12(2): 309-316.
10. **Muhammad, S.** and Z. Khan. 2016. Multivariate analysis of plant communities of Jhika Gali jogging track of Tehsil Murree, Pakistan through two way indicator species analysis (TWINSPAN). *J. Bio. & Env. Sci.*, 9(1): 194-203.
11. **Muhammad, S.**, F. Shakeel, Z. Khan, M. Hasnain and T. A. Cheema. 2016. Assessment of air pollution sensitivity of some selected tree species of busiest roads of Lahore city. *J. Bio. & Env. Sci.*, 9(2): 99-105.
12. Ali, S., A. Shabbir and **S. Muhammad**. 2018. Ethnobotanical uses of some native and alien plants of the Jhok Reserve Forest, Punjab, Pakistan. *Pak. J. Weed Si. Res.*, 24(2):89-103.
13. Zahid, M., N. Iqbal, **S. Muhammad**, S. Faisal, W. Mahboob, M. Hussain and Z. Khan. 2018. Efficacy of exogenous applications of glucose in improving Wheat Crop (*Triticum aestivum* L.) performance under drought stress. *Pakistan Journal of Agricultural Research*, 31 (3): 264-273.
14. **Muhammad, S.**, M. Tayyab, Z. Khan, S. M. Malik, and N. Akram. 2019. Age and growth rate studies of *Cedrus deodara* (Roxb. ex D. Don) around Kashmir point Reserve Forest of Tehsil Murree. *International Journal of Biosciences*, 15(3):458-465. <http://dx.doi.org/10.12692/ijb/15.3.458-465>.
15. **Muhammad, S.**, M. Hasnain, M. Tayyab, Z. Khan and K. Rasool. 2021. Dendrochronological potential of blue pine (*Pinus wallichiana* A.B. Jacks.) of Kuldana reserve forest of Tehsil Murree, Pakistan. *Pak. J. Sci.*, 73(1): 130-137. <https://doi.org/10.57041/vol73iss1>
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