Environ. We Int. J. Sci. Tech. 19, 15-33, 2024

ISSN: 0975-7112 (Print)
ISSN: 0975-7120 (Online)

https://doi.org/10.70497/ewijst.2024.0102

Environment & We
An International
Journal of Science &
Technology

Riparian Floral Assessment of the Boalia Tributary of the River Halda, Chittagong, Bangladesh

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Keywords

Riparian;
Boalia;
Species Richness;
Life Forms;
Conservation Status

Abstract

Riparian zones are ecologically vital interfaces between terrestrial and aquatic systems, supporting rich biodiversity and delivering key ecosystem services such as water purification, erosion control, and habitat provision. Riparian vegetation was assessed covering a 5-meter width on both banks for the entire length of the Boalia tributary of the Halda River, Chittagong, Bangladesh, resulting in the identification of 324 plant species belonging to 91 families. The floral composition is dominated by herbs (41.7%), followed by trees (23.5%) and shrubs (16%). Asteraceae and Euphorbiaceae were the most dominant families, each with 16 species (4.94%), followed by Fabaceae with 15 species (4.63%), and Moraceae with 14 species (4.32%). A total of 11 species (3.4%) were found to be threatened, with 1 Endangered (EN) (0.3%) and 10 Vulnerable (VU) (3.1%) species. Moreover, among the identified ones, 13 were Invasive Alien Species (IAS). The findings serve as a baseline for future ecological monitoring and conservation planning. This pioneering research contributes critical data to Bangladesh's underexplored domain of riparian biodiversity. It provides a reference for academic investigation and policy formulation for sustainable riverine ecosystem management.

1. Introduction

A riparian zone is a biodiverse (Merritt et al., 2017) transitional area where a terrestrial ecosystem unites with an aquatic (especially freshwater) one (SEPA, 2009). Being a transitional area, the riparian zone sustains a unique ecosystem (Olokeogun and Kumar, 2020) and plays a vital role in curbing eutrophication (Rana et al., 2022). Riparian vegetation denotes the plant diversity available on the banks of watercourses, such as streams, canals, rivers, etc. (Baluni et al., 2022). Riparian vegetation is also known as riverine vegetation or gallery forest (Rahman, 2023). To aquatic ecologists, the contributions of riparian flora are multifaceted (Baluni et al., 2022) including but not limited to maintaining nutritional and energy equilibrium, scaling down the water

temperature (Harris et al., 2005), intercepting surface inundation, ameliorating water quality (SEPA, 2009) by minimizing sediment discharge into watercourses (Vyas et al., 2012), impeding pollutants, preventing the water table from declining (Shah et al., 2015), and influencing the faunal diversity (Rana et al., 2022) e.g., providing habitats, food and breeding places. Moreover, with its aesthetic properties, Riparian vegetation acts as a source of refreshment for people (SEPA, 2009). Riparian vegetation may face deterioration due to unwise land use, water regime changes, and invasive species intrusion (Merritt et al., 2017). Globally, there has been a rise in the necessity of maintaining riparian vegetation (Shah et al., 2015). Extensive assessments of the riparian floral richness and the proper scientific documentation are essential in this pursuit.

Boalia (Proper) exemplifies one of the significant tributaries of the Halda River (Islam et al., 2022). The tributary has a tortuosity of 1.47 and is formed when two water channels join together at 22°34'8.51"N and 91°48'44.15"E in Guman Mardan union of Hathazari upazila (sub-district), Chittagong, Bangladesh. On its way, it meanders through the unions of Chhibatali and Hathazari (a union, therefore a toponymic homonym of Hathazari upazila). Finally, it joins the River Halda at 22°30'56.14"N and 91°50'32.02"E in Rohullapur village of Mekhal union. The elevation at the source point is 10.47 m, whereas at the mouth it is 8.96 m. The banks and the adjacent areas of the tributary often get flooded during almost every rainy season. Since time immemorial, the tributary has been utilized by nearby inhabitants for a wide range of domestic and agricultural purposes, including fishing and releasing waste (Islam et al., 2021). Due to receiving waste from households and poultry farms and the runoff of chemical fertilizers and pesticides from nearby agricultural fields, the water quality is predominantly poor with a Grade C (Islam et al., 2021). The tributary is also a recreational destination, especially during the rainy season. Moreover, its banks have been used for grazing domestic animals. The sole research available on the biodiversity of the Boalia tributary is by Islam et al. (2022), which resulted in the identification and documentation of 61 phytoplankton species under 37 genera. Despite its manifold importance, no scientific investigation has so far been conducted to assess the riparian floral diversity of the Boalia tributary. Therefore, a research question has arisen about what floral species the Boalia tributaries' gallery forest has and whether there are any threatened species and invasive alien species in that gallery forest.

To address the aforementioned research question, this study is purposed to document the riparian floral diversity present on both banks of the Boalia tributary to communicate the findings to academia and to draw the attention of policymakers. The present research is the pioneer in assessing riparian vegetation of the Boalia tributary, and it forms the first baseline database for future investigations. This assessment is a complete enumeration (census) of the riparian plant species available on both banks of the tributary. Assessing riparian flora is challenging, as herbaceous life forms are prone to seasonal variations (Harris et al., 2005). To subdue this challenge, the present study was carried out for one round of the year so that all seasonal, annual, and perennial species are documented.

2. Study Area

The investigation has been confined to both banks of the tributary of Boalia Proper. The tributary of Boalia Proper (Fig. 1) has a thalweg length of around 10 km. The source is the confluence of two narrow watercourses at 22°34'8.51"N and 91°48'44.15"E, whereas the tributary

ends its journey at its mouth (22°30'56.14"N and 91°50'32.02"E), where it meets the river Halda. The tributary receives water from ten feeder channels, namely Baissya Jhora, Char Jhora, Charia (Chaijjye) Khal, Fotika (Fodiye) Khal, Gura Chhora, Kobir Khal, Konijjye Khal, Noa Khal, Seraingyer Jhora, and Zillani Chhora (Islam et al., 2021) (Fig. 1).

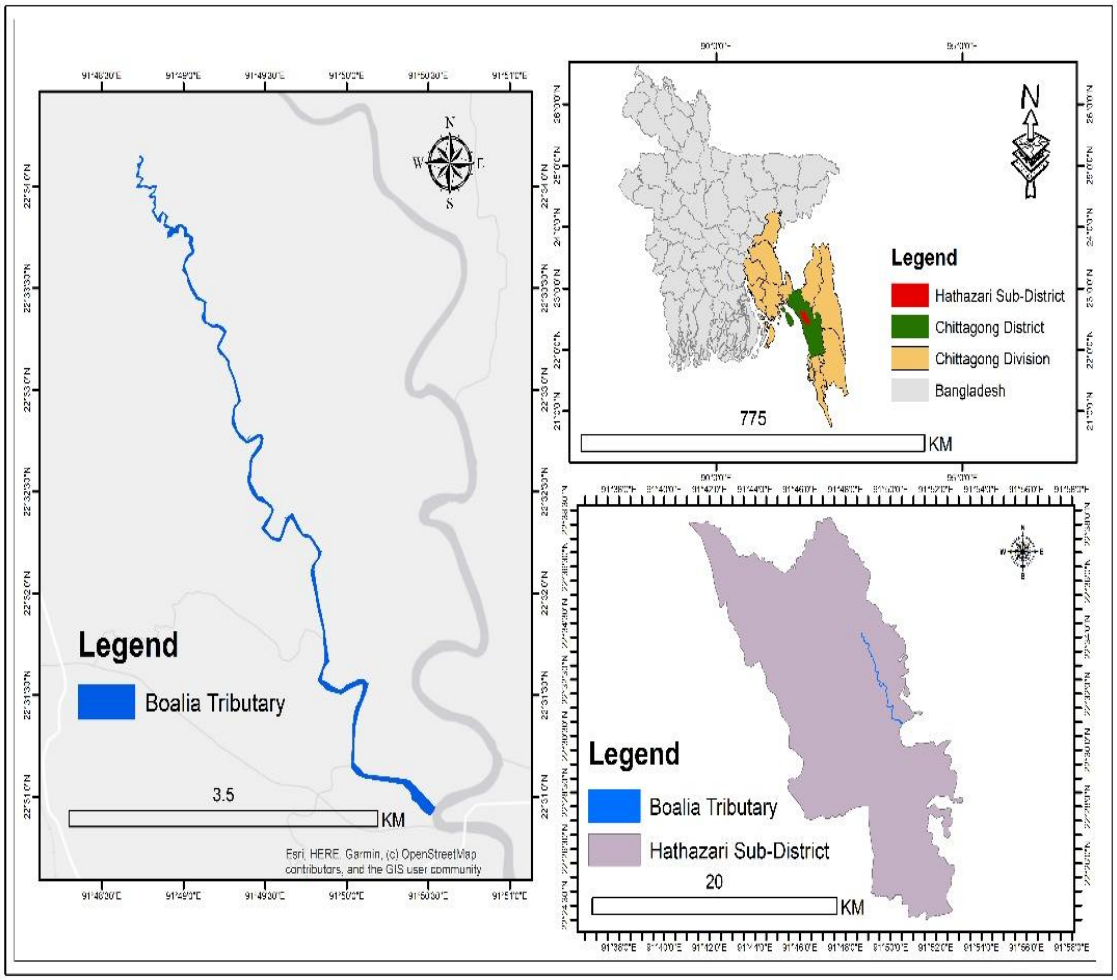

Fig 1. The Boalia tributary (left), Hathazari Upazila (right bottom), and Chittagong District within Chittagong Division of Bangladesh (right top)

3. Material and Methods

The investigation covered a one-year-long enumeration period from September 2022 until August 2023, with fortnightly field visits for data collection, save for a few weeks when the floodplains were flooded. Various studies recommended several riparian buffer zone widths, the narrowest one being 4.6 m (Wenger, 1999). Considering the relatively narrow width of the tributary and the widespread extent of agricultural expansion towards its banks, a width of 5 m (Fig. 2) on both banks, encompassing the entirety of the tributary's length (complete census on both banks), was surveyed. The edge of the bank was used as the reference point for measuring this 5-meter width. Riparian vegetation specimens were collected, processed, made into herbaria, and identified by consulting several keys to the flora of Chittagong, the Chittagong Hill Tracts

(CHT), and overall Bangladesh, namely the Encyclopedia of Flora and Fauna of Bangladesh (Ahmed et al., 2008), Vascular Flora of Chittagong and the Chittagong Hill Tracts (Uddin and Hassan, 2018), Ethnomedicinal Plants of Chittagong Hill Tracts in Bangladesh (Haider et al., 2022), Endangered Forest Genetic Resources in Bangladesh (Hossain et al., 2022), Biodiversity of Chunati Wildlife Sanctuary: Flora (Hossain and Hossain, 2014), and Biodiversity of Protected Areas of Bangladesh (Feeroz et al., 2013) (Fig. 2).

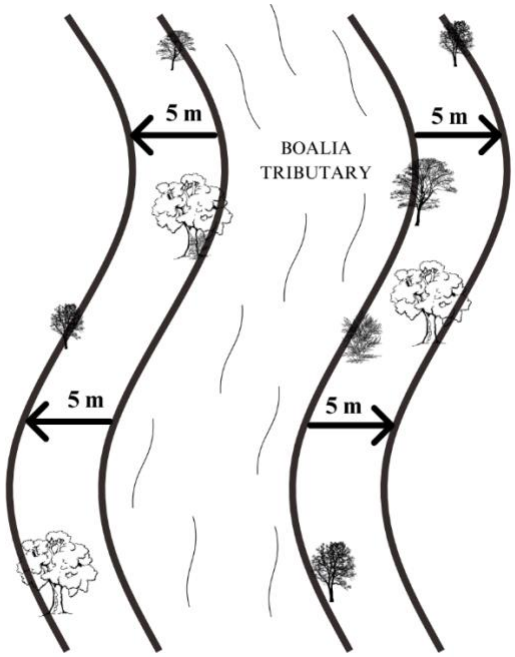

Fig 2. Schematic view of the assessment width (5 meters) on both banks of Boalia

The World Flora Online (www.worldfloraonline.org) was referred to for updated and accepted scientific names, whereas Plant Names of Bangladesh (Huq, 2019) and Dictionary of Plant Names of Bangladesh (Pasha and Uddin, 2013) were used for vernacular names. Habit, family, IUCN status, and usage were recorded for each identified species.

4. Results and Discussion

4.1. Species Composition and Diversity

The present study documented a total of 324 plant species belonging to 91 families along the riparian zone of the Boalia tributary, with herb dominance (Table 1 and Fig. 3). The dominance of herbs (41.7% with 135 species) over other life forms, such as trees (23.5% with 76 species), shrubs (16% with 52 species), climbers (5.9% with 19 species), and pteridophytes (3.7% with 12 species) highlights the herbaceous nature of the riparian vegetation. The findings are consistent with those of Cherullipadi and Paul (2016) and Shah et al. (2015), where herbs were the most dominant life forms. The predominance of herbs is ecologically significant as herbaceous plants contribute to rapid soil stabilization, serve as pioneer species during succession (Harris et al., 2005), and provide crucial ecosystem services like nutrient cycling and sediment trapping (SEPA, 2009; Naiman and Décamps, 1997). Herbaceous vegetation also plays a vital role in maintaining the ecological integrity of riparian corridors by offering ground cover that reduces runoff velocity,

limits soil erosion, and promotes infiltration (Palmer et al., 2009). The relatively lower representation of trees and shrubs could be attributed to anthropogenic pressures like agricultural expansion and grazing (Riis et al., 2020), which favour herbaceous species adapted to disturbance regimes.

The floral composition of the Boalia tributary also includes 8 species (Fig. 3) of aquatic herbs (2.5%), 8 species of twiners (2.4%), 6 species of epiphytes (1.9%), 4 species of lianas (1.2%), 2 species of bamboos (0.6%), 1 undershrub species (0.3%), and 1 parasitic species (0.3%). The presence of twiners, epiphytes, and lianas reflects moderately structured vegetation, providing vertical complexity necessary for habitat heterogeneity (Baluni et al., 2022). This stratification, though limited in extent, contributes significantly to the ecological richness and resilience of the riparian vegetation along the Boalia tributary.

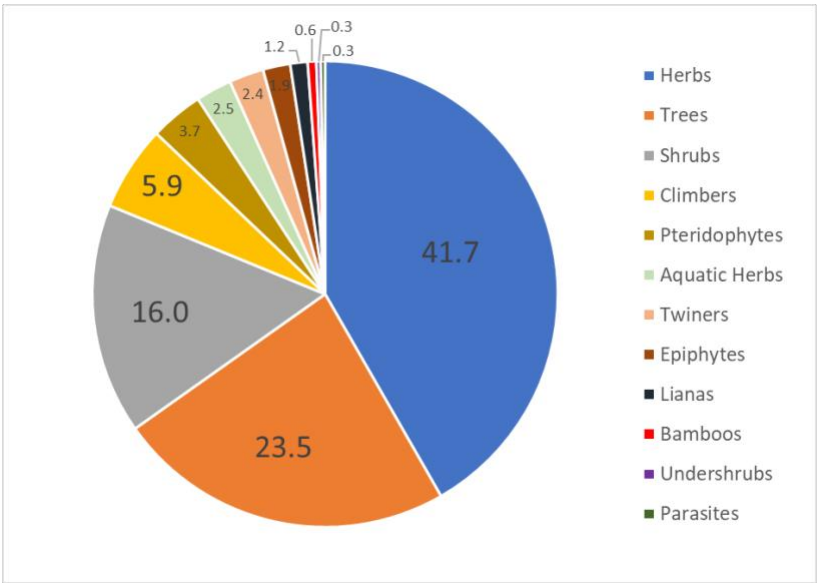

Fig 3. Life forms of the riparian vegetation of the Boalia tributary

4.2. Family Representation

Among the 91 recorded plant families, Asteraceae and Euphorbiaceae were the most dominant, each accounting for 16 species (4.94%), followed closely by Fabaceae with 15 species (4.63%), and Moraceae with 14 species (4.32%) (Fig. 4). This composition aligns with broader floristic trends in riparian ecosystems across tropical and subtropical regions, where Asteraceae and Fabaceae frequently dominate due to their ecological plasticity, wide distribution, and strong colonizing capabilities (Sunil et al., 2010; Vyas et al., 2012). Members of Asteraceae, for example, are often pioneer species in disturbed habitats and are characterized by traits such as wind dispersal, high reproductive rates, and tolerance to poor soil conditions (Heywood et al., 2007). Similarly, species of Euphorbiaceae have been noted for their drought tolerance, vegetative propagation, and allelopathic potential, allowing them to thrive in riparian edges and degraded landscapes (Govaerts et al., 2000) (Fig. 4).

The present study also recorded 11 species (3.4%), representing each of the families of Araceae, Poaceae, and Malvaceae (Fig. 4). Amaranthaceae possessed 10 species (3.09%), whereas Convolvulaceae had 9 species. Each of the Acanthaceae and Cucurbitaceae had 8 species. 7 species were found under each of Mimosaceae, Solanaceae, and Lamiaceae, whereas 6 were found under each of Apocynaceae, Verbenaceae, and Pteridaceae. Each of the families of Arecaceae, Rubiaceae, Apiaceae, Polygonaceae, and Lythraceae was represented by 5 species, whereas 4 species were documented under each of Capparaceae, Meliaceae, Myrtaceae, Plantaginaceae, Primulaceae, Oxalidaceae, and Lygodiaceae. A total of 14 families had only 3 species under each, while 13 families had only 2 species under each. The rest 35 families contained merely 1 species under each of them.

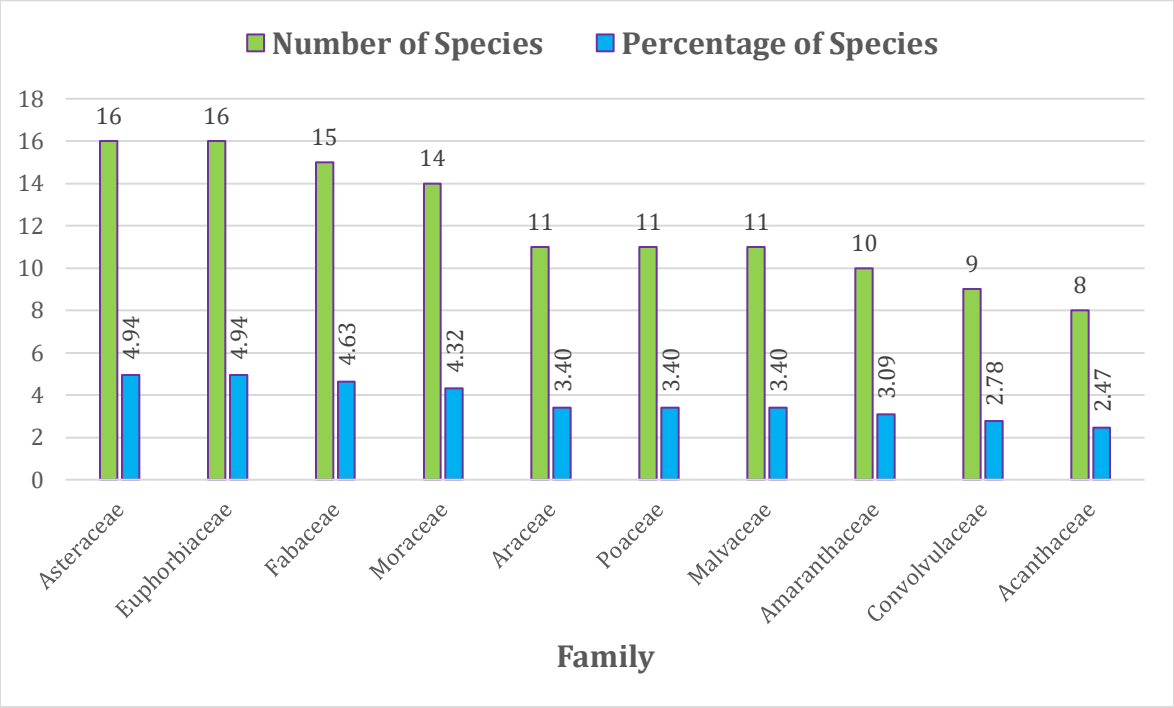

Fig 4. Top 10 dominant families of the plant species found on the Boalia tributary

The relatively high representation of Poaceae, Malvaceae, and Amaranthaceae families is consistent with the disturbance-adapted nature of riparian corridors (Cherullipadi and Paul, 2016). Poaceae exhibits morphological adaptations such as fibrous root systems and basal meristems that allow survival under mechanical disturbances and submergence (Clark et al., 2010). Amaranthaceae and Malvaceae are known for their salt tolerance and resistance to drought, traits that are advantageous in riparian zones with fluctuating water tables or seasonal dryness (Fryxell, 1997; Kadereit et al., 2003). In a study by Kabir and Barua (2019) on riparian tree species in the midstream of the River Halda, Fabaceae was reported to be the most dominant family. Shah et al. (2015) documented 9 dominant families, namely Fabaceae, Asteraceae, Acanthaceae, Amaranthaceae, Poaceae, Malvaceae, Convolvulaceae, Lamiaceae, and Moraceae, while conducting a riparian floral assessment of the River Mini in Vadodara, Gujarat, India. 8 out of these 9 families, except for Lamiaceae, were also dominant in the current Boalia tributary investigation. In contrast, Baluni et al. (2022) reported Rosaceae as the most dominant family from

a riparian vegetation assessment along the Khanda Gad tributary of the River Alaknanda, which emphasizes how plant family dominance can vary spatially depending on local microclimatic factors, elevation, and human activity. Such variability underscores the importance of site-specific floristic assessments in understanding the ecological dynamics of riparian habitats (Gurnell et al., 2015).

4.3. Conservation Status and Vulnerability

As far as the Bangladesh National Herbarium and IUCN (2024) status of the identified plant species are concerned, a total of 11 species (3.4%) were found to be threatened, with 1 species (0.3%) as Endangered (EN) and 10 species (3.1%) as Vulnerable (VU) (Fig. 5) along the Boalia tributary. Fortunately, no species was found to be Critically Endangered (CE). The number of the Near Threatened (NT) species was 8 (2.5%). Most (265 species; 81.8%) were identified as Least Concern (LC). 3 species (0.9%) were found under the Data Deficient (DD) category, whereas 18 species (5.5%) were under Not Evaluated (NE). The number of Conservation Dependent (CD) species was 6 (1.9%). The status of a total of 13 species (4.0%) was not known (Nk) (Fig. 5). The presence of these threatened taxa highlights the ecological value of the riparian corridor as a critical habitat for species facing regional or global decline (Darrah et al., 2017). Moreover, detecting 8 Near Threatened and 18 Not Evaluated species is of particular concern. Near-threatened species may rapidly shift into more severe threat categories without proactive conservation actions (IUCN, 2022). Furthermore, the Not Evaluated species represent a significant knowledge gap. Their ecological roles and population dynamics remain uncertain, which hampers effective conservation planning (Collen et al., 2012).

Furthermore, 13 Invasive Alien Species (IAS) were recorded and asterisked in Table 1 along the Boalia tributary. These are *Acacia auriculiformis* A.Cunn. ex Benth., *Acacia mangium* Willd., *Eucalyptus camaldulensis* Dehnh., *Ipomoea carnea* subsp. fistulosa (Mart. ex Choisy) D.F.Austin, *Ageratum conyzoides* Hieron., *Synedrella nodiflora* Gaertn., *Evolvulus nummularius* (L.) L., *Croton bonplandianus* Baill., *Mimosa pudica* L., *Ludwigia adscendens* (L.) H. Hara, *Imperata cylindrica* (L.) P.Beauv., *Eichhornia crassipes* (Mart.) Solms, and *Mikania cordata* (Burm.f.) B.L.Rob. In Bangladesh, the number of Invasive Alien Species is 17 (Bangladesh National Herbarium and IUCN, 2024), while the earlier number was 22 (Hossain, 2009). The presence of 13 IAS on the banks of Boalia is a paramount issue. Studies from India, like Rana et al. (2022) and Baluni et al. (2022), highlight IAS encroachment as a major threat to riparian systems, necessitating urgent invasive species management programs.

4.4. Species Utilization

A striking 274 species (84.6%) of the documented species have known medicinal uses, affirming the crucial socio-economic role of riparian biodiversity (Fig. 6). This parallels the findings by Baluni and Chandola (2019), where many riparian plants were reported to be medicinally valuable. The local communities' reliance on riparian plants for traditional medicine emphasizes the need for biodiversity conservation from an ecological and cultural perspective. A total of 143 species (44.1%) have miscellaneous non-timber uses rather than medicinal, foods, fodders, and firewood. The uses of 3 species (0.9%) were unknown. 47.2% of species (153 species) (Fig. 6), identified to be food and fodder providers, support agricultural sustainability, while 11.7%

(38 species) of species of different timber usage indicate human dependence on riparian resources (Rahman, 2023; SEPA, 2009). However, if unregulated, such uses can exacerbate riparian degradation, a concern highlighted by Riis et al. (2020), who observed that overexploitation is one of the key drivers of riparian ecosystems' create/bring/responsible for global vulnerability.

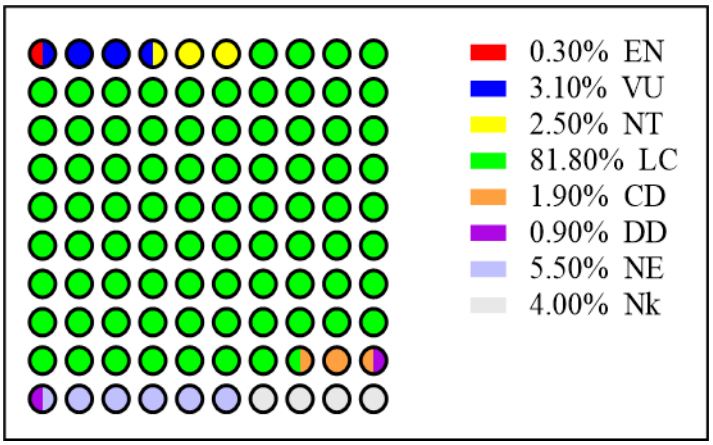

Fig 5. IUCN conservation status of the identified plant species along Boalia

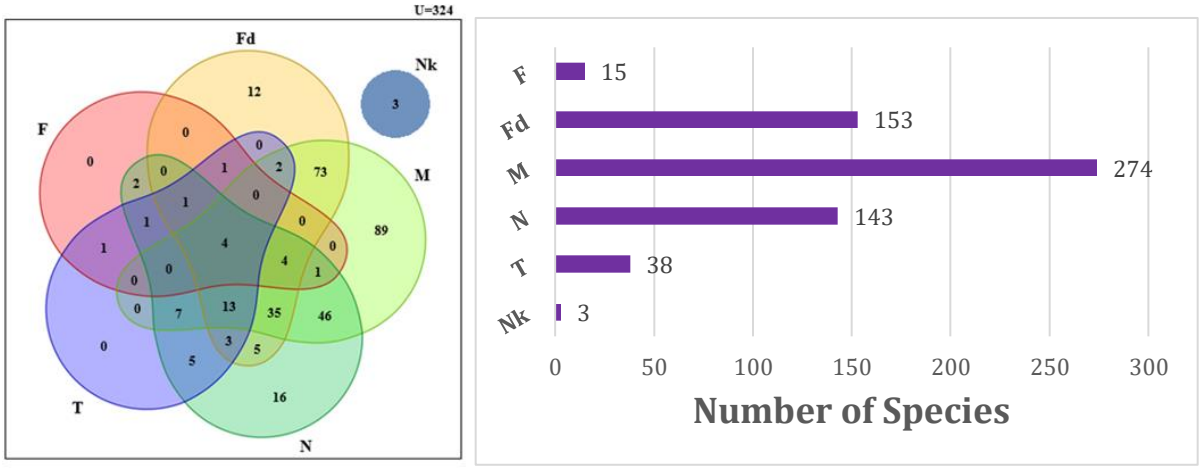

Fig 6. Usage of the recorded plant species along Boalia [Left (Venn Diagram)-Here, F = Fuelwood; Fd = Food and Fodder; T = Timber; M = Medicinal Use; N = Non-timber uses other than fuel, food, fodder, and Medicine; Nk = Not Known. Right (Total surpasses 324, as many species have multiple uses]

Table 1. List of plant species along the riparian zone of the Boalia tributary

SL No.	Scientific Name	Vernacular Name	Family	IUCN Status	Usage
Trees					
1	*Lannea coromandelica* (Houtt.) Merr.	Jialbhadi	Anacardiaceae	LC[4]	Fd, M, N, T
2	*Mangifera indica* L.	Aam	Anacardiaceae	LC[2]	Fd, M, N, T
3	*Annona reticulata* L.	Nona ata	Annonaceae	LC[2]	Fd, M
4	*Alstonia scholaris* (L.) R.Br.	Chatim	Apocynaceae	LC[4]	M, N, T
5	*Areca catechu* L.	Supari	Arecaceae	LC[1]	F, Fd, M, N

SL No.	Scientific Name	Vernacular Name	Family	IUCN Status	Usage
6	*Borassus flabellifer* L.	Tal	Arecaceae	LC[1]	Fd, M, N
7	*Cocos nucifera* L.	Narikel	Arecaceae	LC[1]	Fd, M, N, T
8	*Phoenix sylvestris* (L.) Roxb.	Khejur	Arecaceae	LC[1]	Fd, M, N
9	*Cordia dichotoma* G.Forst.	Boula	Boraginaceae	LC[4]	Fd, M, N, T
10	*Cordia myxa* L.	Lasura/ Pichla-gota	Boraginaceae	VU[4]	Fd, M
11	*Crateva magna* DC.	Boruna	Capparaceae	LC[4]	Fd, M
12	*Carica papaya* L.	Pepe	Caricaceae	LC[2]	Fd, M
13	*Terminalia arjuna* (Roxb. ex DC.) Wight & Arn.	Arjun	Combretaceae	LC[4]	M, N, T
14	*Terminalia catappa* L.	Kat badam	Combretaceae	LC[4]	Fd, M, N, T
15	*Platycladus orientalis* (L.) Franco	Thuja	Cupressaceae	Nk[2]	M, N
16	*Dillenia indica* L.	Chalta	Dilleniaceae	LC[4]	Fd, M, T
17	*Diospyros discolor* Willd.	Bilatigab	Ebenaceae	LC[2]	Fd, M, N, T
18	*Diospyros malabarica* (Desr.) Kostel.	Deshigab	Ebenaceae	LC[4]	M, N
19	*Diospyros toposia* Buch.-Ham.	Katgula	Ebenaceae	VU[4]	Fd, M, N, T
20	*Elaeocarpus floribundus* Blume	Jalpai	Elaeocarpaceae	LC[4]	Fd, N
21	*Trewia nudiflorus* (L.) Kulju & Welzen	Pitali	Euphorbiaceae	LC[4]	M
22	*Mallotus philippensis* (Lam.) Müll.Arg.	Sinduri	Euphorbiaceae	LC[4]	F, Fd, M, N
23	*Sapium indicum* L.	Melgota	Euphorbiaceae	LC[4]	M
24	**Acacia auriculiformis* A.Cunn. ex Benth.	Akashmoni	Mimosaceae	LC[3]	F, T
25	**Acacia mangium* Willd.	Mangium	Mimosaceae	LC[3]	F, N, T
26	*Albizia lebbeck* (L.) Benth.	Kalo Koroi	Mimosaceae	LC[3]	F, Fd, M, N, T
27	*Albizia richardiana* (Voigt.) King & Prain	Gagan Siris/ Raj Koroi	Mimosaceae	LC[3]	N, T
28	*Albizia procera* (Roxb.) Benth.	Sil koroi	Mimosaceae	LC[3]	Fd, M, N, T
29	*Delonix regia* (Bojer ex Hook.) Raf.	Krishnachura	Caesalpiniaceae	LC[2]	F, N
30	*Erythrina fusca* Lour.	Kanta mandar	Fabaceae	LC[3]	F, N
31	*Pongamia pinnata* (L.) Pierre	Karanja, Kerang	Fabaceae	LC[3]	M, N
32	*Samanea saman* (Jacq.) Merr.	Rain tree	Mimosaceae	LC[3]	F, Fd, N, T
33	*Tamarindus indica* L.	Tentul	Caesalpiniaceae	LC[2]	F, Fd, M, N, T
34	*Vitex glabrata* R.Br.	Goda	Lamiaceae	LC[4]	Fd, M, N, T
35	*Litsea monopetala* Pers.	Kat Meda	Lauraceae	LC[4]	M
36	*Litsea salicifolia* Hook.f.	Bara Shiyal	Lauraceae	NT[4]	M
37	*Barringtonia acutangula* Gaertn.	Hijal	Lecythidaceae	LC[4]	M
38	*Lagerstroemia parviflora* Roxb.	Sidha Jarul	Lythraceae	VU[4]	N, T
39	*Lagerstroemia speciosa* Pers.	Jarul	Lythraceae	LC[4]	M, N, T
40	*Sonneratia caseolaris* Engl.	Choila	Lythraceae	LC[4]	Fd, M, N
41	*Bombax ceiba* L.	Shimul	Bombacaceae	LC[4]	Fd, M, N
42	*Ceiba pentandra* (L.) Gaertn.	Burma shimul	Bombacaceae	LC[2]	Fd, N
43	*Aphanamixis polystachya* (Wall.) R.Parker	Pitraj	Meliaceae	LC[4]	M, N, T
44	*Khaya anthotheca* C. DC.	Lombu	Meliaceae	Nk	M, N, T
45	*Swietenia macrophylla* King in Hook.	Bara mahogany	Meliaceae	LC[3]	N, T
46	*Toona ciliata* M.Roem.	Toon	Meliaceae	LC[4]	M, N, T

SL No.	Scientific Name	Vernacular Name	Family	IUCN Status	Usage
47	*Artocarpus chama* Buch.-Ham.	Chapalish	Moraceae	LC[4]	F, Fd, T
48	*Artocarpus heterophyllus* Lam.	Kanthal	Moraceae	LC[3]	F, Fd, M, N, T
49	*Artocarpus lacucha* Roxb. ex Buch.-Ham.	Barta	Moraceae	VU[4]	Fd, M, N, T
50	*Ficus benghalensis* L.	Bot gach	Moraceae	LC[4]	M, N
51	*Ficus benjamina* L.	Pakur	Moraceae	LC[4]	F, M, N
52	*Ficus hispida* L.f.	Kak dumur	Moraceae	LC[4]	M
53	*Ficus microcarpa* L.f.	Jir	Moraceae	NT[4]	M, N
54	*Ficus racemosa* L.	Jaga dumur	Moraceae	LC[4, 5]	Fd, M
55	*Ficus religiosa* L.	Ashwatha	Moraceae	LC[4]	Fd, M, N
56	*Ficus rumphii* Blume	Gaya Ashwatha	Moraceae	LC[3, 5]	F, Fd, M, N
57	*Morus alba* L.	Tut	Moraceae	LC[3]	F, Fd, M, N
58	*Streblus asper* Lour.	Sheora	Moraceae	LC[4]	Fd, M, N
59	**Eucalyptus camaldulensis* Dehnh.	Duli Eucalyptus	Myrtaceae	NE[3, 5]	N, T
60	*Eucalyptus tereticornis* Sm.	Lali Eucalyptus	Myrtaceae	LC[3, 5]	N, T
61	*Psidium guajava* L.	Peyara	Myrtaceae	LC[3, 5]	Fd, M, N, T
62	*Syzygium cumini* (L.) Skeels	Kala jam	Myrtaceae	LC[3]	F, Fd, M, N, T
63	*Averrhoa bilimbi* L.	Bilimbi	Oxalidaceae	LC[3]	Fd, M
64	*Averrhoa carambola* L.	Kamranga	Oxalidaceae	LC[3]	Fd, M
65	*Antidesma ghaesembilla* Gaertn.	Khudijam	Euphorbiaceae	LC[4]	M
66	*Phyllanthus emblica* L.	Amloki	Euphorbiaceae	LC[4]	Fd, M, N
67	*Phyllanthus multilocularis* (Roxb. ex Willd.) Müll.Arg.	Pannyaturi	Phyllanthaceae	Nk	M
68	*Ziziphus mauritiana* Lam.	Boroi	Rhamnaceae	LC[3]	Fd, M, N
69	*Hymenodictyon orixense* (Roxb.) Mabb.	Bhutum	Rubiaceae	LC[4]	M, N
70	*Neolamarckia cadamba* (Roxb.) Bosser	Kadam	Rubiaceae	LC[4]	M, N, T
71	*Citrus limon* (L.) Osbeck	Elachi lebu	Rutaceae	LC[3, 5]	Fd, M
72	*Citrus maxima* (Burm.) Merr.	Jambura	Rutaceae	LC[3]	Fd, M, N
73	*Flacourtia jangomas* (Lour.) Raeusch.	Paniala	Salicaceae	LC[4]	Fd, M, T
74	*Salix tetrasperma* Roxb.	Panijoma	Salicaceae	VU[4]	Fd, M, N, T
75	*Litchi chinensis* Sonn.	Lichu	Sapindaceae	LC[3]	Fd, M
76	*Manilkara zapota* (L.) P.Royen	Safeda	Sapotaceae	LC[3]	Fd, M, N
Shrubs					
77	*Justicia adhatoda* L.	Bashak	Acanthaceae	LC[2]	M
78	*Justicia plumbaginifolia* J.Jacq.	Not known	Acanthaceae	Nk	M
79	*Ichnocarpus frutescens* (L.) W.T.Aiton	Shyamalota/Dudhilata	Apocynaceae	LC[2]	M
80	*Calotropis gigantea* (L.) Dryand.	Akanda	Asclepiadaceae	LC[4]	M
81	*Cascabela thevetia* (L.) Lippold	Kolke Phul	Apocynaceae	LC[2]	M, N
82	*Rauvolfia tetraphylla* L.	Bara chadar	Apocynaceae	NE[2]	M, N
83	*Tabernaemontana divaricata* (L.) R.Br. ex Roem. & Schult.	Tagar	Apocynaceae	LC[4]	M, N
84	*Pothos chinensis* (Raf.) Merr.	Chinalata	Araceae	NE[1]	M
85	*Cordyline fruticosa* (L.) A.Chev.	Agnishwar	Asparagaceae	NE[1]	M
86	*Dracaena fragrans* (L.) Ker Gawl.	Gondhi drakan	Asparagaceae	Nk	M, N
87	*Capparis zeylanica* L.	Azarilata	Capparaceae	LC[4]	Fd, M

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88	*Quisqualis indica* L.	Basantilota/Madhurilata	Combretaceae	LC[2]	M, N
89	**Ipomoea carnea* subsp. fistulosa (Mart. ex Choisy) D.F.Austin	Dhol kalmi	Convolvulaceae	LC[2]	M, N
90	*Codiaeum variegatum* (L.) A.Juss.	Patabahar	Euphorbiaceae	LC[2]	N
91	*Euphorbia milii* Des Moul.	Kanta mukut	Euphorbiaceae	LC[2]	N
92	*Cajanus cajan* (L.) Millsp.	Arhar	Fabaceae	LC[3]	Fd, M
93	*Flemingia lineata* (L.) W.T.Aiton	Atapan	Fabaceae	NT[3, 5]	M
94	*Flemingia strobilifera* (L.) W.T.Aiton	Simbu sak	Fabaceae	LC[3]	M
95	*Senna obtusifolia* (L.) H.S.Irwin & Barneby	Chakunda	Caesalpiniaceae	DD[2]	Fd, M
96	*Tadehagi triquetrum* (L.) H.Ohashi	Bormajal	Fabaceae	LC[3]	M
97	*Ocimum gratissimum* L.	Ram-tulsi	Lamiaceae	LC[3]	M
98	*Clerodendrum indicum* Kuntze	Bamunhati	Verbenaceae	LC[3]	M, N
99	*Clerodendrum infortunatum* L.	Bhant	Verbenaceae	LC[3]	Fd, M, N
100	*Clerodendrum japonicum* (Jacq.) Gandhi	Chandas Bhat	Verbenaceae	CD[3]	M, N
101	*Premna esculenta* Roxb.	Lalana	Lamiaceae	LC[4]	Fd, M, N
102	*Lawsonia inermis* L.	Mehedi	Lythraceae	LC[3]	M, N
103	*Hibiscus rosa-sinensis* L.	Joba	Malvaceae	LC[3]	M, N
104	*Malvaviscus penduliflorus* DC.	Lanka joba	Malvaceae	LC[3]	N
105	*Urena lobata* L.	Bon-okra	Malvaceae	LC[3]	M, N
106	*Schumannianthus benthamianus* (Kuntze) Veldkamp & I.M.Turner	Pati-pata	Marantaceae	LC[1]	Fd, M, N
107	*Ficus gasparriniana* Miq.	Gasper dumur	Moraceae	DD[4, 5]	Nk
108	*Ficus heterophylla* L.f.	Bhui-dumur	Moraceae	LC[4]	Fd, M
109	*Bougainvillea spectabilis* Willd.	Bagan Bilash	Nyctaginaceae	LC[3]	N
110	*Jasminum sambac* (L.) Aiton	Beli	Oleaceae	LC[3]	M, N
111	*Benstonea foetida* (Roxb.) Callm. & Buerki	Keya-kanta	Pandanaceae	LC[4]	M
112	*Antidesma acidum* Retz.	Chutki	Euphorbiaceae	LC[4]	Fd, M
113	*Glochidion zeylanicum* (Gaertn.) A.Juss.	Siloni kechua	Euphorbiaceae	VU[4]	M
114	*Phyllanthus reticulatus* Poir.	Chitki	Euphorbiaceae	LC[2]	M, N
115	*Ardisia solanacea* Roxb.	Banjam	Primulaceae	LC[4]	M, N
116	*Ardisia thomsonii* Mez	Sayajoni	Primulaceae	DD[4]	N
117	*Hymenandra wallichii* A.DC.	Bhau jawa	Primulaceae	NE[3]	Nk
118	*Maesa ramentacea* (Roxb.) A.DC.	Noa maricha	Primulaceae	LC[4]	M
119	*Pavetta indica* L.	Banamali	Rubiaceae	LC[4]	M
120	*Tarenna asiatica* (L.) Kuntze ex K.Schum.	Tarena	Rubiaceae	EN[4]	M
121	*Glycosmis pentaphylla* (Retz.) DC.	Datmajani	Rutaceae	LC[4]	M
122	*Flacourtia indica* (Burm.f.) Merr.	Beuchi	Salicaceae	LC[4]	Fd, M
123	*Lepisanthes senegalensis* (Poir.) Leenh.	Gotaharina	Sapindaceae	LC[4]	Fd, M, N, T
124	*Capsicum frutescens* L.	Marich	Solanaceae	LC[3]	Fd
125	*Boehmeria glomerulifera* Miq.	Borthurthuri	Urticaceae	LC[4]	N
126	*Duranta erecta* L.	Kantamehedi	Verbenaceae	LC[3]	Fd, M, N
127	*Lippia alba* (Mill.) N.E.Br. ex Britton & P.Wilson	Pichas-lakri	Verbenaceae	LC[3]	Fd, M, N
128	*Leea aequata* L.	Kakjangha	Leeaceae	NT[4]	M

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Undershrubs					
129	*Justicia gendarussa* Burm.f.	Jagatmadan	Acanthaceae	LC[2]	M
Herbs					
130	*Hemigraphis hirta* T. Anderson	Buripana	Acanthaceae	LC[2]	M
131	*Nelsonia canescens* Spreng.	Paramul	Acanthaceae	LC[2]	M
132	*Phaulopsis imbricata* Sweet	Kantasi	Acanthaceae	LC[2]	M
133	*Rungia pectinata* Nees	Pindi	Acanthaceae	LC[2]	M
134	*Staurogyne zeylanica* Kuntze	Cylongyne	Acanthaceae	LC[2]	Nk
135	*Aerva sanguinolenta* (L.) Blume	Bishallakarani	Amaranthaceae	LC[2]	M, N
136	*Alternanthera philoxeroides* (Mart.) Griseb.	Helencha	Amaranthaceae	LC[2]	Fd
137	*Alternanthera sessilis* (L.) DC.	Sachi shak	Amaranthaceae	LC[2]	M, N
138	*Amaranthus blitum* L.	Natiya Shak	Amaranthaceae	LC[2]	Fd, M
139	*Amaranthus spinosus* L.	Kanta maris	Amaranthaceae	LC[2]	Fd, M
140	*Amaranthus tricolor* L.	Kantanotey	Amaranthaceae	LC[2]	Fd, M
141	*Amaranthus viridis* L.	Pora Notay	Amaranthaceae	LC[2]	Fd, M
142	*Celosia argentea* L.	Sada morog phul	Amaranthaceae	LC[2]	Fd, M
143	*Chenopodium album* L.	Batua shak	Amaranthaceae	Nk	Fd, M
144	*Cyathula prostrata* Blume	Harualudi	Amaranthaceae	NE[2, 5]	M
145	*Allium cepa* L.	Piyaz	Amaryllidaceae	LC[1]	Fd, M
146	*Crinum asiaticum L.*	Pindari	Amaryllidaceae	LC[4]	M
147	*Anethum graveolens* L.	Sowa, Salpha	Apiaceae	LC[2]	Fd, M
148	*Carum carvi* L.	Jira	Apiaceae	Nk	M
149	*Centella asiatica* (L.) Urb.	Thankuni	Apiaceae	LC[2]	Fd, M
150	*Coriandrum sativum* L.	Dhaniya	Apiaceae	LC[2]	Fd, M
151	*Eryngium foetidum* L.	Belati dhania	Apiaceae	NE[2, 5]	Fd, M
152	*Catharanthus roseus* (L.) G.Don	Nayantara	Apocynaceae	LC[2]	M, N
153	*Alocasia macrorrhizos* (L.) G. Don	Mankachu	Araceae	LC[1]	Fd, M, N
154	*Colocasia esculenta* (L.) Schott	Kachu	Araceae	LC[1]	Fd, M
155	*Cyrtosperma johnstonii* N.E.Br.	Johnstoni Kachu	Araceae	Nk	M
156	*Dieffenbachia seguine* Schott	Dora kachu	Araceae	LC[1, 5]	M, N
157	*Lasia spinosa* (L.) Thwaites	Kanta-kachu	Araceae	LC[1]	Fd, M
158	*Lemna perpusilla* Torr.	Khudi pana	Araceae	LC[1]	N
159	*Hydrocotyle sibthorpioides* Lam.	Khulkuri	Araliaceae	LC[2]	Fd, M
160	*Dracaena trifasciata* (Prain) Mabb.	Sapgach	Asparagaceae	NE[1]	M, N
161	*Acmella calva* (DC.) R.K.Jansen	Surjo Kannya	Asteraceae	LC[2]	M
162	*Acmella uliginosa* Cass.	Bon-Genda	Asteraceae	Nk	M
163	**Ageratum conyzoides* Hieron.	Fulkuri	Asteraceae	LC[2]	M, N
164	*Blumea axillaris* DC.	Nilmoni	Asteraceae	Nk	M
165	*Blumea lacera* (Burm.f.) DC.	Baro Kukshim	Asteraceae	LC[2]	Fd, M
166	*Blumea sinuata* (Lour.) Merr.	Gorujhibba	Asteraceae	LC[2]	M
167	*Crassocephalum crepidioides* S.Moore	Dubbei shak	Asteraceae	LC[2, 5]	M
168	*Eclipta prostrata* (L.) L.	Kesaraj	Asteraceae	LC[2]	M
169	*Enhydra fluctuans* Lour.	Helencha	Asteraceae	LC[2]	Fd, M
170	*Helichrysum luteoalbum* (L.) Rchb.	Bara Kamra	Asteraceae	LC[2]	M
171	*Pseudelephantopus spicatus* (B.Juss. ex Aubl.) Rohr ex C.F.Baker	Kukur Jihba	Asteraceae	NE[2]	M
172	*Sphaeranthus indicus* L.	Murmuri	Asteraceae	LC[2]	M

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173	**Synedrella nodiflora* Gaertn.	Nakful	Asteraceae	LC[2, 5]	M
174	*Tagetes erecta* L.	Ganda	Asteraceae	LC[2]	M, N
175	*Xanthium strumarium* L.	Ghagra	Asteraceae	LC[2]	M
176	*Heliotropium indicum* L.	Hatisur	Boraginaceae	LC[2]	M
177	*Brassica cauliflora* Lgars.	Phulkapi	Brassicaceae	LC[2]	Fd, M
178	*Brassica nigra* W.D.J.Koch	Kalo Sarisha	Brassicaceae	LC[2]	Fd, M
179	*Raphanus raphanistrum* subsp. sativus (L.) Domin	Mula	Brassicaceae	LC[2]	Fd, M
180	*Ananas comosus* (L.) Merr.	Anarash	Bromeliaceae	LC[1]	Fd, M, N
181	*Cleome rutidosperma* DC.	Begune hurhurey	Capparaceae	LC[2]	Fd, M
182	*Cleome viscosa* L.	Halde hurhuria	Capparaceae	LC[2]	M
183	*Commelina diffusa* Burm.f.	Manaina	Commelinaceae	LC[1]	Fd, M
184	**Evolvulus nummularius* (L.) L.	Bhuiokra	Convolvulaceae	LC[2]	M
185	*Bryophyllum pinnatum* (Lam.) Oken	Pathorkuchi	Crassulaceae	LC[2]	M
186	*Cyperus iria* L.	Chagal dari, Barachchucha	Cyperaceae	LC[1]	M, N
187	*Kyllinga* microcephala Steud.	Gothubi	Cyperaceae	LC[1]	Fd
188	*Equisetum ramosissimum* Desf.	Bash-Ghas	Equisetaceae	LC[1]	M
189	**Croton bonplandianus* Baill.	Ban Mircha	Euphorbiaceae	LC[2]	M
190	*Euphorbia heterophylla* L.	Agni pata	Euphorbiaceae	NE[2]	Fd, M
191	*Euphorbia thymifolia* L.	Dudhia	Euphorbiaceae	LC[2]	M
192	*Crotalaria pallida* Aiton	Jhunjhuna	Fabaceae	LC[3]	Fd, N
193	*Grona triflora* (L.) H.Ohashi & K.Ohashi	Kalaliya	Fabaceae	LC[3]	M
194	**Mimosa pudica* L.	Lajjabati	Mimosaceae	LC[3]	M, N
195	*Vigna unguiculata* (L.) Walp.	Barbati	Fabaceae	LC[3]	Fd, M
196	*Leucas aspera* Link	Shetodron, Dondokolosh	Lamiaceae	LC[3]	Fd, M
197	*Mentha spicata* L.	Deshi pudina	Lamiaceae	LC[3]	Fd, M
198	*Ocimum tenuiflorum* L.	Kalo tulsi, Tulsi	Lamiaceae	LC[3]	Fd, M
199	*Coleus scutellarioides* (L.) Benth.	Pathor-chur, Patabahar	Lamiaceae	LC[3]	N
200	*Bonnaya antipoda* (L.) Druce	Sada pani ghas	Linderniaceae	LC[3]	M
201	*Lindernia rotundifolia* (L.) Alston	Tan chapra	Linderniaceae	NE[3]	N
202	*Torenia crustacea* (L.) Cham. & Schltdl.	Chapra ghas	Linderniaceae	LC[3]	M
203	*Ammannia baccifera* L.	Dadmari	Lythraceae	LC[3]	M
204	*Abelmoschus esculentus* Moench	Dheros	Malvaceae	LC[3]	Fd, M, N
205	*Abelmoschus moschatus* Medik.	Kalo Kasturi	Malvaceae	LC[3]	M, N
206	*Corchorus capsularis* L.	Sada pat	Tiliaceae	LC[3, 5]	M, N
207	*Hibiscus sabdariffa* L.	Mesta pat	Malvaceae	NE[3]	Fd, M, N
208	*Melochia corchorifolia* L.	Tikiokra	Malvaceae	Nk	M
209	*Pentapetes phoenicea* L.	Dupurmoni	Malvaceae	Nk	M
210	*Sida cordata* (Burm.f.) Borss.Waalk.	Pit barela	Malvaceae	LC[3, 5]	M
211	*Sida acuta* Burm.f.	Urusia	Malvaceae	LC[3, 5]	M, N
212	*Sida rhombifolia* L.	Lal berela	Malvaceae	LC[3]	M
213	*Osbeckia chinensis* L.	Choigachi	Melastomataceae	NE[3]	M
214	*Glinus oppositifolius* Aug.DC.	Gemashak	Molluginaceae	LC[3]	M, N
215	*Musa paradisiaca* L.	Kola	Musaceae	LC[1]	Fd, M, N
216	*Mirabilis jalapa* L.	Krishnakali	Nyctaginaceae	LC[3]	M

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217	**Ludwigia adscendens* (L.) H.Hara	Malcha	Onagraceae	LC[3]	M
218	*Ludwigia hyssopifolia* (G.Don) Exell	Bhui Shak	Onagraceae	LC[3, 5]	M
219	*Ludwigia octovalvis* (Jacq.) P.H.Raven	Bhuikura	Onagraceae	LC[3]	M
220	*Oxalis corniculata* L.	Amrul	Oxalidaceae	LC[3]	Fd, M
221	*Oxalis corymbosa* DC	Golapi Amrul	Oxalidaceae	LC[3]	N
222	*Pandanus amaryllifolius* Roxb.	Polao pata	Pandanaceae	NE[2]	M, N
223	*Phyllanthus amarus* Schumach. & Thonn.	Bhui amla	Phyllanthaceae	LC[2]	M
224	*Phyllanthus niruri* L.	Bhuiamla	Euphorbiaceae	LC[2]	M
225	*Phyllanthus urinaria* L.	Hazarmani	Euphorbiaceae	LC[2]	M, N
226	*Phyllanthus virgatus* G.Forst.	Khudi Amla	Euphorbiaceae	LC[2]	M
227	*Piper longum* L.	Pipul	Piperaceae	LC[4]	Fd, M
228	*Adenosma indianum* (Lour.) Merr.	Bon ghashiya	Plantaginaceae	LC[3]	M
229	*Bacopa monnieri* (L.) Wettst.	Brammi	Plantaginaceae	LC[3]	M
230	*Mecardonia procumbens* (Mill.) Small	Mikardan	Plantaginaceae	NE[3]	M
231	*Scoparia dulcis* L.	Bondhone	Plantaginaceae	LC[3]	M
232	*Chrysopogon zizanioides* (L.) Roberty	Bena	Poaceae	LC[2]	M, N
233	*Cynodon dactylon* (L.) Pers.	Durba Ghas	Poaceae	LC[2]	Fd, M, N
234	*Digitaria ischaemum* (Schreb.) Muhl.	Khude angulighas	Panicoideae	NE[2]	Fd
235	*Echinochloa colona* (L.) Link	Shama Ghas	Panicoideae	LC[2]	Fd, M
236	*Echinochloa crus-galli* (L.) P.Beauv.	Dalghash	Panicoideae	LC[2]	Fd, M
237	**Imperata cylindrica* (L.) P.Beauv.	Chhan	Poaceae	LC[2]	M, N
238	*Oplismenus burmanni* (Retz.) P.Beauv.	Jabri Durba	Poaceae	LC[2, 5]	Fd
239	*Oryza sativa* L.	Dhan	Poaceae	CD[2]	Fd, M, N
240	*Phragmites karka* (Retz.) Trin. ex Steud.	Nalkhagra	Poaceae	LC[2]	Fd, M, N
241	*Saccharum officinarum* L.	Akh	Poaceae	CD[2]	Fd, M, N
242	*Thysanolaena latifolia* Honda	Phuljharu	Poaceae	LC[2]	Fd, M, N
243	*Zea mays* L.	Bhutta	Poaceae	CD[2]	Fd, M, N
244	*Ampelygonum chinense* (L.) Lindl.	Mohicharan Shak	Polygonaceae	LC[3]	Fd, M
245	*Persicaria glabra* (Willd.) M.Gómez	Lal kukri	Polygonaceae	LC[3]	M
246	*Persicaria hydropiper* (L.) Delarbre	Bishkatali	Polygonaceae	LC[3]	M, N
247	*Persicaria orientalis* (L.) Spach	Bara Panimorich	Polygonaceae	LC[3]	M, N
248	*Polygonum plebeium* R.Br.	Khudi-Bishkatali	Polygonaceae	LC[3]	Fd, M, N
249	*Monochoria hastata* L.	Baranukha	Pontederiaceae	LC[2]	Fd
250	*Portulaca grandiflora* Hook.	Portulaca	Portulacaceae	LC[3, 5]	N
251	*Portulaca oleracea* L.	Lunia Shak	Portulacaceae	LC[3]	Fd, M
252	*Oldenlandia corymbosa* L.	Khet papra	Rubiaceae	LC[3]	Fd, M
253	*Physalis minima* L.	Buntepuria	Solanaceae	NE[3]	Fd, M
254	*Solanum americanum* Mill.	Tit Begun	Solanaceae	LC[3]	Fd, M
255	*Solanum lycopersicum* L.	Tomato	Solanaceae	LC[3]	Fd, M

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256	*Solanum melongena* L.	Begun	Solanaceae	LC[3]	Fd, M, N
257	*Solanum nigrum* Acerbi ex Dunal	Kakmachi	Solanaceae	NE[3]	Fd, M
258	*Solanum tuberosum* L.	Gol alu	Solanaceae	LC[3]	Fd
259	*Sphenoclea zeylanica* Gaertn.	Jhil Morich	Sphenocleaceae	LC[3]	Fd, M
260	*Typha elephantina* Roxb.	Hogla	Typhaceae	LC[2]	Fd, N
261	*Lantana trifolia* L.	Tinpata Lantana	Verbenaceae	LC[3]	Fd, N
262	*Alpinia nigra* (Gaertn.) B.L.Burtt	Tara	Zingiberaceae	LC[2]	Fd, M
263	*Curcuma longa* L.	Holud	Zingiberaceae	LC[2]	Fd, M, N
264	*Hellenia speciosa* (J.Koenig) Govaerts	Kewmul/Khustha	Zingiberaceae	LC[1]	Fd, M
Bamboos					
265	*Bambusa vulgaris* Schrad. ex J.C.Wendl.	Baijja bans	Poaceae	LC[2]	Fd, N, T
266	*Melocanna baccifera* Kurz	Paiya bans	Poaceae	LC[4]	Fd, N, T
Aquatic Herbs					
267	*Acorus calamus* L.	Boch	Acoraceae	VU[1]	M
268	*Cryptocoryne ciliata* Fisch. ex Schott	Kerali	Araceae	LC[1]	M
269	*Pistia stratiotes* L.	Topapana	Araceae	LC[1]	Fd, M
270	*Ipomoea aquatica* Forssk.	Kalmi shak	Convolvulaceae	LC[2]	Fd, M
271	*Ipomoea batatas* (L.) Lam.	Ranga aloo	Convolvulaceae	LC[2]	Fd, M
272	*Nymphoides hydrophylla* (Lour.) Kuntze	Chandmala	Gentianaceae	LC[3, 5]	Fd
273	*Passiflora foetida* L.	Jhumka lata	Passifloraceae	LC[3]	Fd, M, N
274	**Eichhornia crassipes* (Mart.) Solms	Kachuripana	Pontederiaceae	LC[2]	Fd, M, N
Twiners					
275	**Mikania cordata* (Burm.f.) B.L.Rob.	Assamlata	Asteraceae	LC[2]	Fd, M
276	*Dioscorea bulbifera* L.	Pagla alu	Dioscoreaceae	LC[1]	Fd, M
277	*Clitoria ternatea* L.	Nil aparajita	Fabaceae	LC[3]	M
278	*Lablab purpureus* (L.) Sweet	Sheem	Fabaceae	LC[3]	Fd, M
279	*Psophocarpus tetragonolobus* (L.) DC.	Kamranga sheem	Fabaceae	LC[3]	Fd
280	*Ipomoea quamoclit* L.	Kunjolata	Convolvulaceae	LC[2]	M
281	*Merremia gemella* (Choisy) Hallier f.	Nil kalmi	Convolvulaceae	LC[2]	M
282	*Merremia hederacea* (Burm.f.) Hallier f.	Kaladana	Convolvulaceae	LC[2]	M
Climbers					
283	*Calamus tenuis* Roxb.	Jali Bet	Arecaceae	LC[1]	Fd, N, T
284	*Basella alba* L.	Pui shak	Basellaceae	LC	Fd, M
285	*Camonea umbellata* (L.) A.R.Simões & Staples	Sada kalmi	Convolvulaceae	LC[2]	Fd
286	*Camonea vitifolia* (Burm.f.) A.R.Simões & Staples	Kormolata	Convolvulaceae	LC[2]	M
287	*Cucumis sativus* L.	Khira	Cucurbitaceae	LC[2]	Fd, M
288	*Cucurbita maxima* Duchesne	Mistikumra	Cucurbitaceae	LC[2]	Fd, M
289	*Lagenaria siceraria* (Molina) Standl.	Lau	Cucurbitaceae	LC[2]	Fd, M, N
290	*Luffa acutangula* Roxb.	Jhinga	Cucurbitaceae	LC[2]	Fd, M
291	*Luffa cylindrica* (L.) M. Roem.	Dhundul	Cucurbitaceae	LC[2]	Fd, M, N

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292	*Momordica charantia* L.	Tita korolla	Cucurbitaceae	LC[2]	Fd, M
293	*Momordica dioica* Roxb. ex Willd.	Dhar korolla	Cucurbitaceae	LC[2]	Fd, M
294	*Trichosanthes dioica* Roxb.	Potol	Cucurbitaceae	LC[2]	Fd, M
295	*Phaseolus vulgaris* L.	Farash sheem	Fabaceae	LC[3]	Fd
296	*Cyclea barbata* Miers	Patalpur	Menispermaceae	NT[3]	M
297	*Stephania rotunda* Lour.	Thanda Manik	Menispermaceae	VU[3]	M
298	*Cardiospermum halicacabum* L.	Phutka	Sapindaceae	LC[3]	Fd, M
299	*Smilax perfoliata* Lour.	Kumarilata	Smilacaceae	LC[2]	Fd, M
300	*Smilax zeylanica* L.	Lonica-lata	Smilacaceae	Nk	M
301	*Tetrastigma angustifolium* Planch.	Nekung Riubi	Vitaceae	CD[3]	Fd
Lianas					
302	*Derris scandens* (Roxb.) Benth.	Noalata, Amkurchi	Fabaceae	LC[4]	M, N
303	*Entada rheedii* Spreng.	Gila lata	Fabaceae	LC[4]	M, N
304	*Stephania japonica* (Thunb.) Miers	Akundi	Menispermaceae	LC[3]	M
305	*Jasminum attenuatum* Roxb. & G.Don	Attenu Jui	Oleaceae	VU[3, 5]	N
Pteridophytes					
306	*Diplazium esculentum* (Retz.) Sw.	Dhekia	Dryopteridaceae	LC[1]	Fd, M
307	*Stenochlaena palustris* (Burm.) Bedd.	Lata dhekia	Stenochlaenaceae	LC[1]	Fd, M
308	*Lygodium altum* Alderw.	Lata dhekia	Lygodiaceae	NT[1]	N
309	*Lygodium flexuosum* (L.) Sw.	Lata Dhekia	Lygodiaceae	LC[1]	M, N
310	*Lygodium japonicum* (Thunb.) Sw.	Japanilata fern	Lygodiaceae	LC[1, 5]	M, N
311	*Lygodium microphyllum* (Cav.) R.Br.	Patilata fern	Lygodiaceae	LC[1, 5]	Fd, M, N
312	*Marsilea quadrifolia* L.	Sushni Shak	Marsileaceae	LC[1]	Fd, M
313	*Adiantum incisum* Forssk.	Khara pakha	Pteridaceae	NT[1]	M, N
314	*Adiantum latifolium* Lam.	Bara pakha	Pteridaceae	NT[1]	N
315	*Pteris biaurita* L.	Dhekia	Pteridaceae	LC[1]	M
316	*Pteris ensiformis* Burm.	Dhekia	Pteridaceae	LC[1]	Fd, M, N
317	*Pteris vittata* L.	Dhekia	Pteridaceae	LC[1]	N
Epiphytes					
318	*Pothos scandens* L.	Hatilata	Araceae	VU[1]	M
319	*Syngonium podophyllum* Schott	Podo Lata Kachu	Araceae	LC[1, 5]	M, N
320	*Aerides odorata* Lour.	Sukhphul	Orchidaceae	CD[2, 5]	M, N
321	*Drynaria quercifolia* (L.) J.Sm.	Pankhiraj	Polypodiaceae	LC[1]	M
322	*Microsorum punctatum* Copel.	Gucha Patra	Polypodiaceae	LC[1]	M
323	*Haplopteris elongata* (Sw.) E.H.Crane	Lomba ghashi fern	Pteridaceae	LC[1]	M
Parasites					
324	*Macrosolen cochinchinensis* Lour.) Tiegh.	Renda	Loranthaceae	LC[3]	N

*****Bangladesh National Herbarium & IUCN, 2024. [1]Ahmed et al. (2007), [2]Ahmed et al. (2008), [3]Ahmed et al. (2009), [4]IUCN Bangladesh (2024), [5]Huq (2019).

5. Conclusion

The present study reveals that the Boalia tributary supports a flourishing and diverse riparian vegetation, comprising a total of 324 plant species across 91 families, despite being

exposed to substantial human-induced pressures. The presence of 13 invasive alien plant species poses potential risks to the native flora of the tributary and underscores the imperative of focused management. The insights of this study demonstrate the ecological significance of this tributary and serve as a crucial baseline for future studies on riparian ecosystems. Continuous monitoring and integrated conservation measures will be vital to protect the floral diversity and ecological integrity of the area.

Author's Contribution: Mohammad Nur Ali (MNA): Conceptualization, Methodology formulation, Data Collection, Species Identification, Writing, Original draft preparation, and Editing. Sudipta Sen Gupta (SSG): Methodology formulation, Data collection, Curation, Species Identification, Formal analysis and visualization, and Editing. Chinmoy Sarkar Anik (CSA): Data collection and curation, Formal analysis, Manuscript Drafting. Gemechu Jebeso Morketo (GJM): Map Generation, Manuscript Drafting, Mohammad Wasif Mursalin Sadnan (MWMS): Data collection and curation. Samarshwar Sinha (SS): Data collection, Curation, Manuscript Editing. Israt Jahan Rensy (IJR): Data collection and curation. Mohammad Kamal Hossain (MKH): Species Verification, Supervision, Editing, and Reviewing.

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Received: 16 July 2025
Accepted: 5 August 2025