

Mahato et al., 2027. Seasonal diversity and community structure of wetland macrophytes in two monsoon-influenced lakes in eastern India. *Limnetica*, 46(1), 2027

SUPPLEMENTARY INFORMATION

Table S1. Macrophyte species composition and characteristics in Bundu and Ratu Lakes.
Composición y características de las macrófitas en los lagos Bundu y Ratu

S.No	Scientific Name	Family	GF	PT	LS	Bundu Lake	Ratu Lake
1	<i>Acmella paniculata</i> (Wall. ex DC.) R.K.Jansen	Asteraceae	E	D	A	+	.
2	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Amaranthaceae	E	D	P	+	+
3	<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	E	D	P	+	+
4	<i>Ammannia verticillata</i> (Ard.) Lam.	Lythraceae	E	D	A	.	+
5	<i>Aponogeton natans</i> (L.) Engl. & K.Krause	Aponogetonaceae	RFL	M	P	.	+
6	<i>Aponogeton undulatus</i> Roxb.	Aponogetonaceae	S	M	P	.	+
7	<i>Azolla pinnata</i> R.Br.	Salviniaceae	FF	F	P	+	+
8	<i>Blyxa aubertii</i> Rich.	Hydrocharitaceae	S	M	A	.	+
9	<i>Bonnaya antipoda</i> (L.) Druce	Linderniaceae	E	D	A	+	.
10	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	E	D	P	.	+
11	<i>Ceratophyllum demersum</i> L.	Ceratophyllaceae	S	D	P	+	.
12	<i>Ceratophyllum submersum</i> L.	Ceratophyllaceae	S	D	P	.	+
13	<i>Ceratopteris thalictroides</i> (L.) Brongn.	Pteridaceae	E	F	P	.	+
14	<i>Chara fibrosa</i> C. Agardh ex Bruzelius	Characeae	S	MA	P	.	+
15	<i>Chara globularis</i> Thuill	Characeae	S	MA	P	.	+
16	<i>Commelina benghalensis</i> L.	Commelinaceae	E	M	A	+	.
17	<i>Cyperus compressus</i> L.	Cyperaceae	E	M	A	+	+
18	<i>Cyperus difformis</i> L.	Cyperaceae	E	M	A	+	+
19	<i>Cyperus esculentus</i> L.	Cyperaceae	E	M	P	.	+
20	<i>Cyperus exaltatus</i> Retz.	Cyperaceae	E	M	P	+	.
21	<i>Cyperus flavescens</i> L.	Cyperaceae	E	M	A	.	+
22	<i>Cyperus iria</i> L.	Cyperaceae	E	M	A	+	+
23	<i>Cyperus melanospermus</i> (Nees) Valck.Sur.	Cyperaceae	E	M	P	+	+
24	<i>Cyperus polystachyos</i> Rottb.	Cyperaceae	E	M	P	+	.
25	<i>Cyperus rotundus</i> L.	Cyperaceae	E	M	P	+	+

26	<i>Dentella repens</i> (L.) J.R.Forst. & G.Forst.	Rubiaceae	E	D	P	+	+
27	<i>Echinochloa colona</i> (L.) Link	Poaceae	E	M	A	+	+
28	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	E	D	A	+	+
29	<i>Eleocharis acutangula</i> (Roxb.) Schult.	Cyperaceae	E	M	P	.	+
30	<i>Enydra fluctuans</i> Lour.	Asteraceae	E	D	A	.	+
31	<i>Eriocaulon quinqueangulare</i> L.	Eriocaulaceae	E	M	A	.	+
32	<i>Fimbristylis aestivalis</i> (Retz.) Vahl	Cyperaceae	E	M	A	+	.
33	<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani	Cyperaceae	E	M	A	+	.
34	<i>Fuirena ciliaris</i> (L.) Roxb.	Cyperaceae	E	M	P	+	+
35	<i>Grangea maderaspatana</i> (L.) Desf.	Asteraceae	E	D	A	.	+
36	<i>Hydrilla verticillata</i> (L.f.) Royle	Hydrocharitaceae	S	M	P	+	+
37	<i>Hygrophila polysperma</i> (Roxb.) T.Anderson	Acanthaceae	S	D	P	.	+
38	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	RFL	D	P	+	+
39	<i>Ipomoea carnea</i> Jacq.	Convolvulaceae	E	D	P	+	+
40	<i>Leersia hexandra</i> Sw.	Poaceae	E	M	P	+	+
41	<i>Lemna perpusilla</i> Torr.	Araceae	FF	M	P	+	+
42	<i>Limnophila heterophylla</i> (Roxb.) Benth.	Plantaginaceae	E	D	P	.	+
43	<i>Limnophila indica</i> (L.) Druce	Plantaginaceae	S	D	A	.	+
44	<i>Limnophila sessiliflora</i> (Vahl) Blume	Plantaginaceae	S	D	P	.	+
45	<i>Lindernia parviflora</i> (Roxb.) Haines	Linderniaceae	E	D	A	+	.
46	<i>Lobelia alsinoides</i> Lam.	Campanulaceae	E	D	A	+	+
47	<i>Louisiella paludosa</i> (Roxb.) Landge	Poaceae	E	M	P	.	+
48	<i>Ludwigia adscendens</i> (L.) H.Hara	Onagraceae	RFL	D	P	+	+
49	<i>Ludwigia perennis</i> L.	Onagraceae	E	D	A	+	+
50	<i>Ludwigia prostrata</i> Roxb.	Onagraceae	E	D	A	.	+
51	<i>Marsilea minuta</i> L.	Marsileaceae	E	F	P	+	+
52	<i>Murdannia nudiflora</i> (L.) Brenan	Commelinaceae	E	M	A	+	.
53	<i>Murdannia vaginata</i> (L.) G.Brückn.	Commelinaceae	E	M	A	+	.
54	<i>Najas minor</i> All.	Hydrocharitaceae	S	M	A	+	+
55	<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	RFL	D	P	+	+
56	<i>Nitella mucronata</i> (A.Braun) Miq.	Characeae	S	MA	P	.	+
57	<i>Nitella sonderi</i> A.Braun	Characeae	S	MA	P	.	+
58	<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	RFL	D	P	+	+
59	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	RFL	D	P	+	+
60	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	Menyanthaceae	RFL	D	P	+	+
61	<i>Oldenlandia corymbosa</i> L.	Rubiaceae	E	D	A	+	+
62	<i>Oryza rufipogon</i> Griff.	Poaceae	E	M	A	.	+
63	<i>Ottelia alismoides</i> (L.) Pers.	Hydrocharitaceae	S	M	A	+	+

64	<i>Panicum repens</i> L.	Poaceae	E	M	P	+	+
65	<i>Paspalum distichum</i> L.	Poaceae	E	M	P	.	+
66	<i>Paspalum scrobiculatum</i> L.	Poaceae	E	M	A	.	+
67	<i>Persicaria glabra</i> (Willd.) M.Gómez	Polygonaceae	E	D	A	.	+
68	<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	E	D	P	+	+
69	<i>Pistia stratiotes</i> L.	Araceae	FF	M	P	+	.
70	<i>Pontederia crassipes</i> Mart.	Pontederiaceae	FF	M	P	+	+
71	<i>Pontederia vaginalis</i> Burm.f.	Pontederiaceae	E	M	A	.	+
72	<i>Potamogeton crispus</i> L.	Potamogetonaceae	S	M	P	.	+
73	<i>Potamogeton nodosus</i> Poir.	Potamogetonaceae	S	M	P	.	+
74	<i>Pouzolzia zeylanica</i> (L.) Benn.	Urticaceae	E	D	P	.	+
75	<i>Rotala rotundifolia</i> (Buch.-Ham. ex Roxb.) Koehne	Lythraceae	E	D	P	.	+
76	<i>Scleromitron brachypodum</i> (DC.) T.C.Hsu	Rubiaceae	E	D	A	+	+
77	<i>Setaria flavida</i> (Retz.) Veldkamp	Poaceae	E	M	A	.	+
78	<i>Setaria geminata</i> (Forssk.) Veldkamp	Poaceae	E	M	P	+	.
79	<i>Sphaeranthus indicus</i> L.	Asteraceae	E	D	A	+	.
80	<i>Spirodela polyrhiza</i> (L.) Schleid.	Araceae	FF	M	P	+	+
81	<i>Torenia anagallis</i> (Burm.f.) Wannan et al.	Linderniaceae	E	D	A	+	.
82	<i>Torenia crustacea</i> (L.) Cham. & Schldl.	Linderniaceae	E	D	A	+	+
83	<i>Trapa natans</i> var. <i>bispinosa</i> (Roxb.) Makino	Lythraceae	RFL	D	A	+	.
84	<i>Utricularia aurea</i> Lour.	Lentibulariaceae	S	D	P	+	.
85	<i>Utricularia inflexa</i> Forssk.	Lentibulariaceae	S	D	P	.	+
86	<i>Utricularia stellaris</i> L.f.	Lentibulariaceae	S	D	P	+	+
87	<i>Vallisneria spiralis</i> L.	Hydrocharitaceae	S	M	P	.	+

Abbreviations: **GF:** Growth Form (E = Emergent, S = Submerged, FF = Free Floating, RFL = Rooted Floating-leaved); **PT:** Plant Type (D = Dicot, M = Monocot, F = Fern, MA = Algae); **LS:** Life Span (A = Annual, P = Perennial); “+” = Present, (.) = Absent; **S1:** Supplementary Table 1.

Table S2. Seasonal composition of macrophytes in Bundu Lake across the pre-monsoon, monsoon, and post-monsoon seasons. *Composición estacional de macrófitas en el lago Bundu, durante las estaciones de pre-monzón, monzón, y post-monzón*

In the Pre-Monsoon Season									
S.No	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Amaranthaceae	E	D	P	7.14	64.29	11.11	19.50
2	<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	E	D	P	2.29	42.86	5.33	9.04
3	<i>Azolla pinnata</i> R.Br.	Salviniaceae	FF	F	A	7.07	64.29	11.00	19.36
4	<i>Ceratophyllum demersum</i> L.	Ceratophyllaceae	S	D	P	0.36	14.29	2.50	2.84
5	<i>Cyperus compressus</i> L.	Cyperaceae	E	M	A	2.14	21.43	10.00	9.01
6	<i>Cyperus difformis</i> L.	Cyperaceae	E	M	A	1.36	21.43	6.33	6.41
7	<i>Cyperus exaltatus</i> Retz.	Cyperaceae	E	M	P	1.29	21.43	6.00	6.18
8	<i>Cyperus melanospermus</i> (Nees) Valek.Sur.	Cyperaceae	E	M	P	0.79	21.43	3.67	4.53
9	<i>Cyperus polystachyos</i> Rottb.	Cyperaceae	E	M	P	1.21	21.43	5.67	5.94
10	<i>Cyperus rotundus</i> L.	Cyperaceae	E	M	P	1.14	21.43	5.33	5.71
11	<i>Echinochloa colona</i> (L.) Link	Poaceae	E	M	A	0.93	21.43	4.33	5.00
12	<i>Fimbristylis aestivalis</i> (Retz.) Vahl	Cyperaceae	E	M	A	1.21	21.43	5.67	5.94
13	<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani	Cyperaceae	E	M	A	1.79	35.71	5.00	7.64
14	<i>Fuirena ciliaris</i> (L.) Roxb.	Cyperaceae	E	M	P	1.43	35.71	4.00	6.75
15	<i>Hydrilla verticillata</i> (L.f.) Royle	Hydrocharitaceae	S	M	P	6.00	50.00	12.00	17.20
16	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	RFL	D	P	1.21	35.71	3.40	6.23
17	<i>Ipomoea carnea</i> Jacq.	Convolvulaceae	E	D	P	0.86	21.43	4.00	4.76
18	<i>Leersia hexandra</i> Sw.	Poaceae	E	M	P	2.14	28.57	7.50	8.54
19	<i>Lemna perpusilla</i> Torr.	Araceae	FF	M	P	7.07	64.29	11.00	19.36
20	<i>Ludwigia adscendens</i> (L.) H.Hara	Onagraceae	RFL	D	P	0.57	21.43	2.67	3.82
21	<i>Marsilea minuta</i> L.	Marsileaceae	E	F	P	1.00	14.29	7.00	5.63
22	<i>Najas minor</i> All.	Hydrocharitaceae	S	M	A	2.71	35.71	7.60	9.93
23	<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	RFL	D	P	0.50	21.43	2.33	3.59
24	<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	RFL	D	P	0.43	21.43	2.00	3.35
25	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	RFL	D	P	0.43	14.29	3.00	3.15
26	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	Menyanthaceae	RFL	D	P	0.86	21.43	4.00	4.76
27	<i>Panicum repens</i> L.	Poaceae	E	M	P	2.14	21.43	10.00	9.01
28	<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	E	D	P	1.29	21.43	6.00	6.18
29	<i>Pistia stratiotes</i> L.	Araceae	FF	M	P	3.71	42.86	8.67	12.27
30	<i>Pontederia crassipes</i> Mart.	Pontederiaceae	FF	M	P	7.86	64.29	12.22	20.87
31	<i>Scleromitron brachypodum</i> (DC.) T.C.Hsu	Rubiaceae	E	D	A	0.86	21.43	4.00	4.76
32	<i>Setaria geminata</i> (Forssk.) Veldkamp	Poaceae	E	M	P	0.86	21.43	4.00	4.76
33	<i>Spirodela polyrhiza</i> (L.) Schleid.	Araceae	FF	M	P	7.29	57.14	12.75	19.76
34	<i>Torenia anagallis</i> (Burm.f.) Wannan et al.	Linderniaceae	E	D	A	1.93	21.43	9.00	8.30
35	<i>Utricularia aurea</i> Lour.	Lentibulariaceae	S	D	P	0.79	28.57	2.75	4.77

36	<i>Utricularia stellaris</i> L.f.	Lentibulariaceae	S	D	P	0.93	28.57	3.25	5.16
In Monsoon Season									
S.No	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Acmella paniculata</i>	Asteraceae	E	D	A	1.50	28.57	5.25	4.19
2	<i>Alternanthera philoxeroides</i>	Amaranthaceae	E	D	P	9.93	71.43	13.90	15.33
3	<i>Alternanthera sessilis</i>	Amaranthaceae	E	D	P	5.00	64.29	7.78	9.48
4	<i>Azolla pinnata</i>	Salviniaceae	FF	F	A	4.93	42.86	11.50	9.35
5	<i>Bonnaya antipoda</i>	Linderniaceae	E	D	A	0.86	28.57	3.00	3.06
6	<i>Ceratophyllum demersum</i>	Ceratophyllaceae	S	D	P	1.71	28.57	6.00	4.57
7	<i>Commelina benghalensis</i>	Commelinaceae	E	M	A	2.71	28.57	9.50	6.33
8	<i>Cyperus compressus</i>	Cyperaceae	E	M	A	3.29	28.57	11.50	7.34
9	<i>Cyperus difformis</i>	Cyperaceae	E	M	A	2.29	28.57	8.00	5.58
10	<i>Cyperus exaltatus</i>	Cyperaceae	E	M	P	2.00	35.71	5.60	5.05
11	<i>Cyperus iria</i>	Cyperaceae	E	M	A	2.21	35.71	6.20	5.39
12	<i>Cyperus melanospermus</i>	Cyperaceae	E	M	P	3.07	42.86	7.17	6.70
13	<i>Cyperus polystachyos</i>	Cyperaceae	E	M	P	2.00	28.57	7.00	5.07
14	<i>Cyperus rotundus</i>	Cyperaceae	E	M	P	2.21	28.57	7.75	5.45
15	<i>Dentella repens</i>	Rubiaceae	E	D	P	1.29	28.57	4.50	3.81
16	<i>Echinochloa colona</i>	Poaceae	E	M	A	2.00	35.71	5.60	5.05
17	<i>Eclipta prostrata</i>	Asteraceae	E	D	A	2.00	42.86	4.67	5.17
18	<i>Fimbristylis aestivalis</i>	Cyperaceae	E	M	A	2.29	35.71	6.40	5.50
19	<i>Fimbristylis bisumbellata</i>	Cyperaceae	E	M	A	2.43	35.71	6.80	5.72
20	<i>Fuirena ciliaris</i>	Cyperaceae	E	M	A	3.07	35.71	8.60	6.73
21	<i>Hydrilla verticillata</i>	Hydrocharitaceae	S	M	P	7.29	64.29	11.33	12.22
22	<i>Ipomoea aquatica</i>	Convolvulaceae	RFL	D	P	2.29	50.00	4.57	5.74
23	<i>Ipomoea carnea</i>	Convolvulaceae	E	D	P	1.29	28.57	4.50	3.81
24	<i>Leersia hexandra</i>	Poaceae	E	M	P	3.43	42.86	8.00	7.21
25	<i>Lemna perpusilla</i>	Araceae	FF	M	P	4.93	42.86	11.50	9.35
26	<i>Lindernia parviflora</i>	Linderniaceae	E	D	A	1.36	28.57	4.75	3.94
27	<i>Ludwigia adscendens</i>	Onagraceae	RFL	D	P	1.00	35.71	2.80	3.49
28	<i>Ludwigia perennis</i>	Onagraceae	E	D	A	0.79	21.43	3.67	2.81
29	<i>Marsilea minuta</i>	Marsileaceae	E	F	P	1.57	28.57	5.50	4.32
30	<i>Murdannia nudiflora</i>	Commelinaceae	E	M	A	2.71	35.71	7.60	6.17
31	<i>Murdannia vaginata</i>	Commelinaceae	E	M	A	3.00	35.71	8.40	6.62
32	<i>Najas minor</i>	Hydrocharitaceae	S	M	A	2.14	28.57	7.50	5.33
33	<i>Nelumbo nucifera</i>	Nelumbonaceae	RFL	D	P	0.86	21.43	4.00	2.96
34	<i>Nymphaea nouchali</i>	Nymphaeaceae	RFL	D	P	0.71	21.43	3.33	2.66
35	<i>Nymphaea pubescens</i>	Nymphaeaceae	RFL	D	P	0.86	21.43	4.00	2.96
36	<i>Nymphoides hydrophyllum</i>	Menyanthaceae	RFL	D	P	1.57	28.57	5.50	4.32
37	<i>Oldenlandia corymbosa</i>	Rubiaceae	E	D	A	2.29	35.71	6.40	5.50
38	<i>Ottelia alismoides</i>	Hydrocharitaceae	S	M	A	0.71	21.43	3.33	2.66
39	<i>Panicum repens</i>	Poaceae	E	M	P	4.93	42.86	11.50	9.35
40	<i>Phyla nodiflora</i>	Verbenaceae	E	D	P	2.43	42.86	5.67	5.78
41	<i>Pistia stratiotes</i>	Araceae	FF	M	P	2.86	35.71	8.00	6.39
42	<i>Pontederia crassipes</i>	Pontederiaceae	FF	M	P	8.00	78.57	10.18	13.20
43	<i>Scleromitron brachypodium</i>	Rubiaceae	E	D	A	2.00	35.71	5.60	5.05
44	<i>Setaria geminata</i>	Poaceae	E	M	P	2.14	42.86	5.00	5.37
45	<i>Sphaeranthus indicus</i>	Asteraceae	E	D	A	1.14	28.57	4.00	3.56

46	<i>Spirodela polyrhiza</i>	Araceae	FF	M	P	4.43	42.86	10.33	8.63
47	<i>Torenia anagallis</i>	Linderniaceae	E	D	A	2.57	28.57	9.00	6.08
48	<i>Torenia crustacea</i>	Linderniaceae	E	D	A	2.71	28.57	9.50	6.33
49	<i>Trapa natans</i> var. <i>bispinosa</i>	Lythraceae	RFL	D	A	1.43	28.57	5.00	4.07
50	<i>Utricularia aurea</i>	Lentibulariaceae	S	D	P	1.71	42.86	4.00	4.76
51	<i>Utricularia stellaris</i>	Lentibulariaceae	S	D	P	1.50	42.86	3.50	4.46

In Post-Monsoon Season

S.No	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Acmella paniculata</i>	Asteraceae	E	D	A	0.79	21.43	3.67	3.42
2	<i>Alternanthera philoxeroides</i>	Amaranthaceae	E	D	P	8.36	57.14	14.63	16.57
3	<i>Alternanthera sessilis</i>	Amaranthaceae	E	D	P	4.14	50.00	8.29	10.04
4	<i>Azolla pinnata</i>	Salviniaceae	FF	F	A	6.57	50.00	13.14	13.93
5	<i>Bonnaya antipoda</i>	Linderniaceae	E	D	A	0.43	14.29	3.00	2.38
6	<i>Ceratophyllum demersum</i>	Ceratophyllaceae	S	D	P	2.71	42.86	6.33	7.57
7	<i>Commelina benghalensis</i>	Commelinaceae	E	M	A	1.50	21.43	7.00	5.21
8	<i>Cyperus compressus</i>	Cyperaceae	E	M	A	2.14	21.43	10.00	6.82
9	<i>Cyperus difformis</i>	Cyperaceae	E	M	A	2.07	21.43	9.67	6.64
10	<i>Cyperus exaltatus</i>	Cyperaceae	E	M	P	1.71	28.57	6.00	5.56
11	<i>Cyperus iria</i>	Cyperaceae	E	M	A	1.79	28.57	6.25	5.71
12	<i>Cyperus polystachyos</i>	Cyperaceae	E	M	P	2.29	42.86	5.33	6.83
13	<i>Cyperus rotundus</i>	Cyperaceae	E	M	P	1.57	21.43	7.33	5.39
14	<i>Echinochloa colona</i>	Poaceae	E	M	A	1.43	28.57	5.00	4.96
15	<i>Eclipta prostrata</i>	Asteraceae	E	D	A	0.86	28.57	3.00	3.75
16	<i>Fimbristylis aestivalis</i>	Cyperaceae	E	M	A	1.86	35.71	5.20	5.91
17	<i>Fimbristylis bisumbellata</i>	Cyperaceae	E	M	A	1.43	28.57	5.00	4.96
18	<i>Fuirena ciliaris</i>	Cyperaceae	E	M	P	2.71	42.86	6.33	7.57
19	<i>Hydrilla verticillata</i>	Hydrocharitaceae	S	M	P	6.93	64.29	10.78	14.43
20	<i>Ipomoea aquatica</i>	Convolvulaceae	RFL	D	P	1.57	42.86	3.67	5.61
21	<i>Ipomoea carnea</i>	Convolvulaceae	E	D	P	0.71	21.43	3.33	3.24
22	<i>Leersia hexandra</i>	Poaceae	E	M	P	2.79	35.71	7.80	7.64
23	<i>Lemna perpusilla</i>	Araceae	FF	M	P	6.71	50.00	13.43	14.16
24	<i>Lobelia alsinoides</i>	Campanulaceae	E	D	A	1.14	28.57	4.00	4.35
25	<i>Ludwigia adscendens</i>	Onagraceae	RFL	D	P	0.93	28.57	3.25	3.90
26	<i>Marsilea minuta</i>	Marsileaceae	E	F	P	2.00	28.57	7.00	6.16
27	<i>Najas minor</i>	Hydrocharitaceae	S	M	A	3.21	35.71	9.00	8.45
28	<i>Nelumbo nucifera</i>	Nelumbonaceae	RFL	D	P	0.57	14.29	4.00	2.85
29	<i>Nymphaea nouchali</i>	Nymphaeaceae	RFL	D	P	0.64	21.43	3.00	3.07
30	<i>Nymphaea pubescens</i>	Nymphaeaceae	RFL	D	P	0.93	21.43	4.33	3.78
31	<i>Nymphoides hydrophyllum</i>	Menyanthaceae	RFL	D	P	2.00	35.71	5.60	6.17
32	<i>Oldenlandia corymbosa</i>	Rubiaceae	E	D	A	1.43	28.57	5.00	4.96
33	<i>Ottelia alismoides</i>	Hydrocharitaceae	S	M	A	1.14	28.57	4.00	4.35
34	<i>Panicum repens</i>	Poaceae	E	M	P	4.36	35.71	12.20	10.59
35	<i>Phyla nodiflora</i>	Verbenaceae	E	D	P	2.07	28.57	7.25	6.31
36	<i>Pistia stratiotes</i>	Araceae	FF	M	P	2.29	35.71	6.40	6.71
37	<i>Pontederia crassipes</i>	Pontederiaceae	FF	M	P	7.29	57.14	12.75	14.94
38	<i>Scleromitron brachypodum</i>	Rubiaceae	E	D	A	1.43	28.57	5.00	4.96
39	<i>Setaria geminata</i>	Poaceae	E	M	A	1.57	35.71	4.40	5.37
40	<i>Sphaeranthus indicus</i>	Asteraceae	E	D	A	0.43	14.29	3.00	2.38
41	<i>Spirodela polyrhiza</i>	Araceae	FF	M	P	6.36	50.00	12.71	13.58

42	<i>Torenia crustacea</i>	Linderniaceae	E	D	A	1.29	21.43	6.00	4.68
43	<i>Trapa natans</i> var. <i>bispinosa</i>	Lythraceae	RFL	D	A	1.00	21.43	4.67	3.96
44	<i>Utricularia aurea</i>	Lentibulariaceae	S	D	P	1.36	35.71	3.80	4.97
45	<i>Utricularia stellaris</i>	Lentibulariaceae	S	D	P	1.50	35.71	4.20	5.24

Table S3. Seasonal composition of macrophytes in Ratu Maharaja Lake during the pre-monsoon, monsoon, and post-monsoon seasons. *Composición estacional de macrófitas en el lago Bundu, durante las estaciones de pre-monzón, monzón, y post-monzón*

In Pre-Monsoon Season									
Sl. No.	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Alternanthera philoxeroides</i>	Amaranthaceae	E	D	P	5.64	42.86	13.17	14.38
2	<i>Alternanthera sessilis</i>	Amaranthaceae	E	D	P	3.21	35.71	9.00	9.55
3	<i>Azolla pinnata</i>	Salviniaceae	FF	F	P	2.93	35.71	8.20	8.94
4	<i>Ceratophyllum submersum</i>	Ceratophyllaceae	S	D	P	1.29	28.57	4.50	5.20
5	<i>Chara fibrosa</i>	Characeae	S	M	P	1.14	14.29	8.00	5.11
6	<i>Chara globularis</i>	Characeae	S	M	P	1.00	14.29	7.00	4.61
7	<i>Cyperus compressus</i>	Cyperaceae	E	M	A	1.07	21.43	5.00	4.57
8	<i>Cyperus difformis</i>	Cyperaceae	E	M	A	1.71	28.57	6.00	6.21
9	<i>Cyperus esculentus</i>	Cyperaceae	E	M	P	1.93	28.57	6.75	6.72
10	<i>Cyperus melanospermus</i>	Cyperaceae	E	M	P	1.57	21.43	7.33	5.95
11	<i>Cyperus rotundus</i>	Cyperaceae	E	M	P	1.93	28.57	6.75	6.72
12	<i>Echinochloa colona</i>	Poaceae	E	M	A	1.50	21.43	7.00	5.75
13	<i>Eleocharis acutangula</i>	Cyperaceae	E	M	P	4.93	42.86	11.50	12.97
14	<i>Fuirena ciliaris</i>	Cyperaceae	E	M	A	2.21	28.57	7.75	7.39
15	<i>Grangea maderaspatana</i>	Asteraceae	E	D	A	0.64	14.29	4.50	3.35
16	<i>Hydrilla verticillata</i>	Hydrocharitaceae	S	M	P	4.43	42.86	10.33	11.99
17	<i>Ipomoea aquatica</i>	Convolvulaceae	E	D	P	0.79	21.43	3.67	3.78
18	<i>Ipomoea carnea</i>	Convolvulaceae	E	D	P	1.00	21.43	4.67	4.37
19	<i>Leersia hexandra</i>	Poaceae	E	M	P	2.29	28.57	8.00	7.56
20	<i>Lemna perpusilla</i>	Araceae	FF	M	A	2.86	28.57	10.00	8.91
21	<i>Limnophila heterophylla</i>	Plantaginaceae	E	D	P	2.29	28.57	8.00	7.56
22	<i>Limnophila indica</i>	Plantaginaceae	S	D	A	1.64	28.57	5.75	6.04
23	<i>Limnophila sessiliflora</i>	Plantaginaceae	S	D	P	1.36	21.43	6.33	5.36
24	<i>Louisiella paludosa</i>	Poaceae	E	M	P	1.14	21.43	5.33	4.77
25	<i>Ludwigia adscendens</i>	Onagraceae	RFL	D	P	0.71	21.43	3.33	3.59
26	<i>Marsilea minuta</i>	Marsileaceae	E	F	P	1.50	21.43	7.00	5.75
27	<i>Najas minor</i>	Hydrocharitaceae	S	M	A	1.29	21.43	6.00	5.16
28	<i>Nelumbo nucifera</i>	Nelumbonaceae	RFL	D	P	2.07	35.71	5.80	7.11
29	<i>Nitella sonderi</i>	Characeae	S	M	P	1.29	28.57	4.50	5.20
30	<i>Nymphaea nouchali</i>	Nymphaeaceae	RFL	D	P	1.36	28.57	4.75	5.37
31	<i>Nymphaea pubescens</i>	Nymphaeaceae	RFL	D	P	2.50	35.71	7.00	8.03
32	<i>Nymphoides hydrophyllum</i>	Menyanthaceae	RFL	D	A	2.50	42.86	5.83	8.18
33	<i>Ottelia alismoides</i>	Hydrocharitaceae	S	M	A	0.71	21.43	3.33	3.59
34	<i>Panicum repens</i>	Poaceae	E	M	P	1.07	28.57	3.75	4.69
35	<i>Paspalum distichum</i>	Poaceae	E	M	P	1.00	28.57	3.50	4.53
36	<i>Paspalum scrobiculatum</i>	Poaceae	E	M	A	0.50	14.29	3.50	2.85
37	<i>Phyla nodiflora</i>	Verbenaceae	E	D	P	1.07	21.43	5.00	4.57

38	<i>Pontederia crassipes</i>	Pontederiaceae	FF	M	P	0.50	14.29	3.50	2.85
39	<i>Pontederia vaginalis</i>	Pontederiaceae	E	M	A	0.50	21.43	2.33	3.00
40	<i>Potamogeton crispus</i>	Potamogetonaceae	S	M	P	2.50	42.86	5.83	8.18
41	<i>Pouzolzia zeylanica</i>	Urticaceae	E	D	P	0.71	21.43	3.33	3.59
42	<i>Potamogeton nodosus</i>	Potamogetonaceae	S	M	P	1.00	14.29	7.00	4.61
43	<i>Rotala rotundifolia</i>	Lythraceae	E	D	P	1.64	21.43	7.67	6.14
44	<i>Scleromitron brachypodum</i>	Rubiaceae	E	D	A	1.21	28.57	4.25	5.03
45	<i>Setaria flavida</i>	Poaceae	E	M	A	1.14	28.57	4.00	4.86
46	<i>Spirodela polyrhiza</i>	Araceae	FF	M	P	2.79	28.57	9.75	8.74
47	<i>Torenia crustacea</i>	Linderniaceae	E	D	A	0.93	21.43	4.33	4.18
48	<i>Utricularia inflexa</i>	Lentibulariaceae	S	D	P	0.79	28.57	2.75	4.02
49	<i>Utricularia stellaris</i>	Lentibulariaceae	S	D	P	0.71	28.57	2.50	3.85
50	<i>Vallisneria spiralis</i>	Hydrocharitaceae	S	M	P	1.07	21.43	5.00	4.57

In Monsoon Season

Sl.No	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Alternanthera philoxeroides (Mart.) Griseb.</i>	Amaranthaceae	E	D	P	8.64	57.14	15.13	11.90
2	<i>Alternanthera sessilis (L.) DC.</i>	Amaranthaceae	E	D	P	5.07	57.14	8.88	8.10
3	<i>Ammannia verticillata (Ard.) Lam.</i>	Lythraceae	E	D	A	1.29	28.57	4.50	3.22
4	<i>Aponogeton natans (L.) Engl. & K.Krause</i>	Aponogetonaceae	RFL	M	P	1.50	35.71	4.20	3.64
5	<i>Aponogeton undulatus Roxb.</i>	Aponogetonaceae	S	M	P	1.71	28.57	6.00	3.84
6	<i>Azolla pinnata R.Br.</i>	Salviniaceae	FF	F	P	3.71	35.71	10.40	6.50
7	<i>Blyxa aubertii Rich.</i>	Hydrocharitaceae	S	M	A	1.07	21.43	5.00	2.84
8	<i>Centella asiatica (L.) Urb.</i>	Apiaceae	E	D	P	2.64	28.57	9.25	5.18
9	<i>Ceratophyllum submersum L.</i>	Ceratophyllaceae	S	D	P	1.00	14.29	7.00	2.89
10	<i>Ceratopteris thalictroides (L.) Brongn.</i>	Pteridaceae	E	F	P	0.50	14.29	3.50	1.79
11	<i>Chara fibrosa C. Agardh ex Bruzelius</i>	Characeae	S	M A	P	1.57	21.43	7.33	3.69
12	<i>Chara globularis Thuill</i>	Characeae	S	M A	P	1.43	21.43	6.67	3.45
13	<i>Cyperus compressus L.</i>	Cyperaceae	E	M	A	2.64	35.71	7.40	5.11
14	<i>Cyperus difformis L.</i>	Cyperaceae	E	M	A	2.29	35.71	6.40	4.65
15	<i>Cyperus esculentus L.</i>	Cyperaceae	E	M	P	2.43	35.71	6.80	4.84
16	<i>Cyperus iria L.</i>	Cyperaceae	E	M	A	2.36	28.57	8.25	4.77
17	<i>Cyperus melanospermus (Nees) Valck.Sur.</i>	Cyperaceae	E	M	P	2.93	42.86	6.83	5.52
18	<i>Cyperus rotundus L.</i>	Cyperaceae	E	M	P	2.21	35.71	6.20	4.56
19	<i>Cyperus flavescens L.</i>	Cyperaceae	E	M	A	1.29	28.57	4.50	3.22
20	<i>Dentella repens (L.) J.R.Forst. & G.Forst.</i>	Rubiaceae	E	D	A	2.64	21.43	12.33	5.52
21	<i>Echinochloa colona (L.) Link</i>	Poaceae	E	M	A	2.57	35.71	7.20	5.02
22	<i>Eclipta prostrata (L.) L.</i>	Asteraceae	E	D	A	1.07	28.57	3.75	2.91
23	<i>Eleocharis acutangula (Roxb.) Schult.</i>	Cyperaceae	E	M	P	7.21	57.14	12.63	10.38
24	<i>Enydra fluctuans Lour.</i>	Asteraceae	E	D	A	2.43	21.43	11.33	5.16
25	<i>Eriocaulon quinquangulare L.</i>	Eriocaulaceae	E	M	A	1.21	21.43	5.67	3.09
26	<i>Fuirena ciliaris (L.) Roxb.</i>	Cyperaceae	E	M	A	3.07	42.86	7.17	5.69
27	<i>Grangea maderaspatana (L.) Desf.</i>	Asteraceae	E	D	A	1.14	21.43	5.33	2.96
28	<i>Hydrilla verticillata (L.f.) Royle</i>	Hydrocharitaceae	S	M	P	5.14	57.14	9.00	8.18
29	<i>Hygrophila polysperma (Roxb.) T.Anderson</i>	Acanthaceae	S	D	P	3.00	28.57	10.50	5.70
30	<i>Ipomoea aquatica Forssk.</i>	Convolvulaceae	E	D	P	1.29	28.57	4.50	3.22
31	<i>Ipomoea carnea Jacq.</i>	Convolvulaceae	E	D	P	0.86	21.43	4.00	2.48
32	<i>Leersia hexandra Sw.</i>	Poaceae	E	M	P	3.21	35.71	9.00	5.85
33	<i>Lemna perpusilla Torr.</i>	Araceae	FF	M	A	3.86	28.57	13.50	6.94

34	<i>Limnophila heterophylla</i> (Roxb.) Benth.	Plantaginaceae	S	D	P	1.57	21.43	7.33	3.69
35	<i>Limnophila indica</i> (L.) Druce	Plantaginaceae	S	D	A	1.29	28.57	4.50	3.22
36	<i>Limnophila sessiliflora</i> (Vahl) Blume	Plantaginaceae	S	D	P	1.50	28.57	5.25	3.53
37	<i>Lobelia alsinoides</i> Lam.	Campanulaceae	E	D	A	1.29	28.57	4.50	3.22
38	<i>Louisiella paludosa</i> (Roxb.) Landge	Poaceae	E	M	P	1.57	28.57	5.50	3.63
39	<i>Ludwigia adscendens</i> (L.) H.Hara	Onagraceae	RFL	D	P	1.29	28.57	4.50	3.22
40	<i>Ludwigia perennis</i> L.	Onagraceae	E	D	A	1.07	21.43	5.00	2.84
41	<i>Ludwigia prostrata</i> Roxb.	Onagraceae	E	D	A	0.64	14.29	4.50	2.10
42	<i>Marsilea minuta</i> L.	Marsileaceae	E	F	P	2.71	35.71	7.60	5.21
43	<i>Najas minor</i> All.	Hydrocharitaceae	S	M	A	1.79	28.57	6.25	3.94
44	<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	RFL	D	P	3.07	42.86	7.17	5.69
45	<i>Nitella mucronata</i> (A.Braun) Miq.	Characeae	S	M	P	1.14	21.43	5.33	2.96
46	<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	RFL	D	P	1.36	35.71	3.80	3.45
47	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	RFL	D	P	5.00	57.14	8.75	8.03
48	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	Menyanthaceae	RFL	D	A	2.79	42.86	6.50	5.35
49	<i>Oldenlandia corymbosa</i> L.	Rubiaceae	E	D	A	1.07	28.57	3.75	2.91
50	<i>Oryza rufipogon</i> Griff.	Poaceae	E	M	A	1.64	28.57	5.75	3.73
51	<i>Panicum repens</i> L.	Poaceae	E	M	P	2.64	42.86	6.17	5.18
52	<i>Paspalum distichum</i> L.	Poaceae	E	M	P	2.36	42.86	5.50	4.84
53	<i>Paspalum scrobiculatum</i> L.	Poaceae	E	M	A	1.57	28.57	5.50	3.63
54	<i>Persicaria glabra</i> (Willd.) M.Gómez	Polygonaceae	E	D	A	0.93	21.43	4.33	2.60
55	<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	E	D	P	2.00	35.71	5.60	4.28
56	<i>Pontederia crassipes</i> Mart.	Pontederiaceae	FF	M	P	1.21	21.43	5.67	3.09
57	<i>Pontederia vaginalis</i> Burm.f.	Pontederiaceae	E	M	A	1.36	28.57	4.75	3.32
58	<i>Potamogeton crispus</i> L.	Potamogetonaceae	S	M	P	1.21	21.43	5.67	3.09
59	<i>Potamogeton nodosus</i> Poir.	Potamogetonaceae	S	M	P	1.86	28.57	6.50	4.04
60	<i>Pouzolzia zeylanica</i> (L.) Benn.	Urticaceae	E	D	P	1.29	28.57	4.50	3.22
61	<i>Rotala rotundifolia</i> (Buch.-Ham. ex Roxb.) Koehne	Lythraceae	E	D	P	2.43	21.43	11.33	5.16
62	<i>Scleromitron brachypodum</i> (DC.) T.C.Hsu	Rubiaceae	E	D	A	1.50	28.57	5.25	3.53
63	<i>Setaria flavida</i> (Retz.) Veldkamp	Poaceae	E	M	A	1.93	28.57	6.75	4.15
64	<i>Spirodela polyrhiza</i> (L.) Schleid.	Araceae	FF	M	P	3.79	28.57	13.25	6.84
65	<i>Torenia crustacea</i> (L.) Cham. & Schldl.	Linderniaceae	E	D	A	1.57	28.57	5.50	3.63
66	<i>Utricularia inflexa</i> Forssk.	Lentibulariaceae	S	D	P	1.21	28.57	4.25	3.11
67	<i>Utricularia stellaris</i> L.f.	Lentibulariaceae	S	D	P	1.14	28.57	4.00	3.01
68	<i>Vallisneria spiralis</i> L.	Hydrocharitaceae	S	M	P	1.57	35.71	4.40	3.73

In Post-Monsoon Season

Sl.No	Scientific Name	Family	GF	PT	LS	Density	% Freq.	Abundance	IVI
1	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Amaranthaceae	E	D	P	8.00	57.14	14.00	12.43
2	<i>Alternanthera sessilis</i> (L.) DC.	Amaranthaceae	E	D	P	4.64	42.86	10.83	8.38
3	<i>Ammannia verticillata</i> (Ard.) Lam.	Lythraceae	E	D	A	1.07	21.43	5.00	3.14
4	<i>Aponogeton natans</i> (L.) Engl. & K.Krause	Aponogetonaceae	RFL	M	P	1.71	35.71	4.80	4.30
5	<i>Aponogeton undulatus</i> Roxb.	Aponogetonaceae	S	M	P	2.50	42.86	5.83	5.51
6	<i>Azolla pinnata</i> R.Br.	Salviniaceae	FF	F	P	3.21	28.57	11.25	6.68
7	<i>Blyxa aubertii</i> Rich.	Hydrocharitaceae	S	M	A	2.29	35.71	6.40	5.13
8	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	E	D	P	1.43	21.43	6.67	3.83
9	<i>Ceratophyllum submersum</i> L.	Ceratophyllaceae	S	D	P	2.07	42.86	4.83	4.94
10	<i>Ceratopteris thalictroides</i> (L.) Brongn.	Pteridaceae	E	F	P	0.50	14.29	3.50	1.97
11	<i>Chara fibrosa</i> C. Agardh ex Bruzelius	Characeae	S	M	P	1.86	28.57	6.50	4.47

12	<i>Chara globularis</i> Thuill	Characeae	S	M	P	1.43	28.57	5.00	3.77
13	<i>Cyperus compressus</i> L.	Cyperaceae	E	M	A	1.57	28.57	5.50	4.00
14	<i>Cyperus difformis</i> L.	Cyperaceae	E	M	A	1.14	14.29	8.00	3.58
15	<i>Cyperus esculentus</i> L.	Cyperaceae	E	M	P	1.64	28.57	5.75	4.12
16	<i>Cyperus iria</i> L.	Cyperaceae	E	M	A	2.36	35.71	6.60	5.23
17	<i>Cyperus rotundus</i> L.	Cyperaceae	E	M	P	1.43	21.43	6.67	3.83
18	<i>Cyperus flavescens</i> L.	Cyperaceae	E	M	A	1.21	21.43	5.67	3.41
19	<i>Echinochloa colona</i> (L.) Link	Poaceae	E	M	A	1.50	28.57	5.25	3.89
20	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	E	D	A	1.29	35.71	3.60	3.68
21	<i>Eleocharis acutangula</i> (Roxb.) Schult.	Cyperaceae	E	M	P	6.71	50.00	13.43	10.95
22	<i>Enydra fluctuans</i> Lour.	Asteraceae	E	D	A	1.79	28.57	6.25	4.35
23	<i>Eriocaulon quinquangulare</i> L.	Eriocaulaceae	E	M	A	1.43	21.43	6.67	3.83
24	<i>Fuirena ciliaris</i> (L.) Roxb.	Cyperaceae	E	M	A	1.21	21.43	5.67	3.41
25	<i>Hydrilla verticillata</i> (L.f.) Royle	Hydrocharitaceae	S	M	P	6.36	57.14	11.13	10.47
26	<i>Hygrophila polysperma</i> (Roxb.) T.Anderson	Acanthaceae	S	D	P	4.43	42.86	10.33	8.09
27	<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	E	D	P	1.00	21.43	4.67	3.00
28	<i>Ipomoea carnea</i> Jacq.	Convolvulaceae	E	D	P	1.21	21.43	5.67	3.41
29	<i>Leersia hexandra</i> Sw.	Poaceae	E	M	P	4.36	42.86	10.17	8.00
30	<i>Lemna perpusilla</i> Torr.	Araceae	FF	M	A	3.14	28.57	11.00	6.56
31	<i>Limnophila heterophylla</i> (Roxb.) Benth.	Plantaginaceae	E	D	P	2.29	42.86	5.33	5.22
32	<i>Limnophila indica</i> (L.) Druce	Plantaginaceae	S	D	P	2.00	35.71	5.60	4.71
33	<i>Limnophila sessiliflora</i> (Vahl) Blume	Plantaginaceae	S	D	P	0.93	21.43	4.33	2.87
34	<i>Lobelia alsinoides</i> Lam.	Campanulaceae	E	D	A	1.36	21.43	6.33	3.69
35	<i>Ludwigia adscendens</i> (L.) H.Hara	Onagraceae	RFL	D	P	1.07	35.71	3.00	3.36
36	<i>Ludwigia prostrata</i> Roxb.	Onagraceae	E	D	A	0.71	21.43	3.33	2.45
37	<i>Marsilea minuta</i> L.	Marsileaceae	E	F	P	1.86	28.57	6.50	4.47
38	<i>Najas minor</i> All.	Hydrocharitaceae	S	M	A	2.71	35.71	7.60	5.75
39	<i>Nelumbo nucifera</i> Gaertn.	Nelumbonaceae	RFL	D	P	2.71	35.71	7.60	5.75
40	<i>Nitella mucronata</i> (A.Braun) Miq.	Characeae	S	M	P	1.21	28.57	4.25	3.42
41	<i>Nitella sonderi</i> A.Braun	Characeae	S	M	P	1.29	28.57	4.50	3.54
42	<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	RFL	D	P	1.29	28.57	4.50	3.54
43	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	RFL	D	P	4.43	57.14	7.75	8.17
44	<i>Nymphoides hydrophyllum</i> (Lour.) Kuntze	Menyanthaceae	RFL	D	A	2.79	42.86	6.50	5.89
45	<i>Oldenlandia corymbosa</i> L.	Rubiaceae	E	D	A	1.21	28.57	4.25	3.42
46	<i>Oryza rufipogon</i> Griff.	Poaceae	E	M	A	1.86	28.57	6.50	4.47
47	<i>Ottelia alismoides</i> (L.) Pers.	Hydrocharitaceae	S	M	A	1.21	28.57	4.25	3.42
48	<i>Louisiella paludosa</i> (Roxb.) Landge	Poaceae	E	M	P	2.29	35.71	6.40	5.13
49	<i>Panicum repens</i> L.	Poaceae	E	M	P	2.21	35.71	6.20	5.03
50	<i>Paspalum distichum</i> L.	Poaceae	E	M	P	1.36	28.57	4.75	3.66
51	<i>Persicaria glabra</i> (Willd.) M.Gómez	Polygonaceae	E	D	A	1.07	21.43	5.00	3.14
52	<i>Phyla nodiflora</i> (L.) Greene	Verbenaceae	E	D	P	1.07	28.57	3.75	3.19
53	<i>Pontederia crassipes</i> Mart.	Pontederiaceae	FF	M	P	1.29	28.57	4.50	3.54
54	<i>Pontederia vaginalis</i> Burm.f.	Pontederiaceae	E	M	A	1.00	28.57	3.50	3.07
55	<i>Potamogeton crispus</i> L.	Potamogetonaceae	S	M	P	2.64	42.86	6.17	5.70
56	<i>Potamogeton nodosus</i> Poir.	Potamogetonaceae	S	M	P	1.71	21.43	8.00	4.37
57	<i>Pouzolzia zeylanica</i> (L.) Benn.	Urticaceae	E	D	P	1.07	28.57	3.75	3.19
58	<i>Rotala rotundifolia</i> (Buch.-Ham. ex Roxb.) Koehne	Lythraceae	E	D	P	2.71	21.43	12.67	6.29
59	<i>Scleromitron brachypodum</i> (DC.) T.C.Hsu	Rubiaceae	E	D	A	1.00	21.43	4.67	3.00

60	<i>Spirodela polyrhiza</i> (L.) Schleid.	Araceae	FF	M	P	3.07	28.57	10.75	6.45
61	<i>Utricularia inflexa</i> Forssk.	Lentibulariaceae	S	D	P	1.57	42.86	3.67	4.27
62	<i>Utricularia stellaris</i> L.f.	Lentibulariaceae	S	D	P	1.43	35.71	4.00	3.88
63	<i>Vallisneria spiralis</i> L.	Hydrocharitaceae	S	M	P	1.29	28.57	4.50	3.54

Table S4. Top 5 dominant (by IVI) and rare (IVI < 5) macrophyte species in Bundu Lake and Ratu Maharaja Lake across seasons. Species listed with authority; only the top 5 dominants are shown per season. *Las 5 especies de macrófitas dominantes (por IVI) y raras (IVI < 5) en el lago Bundu y el lago Ratu Maharaja a lo largo de las estaciones. Especies enumeradas con autoridad; solo se muestran las 5 especies dominantes por estación.*

Lake	Season	Dominant Species (Top 5, IVI%)	Rare Species (IVI%)
Bundu Lake	Pre-Monsoon	<i>Pontederia crassipes</i> Mart. (20.87), <i>Spirodela polyrhiza</i> (L.) Schleid. (19.76), <i>Alternanthera philoxeroides</i> (Mart.) Griseb. (19.50), <i>Azolla pinnata</i> R.Br. (19.36), <i>Lemna perpusilla</i> Torr. (19.36)	<i>Ceratophyllum demersum</i> L. (2.84), <i>Nymphaea pubescens</i> Willd. (3.15), <i>Nymphaea nouchali</i> Burmf. (3.35), <i>Nelumbo nucifera</i> Gaertn. (3.59), <i>Ludwigia adscendens</i> (L.) H.Hara (3.82)
	Monsoon	<i>Alternanthera philoxeroides</i> (Mart.) Griseb. (15.33), <i>Pontederia crassipes</i> Mart. (13.20), <i>Hydrilla verticillata</i> (L.f.) Royle (12.22), <i>Alternanthera sessilis</i> (L.) DC. (9.48), <i>Azolla pinnata</i> R.Br. (9.35),	<i>Nymphaea nouchali</i> Burmf. (2.66), <i>Ottelia alismoides</i> (L.) Pers. (2.66), <i>Ludwigia perennis</i> L. (2.81), <i>Nelumbo nucifera</i> Gaertn. (2.96), <i>Nymphaea pubescens</i> Willd. (2.96)
	Post-Monsoon	<i>Alternanthera philoxeroides</i> (Mart.) Griseb. (16.57), <i>Pontederia crassipes</i> Mart. (14.94), <i>Hydrilla verticillata</i> (L.f.) Royle (14.43), <i>Lemna perpusilla</i> Torr. (14.16), <i>Azolla pinnata</i> R.Br. (13.93)	<i>Bonnaya antipoda</i> (L.) Druce (2.38), <i>Sphaeranthus indicus</i> L. (2.38), <i>Nelumbo nucifera</i> Gaertn. (2.85), <i>Nymphaea nouchali</i> Burmf. (3.07), <i>Ipomoea carnea</i> Jacq. (3.24)
Ratu Lake	Pre-Monsoon	<i>Alternanthera philoxeroides</i> (Mart.) Griseb. (14.38), <i>Eleocharis acutangula</i> (Roxb.) Schult. (12.97), <i>Hydrilla verticillata</i> (L.f.) Royle (11.99), <i>Alternanthera sessilis</i> (L.) DC. (9.55), <i>Azolla pinnata</i> R.Br. (8.94),	<i>Paspalum scrobiculatum</i> L. (2.85), <i>Pontederia crassipes</i> Mart. (2.85), <i>Pontederia vaginalis</i> Burmf. (3.00), <i>Grangea maderaspatana</i> (L.) Desf. (3.35)
	Monsoon	<i>Alternanthera philoxeroides</i> (Mart.) Griseb. (11.90), <i>Eleocharis acutangula</i> (Roxb.) Schult. (10.38), <i>Hydrilla verticillata</i> (L.f.) Royle (8.18), <i>Alternanthera sessilis</i> (L.) DC. (8.10), <i>Nymphaea pubescens</i> Willd. (8.03)	<i>Ceratopteris thalictroides</i> (L.) Brongn. (1.79), <i>Ludwigia prostrata</i> Roxb. (2.10), <i>Ipomoea carnea</i> Jacq. (2.48), <i>Persicaria glabra</i> (Willd.) M.Gómez (2.60)
	Post-Monsoon	<i>Alternanthera philoxeroides</i> (Mart.) Griseb. (12.43), <i>Eleocharis acutangula</i> (Roxb.) Schult. (10.95), <i>Hydrilla verticillata</i> (L.f.) Royle (10.47), <i>Alternanthera sessilis</i> (L.) DC. (8.38), <i>Nymphaea pubescens</i> Willd. (8.17)	<i>Ceratopteris thalictroides</i> (L.) Brongn. (1.97), <i>Ludwigia prostrata</i> Roxb. (2.45), <i>Limnophila sessiliflora</i> (Vahl) Blume (2.87), <i>Ipomoea aquatica</i> Forssk. (3.00), <i>Scleromitron brachypodium</i> (DC.) T.C. Hsu (3.00), <i>Pontederia vaginalis</i> Burmf. (3.07)

Table S5. Non-metric multidimensional scaling (NMDS) ordination scores (NMDS1, NMDS2, NMDS3) of macrophyte species in Bundu Lake across the pre-monsoon, monsoon and post-monsoon seasons. The table presents species positions in three-dimensional NMDS space and identifies their dominant season of occurrence, reflecting seasonal variation in community composition. *Escalamiento multidimensional no métrico (NMDS) ordenación (NMDS1, NMDS2, NMDS3) de especies de macrófitas en el lago Bundu durante las estaciones pre-monzónica, monzónica y post-monzónica. La tabla presenta las posiciones de las especies en el espacio NMDS tridimensional e identifica su estación dominante de aparición, lo que refleja la variación estacional en la composición de la comunidad.*

Scientific_Name	NMDS1	NMDS2	NMDS3	Dominant Season
<i>Acemella paniculata</i>	-0.44348603	-0.00616887	-0.18587581	Monsoon
<i>Alternanthera philoxeroides</i>	0.81193445	0.03893011	-0.16972685	Post monsoon
<i>Alternanthera sessilis</i>	0.30215462	-0.0203047	-0.00010802	Post monsoon
<i>Azolla pinnata</i>	0.74046813	0.01399697	-0.11778344	Post monsoon
<i>Bonnaya antipoda</i>	-0.74269622	-0.2417422	-0.12557242	Monsoon
<i>Ceratophyllum demersum</i>	-0.01387373	-0.12730589	-0.08456225	Post monsoon
<i>Commelina benghalensis</i>	0.10290133	0.13937204	-0.41674428	Monsoon
<i>Cyperus compressus</i>	0.6441393	0.04571826	-0.04161727	Monsoon
<i>Cyperus difformis</i>	0.40977452	-0.02443398	0.00602704	Post monsoon
<i>Cyperus exaltatus</i>	0.15726004	-0.13157514	0.12630641	Pre monsoon
<i>Cyperus iria</i>	-0.13108318	-0.00876588	-0.32966198	Post monsoon
<i>Cyperus melanospermus</i>	-0.03664858	0.47033551	0.38409705	Monsoon
<i>Cyperus polystachyos</i>	0.15405145	-0.00561594	0.12831587	Monsoon
<i>Cyperus rotundus</i>	0.25601551	0.00634827	0.03141682	Monsoon
<i>Dentella repens</i>	-0.79064299	0.57192403	0.03398093	Monsoon
<i>Echinochloa colona</i>	-0.00992997	-0.10695703	0.13344353	Monsoon
<i>Eclipta prostrata</i>	-0.57460562	0.01779804	-0.1196263	Monsoon
<i>Fimbristylis aestivalis</i>	0.12349875	-0.04617173	0.1455959	Monsoon
<i>Fimbristylis bisumbellata</i>	0.08585374	-0.00588509	0.13053744	Monsoon
<i>Fuirena ciliaris</i>	0.16677467	0.06120498	-0.04264587	Monsoon
<i>Hydrilla verticillata</i>	0.71417888	0.011172	-0.05500316	Pre monsoon
<i>Ipomoea aquatica</i>	-0.22663591	-0.14993119	0.22426533	Monsoon
<i>Ipomoea carnea</i>	-0.19558397	-0.12043485	0.29077104	Monsoon
<i>Leersia hexandra</i>	0.38334546	0.0255515	0.06994759	Monsoon
<i>Lemna perpusilla</i>	0.74497523	0.01467837	-0.12137312	Post monsoon
<i>Lindernia parviflora</i>	-0.74432773	0.58609465	0.00427969	Monsoon
<i>Lobelia alsinoides</i>	-0.56551295	-0.91056974	-0.47428634	Post monsoon
<i>Ludwigia adscendens</i>	-0.37548184	-0.39977196	0.29153158	Post monsoon
<i>Ludwigia perennis</i>	-0.95099991	0.52273877	0.09353909	Monsoon
<i>Marsilea minuta</i>	0.26208033	-0.16795973	0.12736696	Pre monsoon
<i>Murdannia nudiflora</i>	-0.27920206	0.76332244	-0.14374935	Monsoon
<i>Murdannia vaginata</i>	-0.20511439	0.78676457	-0.20140926	Monsoon
<i>Najas minor</i>	0.42222773	-0.02520662	0.06601153	Post monsoon
<i>Nelumbo nucifera</i>	-0.32021708	-0.25295832	0.12957831	Monsoon
<i>Nymphaea nouchali</i>	-0.48753826	-0.28425471	0.2212943	Monsoon
<i>Nymphaea pubescens</i>	-0.22800318	-0.25773433	0.15864257	Post monsoon
<i>Nymphoides hydrophyllum</i>	0.0059229	-0.13406784	0.10044808	Post monsoon
<i>Oldenlandia corymbosa</i>	-0.21539022	0.04266987	-0.26966293	Monsoon
<i>Ottelia alismoides</i>	-0.56177941	-0.27327729	-0.18888296	Post monsoon

<i>Panicum repens</i>	0.70002253	0.04301805	-0.07431468	Post monsoon
<i>Phyla nodiflora</i>	0.22254435	-0.15553077	0.08189327	Post monsoon
<i>Pistia stratiotes</i>	0.37290232	0.07752261	0.11849968	Pre monsoon
<i>Pontederia crassipes</i>	0.73295524	-0.03590794	-0.10883473	Post monsoon
<i>Scleromitrium brachypodium</i>	-0.03170391	-0.1071762	0.12327428	Monsoon
<i>Setaria geminata</i>	-0.10167476	-0.13428373	0.18214843	Monsoon
<i>Sphaeranthus indicus</i>	-0.64498978	-0.07398893	-0.09131335	Monsoon
<i>Spirodela polyrhiza</i>	0.74642848	-0.04197435	-0.10285192	Pre monsoon
<i>Torenia anagallis</i>	0.45605188	0.49054419	0.31109638	Pre monsoon
<i>Torenia crustacea</i>	0.04215251	0.14720551	-0.40476017	Monsoon
<i>Trapa natans var bispinosa</i>	-0.36038739	-0.06911947	-0.23237717	Monsoon
<i>Utricularia aurea</i>	-0.29918237	-0.2364147	0.18444293	Monsoon
<i>Utricularia stellaris</i>	-0.22392294	-0.32142163	0.20399158	Post monsoon

Table S6. Non-metric multidimensional scaling (NMDS) ordination scores (NMDS1, NMDS2, NMDS3) of macrophyte species in Ratu Maharaja Lake across pre-monsoon, monsoon, and post-monsoon seasons. The table shows the spatial positions of species in three-dimensional NMDS space and identifies their dominant season of occurrence, reflecting seasonal variation in community composition. *Escalamiento multidimensional no métrico (NMDS) ordenación (NMDS1, NMDS2, NMDS3) de especies de macrófitas en el lago Ratu Maharaja durante las estaciones pre-monzónica, monzónica y post-monzónica. La tabla presenta las posiciones de las especies en el espacio NMDS tridimensional e identifica su estación dominante de aparición, lo que refleja la variación estacional en la composición de la comunidad.*

Scientific_Name	NMDS1	NMDS2	NMDS3	Dominant Season
<i>Alternanthera philoxeroides</i>	-0.83122923	0.21233441	-0.05336312	Monsoon
<i>Alternanthera sessilis</i>	-0.53576949	0.05642275	-0.10411257	Post monsoon
<i>Ammannia verticillata</i>	0.42588987	0.26998127	-0.10311409	Post monsoon
<i>Aponogeton natans</i>	0.47140532	0.25668859	-0.12731895	Post monsoon
<i>Aponogeton undulatus</i>	0.21675113	0.34987019	-0.02469403	Monsoon
<i>Azolla pinnata</i>	-0.55997861	0.11367819	-0.07283024	Post monsoon
<i>Blyxa aubertii</i>	0.2573734	0.36268941	-0.11857931	Post monsoon
<i>Centella asiatica</i>	-0.05102895	0.49818494	0.02713954	Monsoon
<i>Ceratophyllum submersum</i>	-0.01740186	-0.13454868	0.06220115	Monsoon
<i>Ceratopteris thalictroides</i>	0.7005167	0.20237062	-0.08320927	Monsoon
<i>Chara fibrosa</i>	-0.29622287	-0.07551693	-0.016096	Pre monsoon
<i>Chara globularis</i>	-0.16141849	-0.17899969	0.00598296	Pre monsoon
<i>Cyperus compressus</i>	-0.09430643	-0.08910457	0.03280351	Monsoon
<i>Cyperus difformis</i>	-0.21219556	-0.06399267	-0.1445082	Post monsoon
<i>Cyperus esculentus</i>	-0.17720303	-0.12590029	-0.02073689	Monsoon
<i>Cyperus flavescens</i>	0.36028454	0.31534479	-0.13964754	Post monsoon
<i>Cyperus iria</i>	0.00356986	0.45953583	0.002292	Monsoon
<i>Cyperus melanospermus</i>	-0.34382718	-0.41399598	0.40685154	Pre monsoon
<i>Cyperus rotundus</i>	-0.18306963	-0.09988321	-0.0890448	Pre monsoon
<i>Dentella repens</i>	-0.21734101	0.54987936	0.81248406	Monsoon
<i>Echinochloa colona</i>	-0.19959001	-0.14392024	0.0140257	Monsoon
<i>Eclipta prostrata</i>	0.65772908	0.20384047	-0.06086224	Monsoon
<i>Eleocharis acutangula</i>	-0.74627911	0.1662659	-0.05008688	Post monsoon

<i>Enydra fluctuans</i>	-0.11164678	0.55214806	0.12316784	Monsoon
<i>Eriocaulon quinquangulare</i>	0.1798909	0.37906173	-0.08985374	Post monsoon
<i>Fuirena ciliaris</i>	-0.25149309	-0.12605808	0.00888652	Pre monsoon
<i>Grangea maderaspatana</i>	0.05698424	-0.47242655	0.47869245	Monsoon
<i>Hydrilla verticillata</i>	-0.5875574	0.06255246	-0.13679764	Post monsoon
<i>Hygrophila polysperma</i>	-0.29392033	0.59317636	-0.0294387	Monsoon
<i>Ipomoea aquatica</i>	0.23687528	-0.17685259	-0.06592287	Post monsoon
<i>Ipomoea carnea</i>	0.10520613	-0.18556547	-0.19040089	Post monsoon
<i>Leersia hexandra</i>	-0.48341042	0.04685581	-0.0769088	Post monsoon
<i>Lemna perpusilla</i>	-0.6778015	0.1566415	0.00115423	Monsoon
<i>Limnophila heterophylla</i>	-0.26466564	-0.1401063	0.0300426	Pre monsoon
<i>Limnophila indica</i>	0.00885441	-0.18327005	-0.1525446	Pre monsoon
<i>Limnophila sessiliflora</i>	-0.01193889	-0.26107457	-0.0394784	Pre monsoon
<i>Lobelia alsinoides</i>	0.30742697	0.34982732	-0.16561168	Post monsoon
<i>Louisiella paludosa</i>	-0.04413385	-0.10102598	-0.10052832	Post monsoon
<i>Ludwigia adscendens</i>	0.35139042	-0.26995499	0.0902517	Monsoon
<i>Ludwigia perennis</i>	0.57558444	0.17473962	0.74196326	Monsoon
<i>Ludwigia prostrata</i>	0.58866818	0.21809839	0.05953595	Monsoon
<i>Marsilea minuta</i>	-0.25422701	-0.05599769	-0.01875527	Monsoon
<i>Najas minor</i>	-0.18435974	-0.07029354	-0.1396269	Post monsoon
<i>Nelumbo nucifera</i>	-0.22282548	-0.03425918	-0.08602612	Post monsoon
<i>Nitella mucronata</i>	0.41970236	0.25338848	0.04797006	Monsoon
<i>Nitella sonderi</i>	0.11473441	-0.59068703	-0.5254532	Pre monsoon
<i>Nymphaea nouchali</i>	0.18060611	-0.28443437	-0.14254991	Pre monsoon
<i>Nymphaea pubescens</i>	-0.35283452	0.00024677	-0.06532184	Monsoon
<i>Nymphoides hydrophyllum</i>	-0.13585477	-0.07760775	-0.0697864	Monsoon
<i>Oldenlandia corymbosa</i>	0.57514426	0.22274402	-0.1550407	Post monsoon
<i>Oryza rufipogon</i>	0.18670529	0.37172567	-0.07461318	Post monsoon
<i>Ottelia alismoides</i>	0.29672517	-0.5559483	-0.59470404	Post monsoon
<i>Panicum repens</i>	0.01610562	-0.01930041	-0.0210452	Post monsoon
<i>Paspalum distichum</i>	0.1656098	-0.12669837	0.0238785	Monsoon
<i>Paspalum scrobiculatum</i>	0.14348458	-0.39859859	0.54956352	Monsoon
<i>Persicaria glabra</i>	0.43949855	0.27252443	-0.11763684	Post monsoon
<i>Phyla nodiflora</i>	0.08467646	-0.25276326	0.05367952	Monsoon
<i>Pontederia crassipes</i>	0.16804427	-0.14002841	0.04384088	Monsoon
<i>Pontederia vaginalis</i>	0.40644616	-0.12631173	0.09001743	Monsoon
<i>Potamogeton crispus</i>	-0.07583964	-0.11403879	-0.09304388	Post monsoon
<i>Potamogeton nodosus</i>	-0.27553639	-0.07409156	-0.12020899	Post monsoon
<i>Pouzolzia zeylanica</i>	0.32110394	-0.21705291	0.00823368	Monsoon
<i>Rotala rotundifolia</i>	-0.60269287	0.15896503	-0.08838373	Post monsoon
<i>Scleromitrium brachypodium</i>	0.13188366	-0.18427725	-0.00655947	Monsoon
<i>Setaria flavida</i>	-0.05199869	-0.35621823	0.5513666	Monsoon
<i>Spirodela polyrhiza</i>	-0.66016406	0.15218918	0.00282328	Monsoon
<i>Torenia crustacea</i>	0.05786645	-0.45459391	0.49155797	Monsoon
<i>Utricularia inflexa</i>	0.40148873	-0.19184382	-0.01153561	Monsoon
<i>Utricularia stellaris</i>	0.4184085	-0.16335859	-0.08353295	Monsoon
<i>Vallisneria spiralis</i>	0.13712736	-0.25137101	-0.09089247	Pre monsoon

Table S7. Seasonal rank reversal status of macrophytes in Bundu and Ratu Lakes across the seasons.
Estado de inversión estacional del rango de las macrófitas en los lagos Bundu y Ratu a lo largo de las estaciones

Lakes	Scientific Name	Pre-monsoon-rank	Monsoon-rank	Post monsoon-rank	Rank Reversal
Bundu Lake	<i>Spirodela polyrhiza</i>	1	7	5	TRUE
Bundu Lake	<i>Pontederia crassipes</i>	2	8	4	TRUE
Bundu Lake	<i>Alternanthera philoxeroides</i>	4	1	1	TRUE
Bundu Lake	<i>Azolla pinnata</i>	5	2	3	TRUE
Bundu Lake	<i>Lemna perpusilla</i>	6	4	2	TRUE
Bundu Lake	<i>Cyperus compressus</i>	7	3	8	TRUE
Bundu Lake	<i>Panicum repens</i>	8	5	6	TRUE
Bundu Lake	<i>Najas minor</i>	11	20	10	TRUE
Bundu Lake	<i>Leersia hexandra</i>	12	15	12	TRUE
Bundu Lake	<i>Marsilea minuta</i>	13	32	16	TRUE
Bundu Lake	<i>Cyperus difformis</i>	14	14	9	TRUE
Bundu Lake	<i>Cyperus exaltatus</i>	15	29	21	TRUE
Bundu Lake	<i>Phyla nodiflora</i>	16	28	14	TRUE
Bundu Lake	<i>Alternanthera sessilis</i>	19	17	11	TRUE
Bundu Lake	<i>Cyperus rotundus</i>	20	18	13	TRUE
Bundu Lake	<i>Echinochloa colona</i>	22	30	26	TRUE
Bundu Lake	<i>Fuirena ciliaris</i>	23	12	19	TRUE
Bundu Lake	<i>Ipomoea carnea</i>	24	41	40	TRUE
Bundu Lake	<i>Nymphoides hydrophyllum</i>	25	33	23	TRUE
Bundu Lake	<i>Scleromitron brachypodium</i>	26	31	29	TRUE
Bundu Lake	<i>Setaria geminata</i>	27	35	31	TRUE
Bundu Lake	<i>Cyperus melanospermus</i>	28	21		TRUE
Bundu Lake	<i>Utricularia stellaris</i>	30	47	33	TRUE
Bundu Lake	<i>Nymphaea pubescens</i>	31	43	32	TRUE
Bundu Lake	<i>Utricularia aurea</i>	32	45	37	TRUE
Bundu Lake	<i>Ludwigia adscendens</i>	33	51	41	TRUE
Bundu Lake	<i>Ceratophyllum demersum</i>	34	27	18	TRUE
Bundu Lake	<i>Nelumbo nucifera</i>	35	42	35	TRUE
Bundu Lake	<i>Nymphaea nouchali</i>	36	48	44	TRUE
Bundu Lake	<i>Cyperus iria</i>		26	20	TRUE
Bundu Lake	<i>Trapa natans var. bispinosa</i>		36	30	TRUE
Bundu Lake	<i>Ottelia alismoides</i>		49	36	TRUE
Bundu Lake	<i>Bonnaya antipoda</i>		50	42	TRUE
Ratu Lake	<i>Eleocharis acutangula</i>	2	4	2	TRUE
Ratu Lake	<i>Hydrilla verticillata</i>	3	11	5	TRUE
Ratu Lake	<i>Lemna perpusilla</i>	4	2	6	TRUE
Ratu Lake	<i>Spirodela polyrhiza</i>	5	3	8	TRUE
Ratu Lake	<i>Alternanthera sessilis</i>	6	13	7	TRUE
Ratu Lake	<i>Azolla pinnata</i>	7	9	4	TRUE
Ratu Lake	<i>Leersia hexandra</i>	9	12	10	TRUE
Ratu Lake	<i>Rotala rotundifolia</i>	12	7	3	TRUE
Ratu Lake	<i>Nymphaea pubescens</i>	17	14	13	TRUE
Ratu Lake	<i>Potamogeton nodosus</i>	18	29	12	TRUE

Ratu Lake	<i>Cyperus rotundus</i>	20	32	17	TRUE
Ratu Lake	<i>Cyperus difformis</i>	22	30	11	TRUE
Ratu Lake	<i>Najas minor</i>	23	31	14	TRUE
Ratu Lake	<i>Nymphoides hydrophyllum</i>	24	28	22	TRUE
Ratu Lake	<i>Potamogeton crispus</i>	25	38	29	TRUE
Ratu Lake	<i>Nelumbo nucifera</i>	26	22	15	TRUE
Ratu Lake	<i>Limnophila indica</i>	27	54	35	TRUE
Ratu Lake	<i>Louisiella paludosa</i>	28	40	25	TRUE
Ratu Lake	<i>Cyperus compressus</i>	29	17	36	TRUE
Ratu Lake	<i>Vallisneria spiralis</i>	31	59	50	TRUE
Ratu Lake	<i>Nymphaea nouchali</i>	32	65	48	TRUE
Ratu Lake	<i>Ipomoea carnea</i>	33	63	34	TRUE
Ratu Lake	<i>Ceratophyllum submersum</i>	34	23	42	TRUE
Ratu Lake	<i>Scleromitron brachypodum</i>	38	47	46	TRUE
Ratu Lake	<i>Setaria flavida</i>	39	26		TRUE
Ratu Lake	<i>Panicum repens</i>	40	33	28	TRUE
Ratu Lake	<i>Ipomoea aquatica</i>	41	53	45	TRUE
Ratu Lake	<i>Paspalum distichum</i>	42	41	44	TRUE
Ratu Lake	<i>Paspalum scrobiculatum</i>	43	42		TRUE
Ratu Lake	<i>Pontederia crassipes</i>	44	37	49	TRUE
Ratu Lake	<i>Pouzolzia zeylanica</i>	47	58	57	TRUE
Ratu Lake	<i>Utricularia inflexa</i>	48	61	58	TRUE
Ratu Lake	<i>Utricularia stellaris</i>	49	64	55	TRUE
Ratu Lake	<i>Aponogeton undulatus</i>		34	30	TRUE
Ratu Lake	<i>Oryza rufipogon</i>		35	23	TRUE
Ratu Lake	<i>Eriocaulon quinquangulare</i>		36	18	TRUE
Ratu Lake	<i>Blyxa aubertii</i>		48	24	TRUE
Ratu Lake	<i>Ammannia verticillata</i>		51	39	TRUE
Ratu Lake	<i>Cyperus flavescens</i>		52	32	TRUE
Ratu Lake	<i>Lobelia alsinoides</i>		55	26	TRUE
Ratu Lake	<i>Persicaria glabra</i>		60	41	TRUE
Ratu Lake	<i>Aponogeton natans</i>		62	43	TRUE
Ratu Lake	<i>Eclipta prostrata</i>		66	59	TRUE
Ratu Lake	<i>Oldenlandia corymbosa</i>		67	53	TRUE
Ratu Lake	<i>Ceratopteris thalictroides</i>		68	60	TRUE

Table S8. Seasonal rank consistency of macrophytes in Bundu and Ratu Lakes. *Consistencia estacional del rango de las macrófitas en los lagos Bundu y Ratu*

Lakes	Scientific Name	Pre monsoon	Monsoon	Post monsoon	Mean Rank	Rank SD	Rank Consistency
Bundu Lake	<i>Acmella paniculata</i>		34	38	36	2.82842712	0.261203875
Bundu Lake	<i>Alternanthera philoxeroides</i>	4	1	1	2	1.73205081	0.366025404
Bundu Lake	<i>Alternanthera sessilis</i>	19	17	11	15.6666667	4.163332	0.193673388
Bundu Lake	<i>Azolla pinnata</i>	5	2	3	3.33333333	1.52752523	0.395643924
Bundu Lake	<i>Bonnaya antipoda</i>		50	42	46	5.65685425	0.150221105
Bundu Lake	<i>Ceratophyllum demersum</i>	34	27	18	26.3333333	8.02080628	0.110854836
Bundu Lake	<i>Commelina benghalensis</i>		9	15	12	4.24264069	0.19074357
Bundu Lake	<i>Cyperus compressus</i>	7	3	8	6	2.64575131	0.274291885
Bundu Lake	<i>Cyperus difformis</i>	14	14	9	12.3333333	2.88675135	0.257284274
Bundu Lake	<i>Cyperus exaltatus</i>	15	29	21	21.6666667	7.02376917	0.124629707
Bundu Lake	<i>Cyperus iria</i>		26	20	23	4.24264069	0.19074357
Bundu Lake	<i>Cyperus melanospermus</i>	28	21		24.5	4.94974747	0.16807436
Bundu Lake	<i>Cyperus polystachyos</i>	17	22	24	21	3.60555128	0.217129273
Bundu Lake	<i>Cyperus rotundus</i>	20	18	13	17	3.60555128	0.217129273
Bundu Lake	<i>Dentella repens</i>		40		40		
Bundu Lake	<i>Echinochloa colona</i>	22	30	26	26	4	0.2
Bundu Lake	<i>Eclipta prostrata</i>		38	43	40.5	3.53553391	0.220481209
Bundu Lake	<i>Fimbristylis aestivalis</i>	18	24	25	22.3333333	3.7859389	0.208945417
Bundu Lake	<i>Fimbristylis bisumbellata</i>	21	23	27	23.6666667	3.05505046	0.246606056
Bundu Lake	<i>Fuirena ciliaris</i>	23	12	19	18	5.56776436	0.152258812
Bundu Lake	<i>Hydrilla verticillata</i>	3	6	7	5.33333333	2.081666	0.3244998
Bundu Lake	<i>Ipomoea aquatica</i>	29	39	39	35.6666667	5.77350269	0.147634104
Bundu Lake	<i>Ipomoea carnea</i>	24	41	40	35	9.53939201	0.094882133
Bundu Lake	<i>Leersia hexandra</i>	12	15	12	13	1.73205081	0.366025404
Bundu Lake	<i>Lemna perpusilla</i>	6	4	2	4	2	0.333333333
Bundu Lake	<i>Lindernia parviflora</i>		37		37		
Bundu Lake	<i>Lobelia alsinoides</i>			34	34		
Bundu Lake	<i>Ludwigia adscendens</i>	33	51	41	41.6666667	9.01849951	0.099815347
Bundu Lake	<i>Ludwigia perennis</i>		46		46		
Bundu Lake	<i>Marsilea minuta</i>	13	32	16	20.3333333	10.214369	0.089171313
Bundu Lake	<i>Murdannia nudiflora</i>		19		19		
Bundu Lake	<i>Murdannia vaginata</i>		13		13		
Bundu Lake	<i>Najas minor</i>	11	20	10	13.6666667	5.50757055	0.153667178
Bundu Lake	<i>Nelumbo nucifera</i>	35	42	35	37.3333333	4.04145188	0.198355558
Bundu Lake	<i>Nymphaea nouchali</i>	36	48	44	42.6666667	6.11010093	0.14064498
Bundu Lake	<i>Nymphaea pubescens</i>	31	43	32	35.3333333	6.65832812	0.130576803
Bundu Lake	<i>Nymphoides hydrophyllum</i>	25	33	23	27	5.29150262	0.158944542
Bundu Lake	<i>Oldenlandia corymbosa</i>		25	28	26.5	2.12132034	0.320377241
Bundu Lake	<i>Ottelia alismoides</i>		49	36	42.5	9.19238816	0.098112433
Bundu Lake	<i>Panicum repens</i>	8	5	6	6.33333333	1.52752523	0.395643924
Bundu Lake	<i>Phyla nodiflora</i>	16	28	14	19.3333333	7.57187779	0.116660553
Bundu Lake	<i>Pistia stratiotes</i>	10	16	17	14.3333333	3.7859389	0.208945417
Bundu Lake	<i>Pontederia crassipes</i>	2	8	4	4.66666667	3.05505046	0.246606056
Bundu Lake	<i>Scleromitron brachypodum</i>	26	31	29	28.6666667	2.51661148	0.284364652
Bundu Lake	<i>Setaria geminata</i>	27	35	31	31	4	0.2
Bundu Lake	<i>Sphaeranthus indicus</i>		44	45	44.5	0.70710678	0.585786438
Bundu Lake	<i>Spirodela polyrhiza</i>	1	7	5	4.33333333	3.05505046	0.246606056
Bundu Lake	<i>Torenia anagallis</i>	9	11		10	1.41421356	0.414213562
Bundu Lake	<i>Torenia crustacea</i>		10	22	16	8.48528137	0.105426498
Bundu Lake	<i>Trapa natans var. bispinosa</i>		36	30	33	4.24264069	0.19074357
Bundu Lake	<i>Utricularia aurea</i>	32	45	37	38	6.55743852	0.132319965
Bundu Lake	<i>Utricularia stellaris</i>	30	47	33	36.6666667	9.07377173	0.099267685
Ratu Lake	<i>Alternanthera philoxeroides</i>	1	1	1	1	0	1

Ratu Lake	<i>Alternanthera sessilis</i>	6	13	7	8.6666667	3.7859389	0.208945417
Ratu Lake	<i>Ammannia verticillata</i>		51	39	45	8.48528137	0.105426498
Ratu Lake	<i>Aponogeton natans</i>		62	43	52.5	13.4350288	0.069275927
Ratu Lake	<i>Aponogeton undulatus</i>		34	30	32	2.82842712	0.261203875
Ratu Lake	<i>Azolla pinnata</i>	7	9	4	6.6666667	2.51661148	0.284364652
Ratu Lake	<i>Blyxa aubertii</i>		48	24	36	16.9705627	0.05564656
Ratu Lake	<i>Centella asiatica</i>		10	16	13	4.24264069	0.19074357
Ratu Lake	<i>Ceratophyllum submersum</i>	34	23	42	33	9.53939201	0.094882133
Ratu Lake	<i>Ceratopteris thalictroides</i>		68	60	64	5.65685425	0.150221105
Ratu Lake	<i>Chara fibrosa</i>	8	18	20	15.3333333	6.42910051	0.134605798
Ratu Lake	<i>Chara globularis</i>	14	27	40	27	13	0.071428571
Ratu Lake	<i>Cyperus compressus</i>	29	17	36	27.3333333	9.60902354	0.094259382
Ratu Lake	<i>Cyperus difformis</i>	22	30	11	21	9.53939201	0.094882133
Ratu Lake	<i>Cyperus esculentus</i>	19	25	31	25	6	0.142857143
Ratu Lake	<i>Cyperus flavescens</i>		52	32	42	14.1421356	0.066040883
Ratu Lake	<i>Cyperus iria</i>		15	19	17	2.82842712	0.261203875
Ratu Lake	<i>Cyperus melanospermus</i>	13	24		18.5	7.77817459	0.113918901
Ratu Lake	<i>Cyperus rotundus</i>	20	32	17	23	7.93725393	0.111891192
Ratu Lake	<i>Dentella repens</i>		5		5		
Ratu Lake	<i>Echinochloa colona</i>	15	20	38	24.3333333	12.0968315	0.076354345
Ratu Lake	<i>Eclipta prostrata</i>		66	59	62.5	4.94974747	0.16807436
Ratu Lake	<i>Eleocharis acutangula</i>	2	4	2	2.6666667	1.15470054	0.464101615
Ratu Lake	<i>Enydra fluctuans</i>		6	27	16.5	14.8492424	0.063094498
Ratu Lake	<i>Eriocaulon quinquangulare</i>		36	18	27	12.7279221	0.072844236
Ratu Lake	<i>Fuirena ciliaris</i>	11	21	33	21.6666667	11.0151411	0.083228319
Ratu Lake	<i>Grangea maderaspatana</i>	35	44		39.5	6.36396103	0.135796482
Ratu Lake	<i>Hydrilla verticillata</i>	3	11	5	6.3333333	4.163332	0.193673388
Ratu Lake	<i>Hygrophila polysperma</i>		8	9	8.5	0.70710678	0.585786438
Ratu Lake	<i>Ipomoea aquatica</i>	41	53	45	46.3333333	6.11010093	0.14064498
Ratu Lake	<i>Ipomoea carnea</i>	33	63	34	43.3333333	17.0391706	0.055434921
Ratu Lake	<i>Leersia hexandra</i>	9	12	10	10.3333333	1.52752523	0.395643924
Ratu Lake	<i>Lemna perpusilla</i>	4	2	6	4	2	0.333333333
Ratu Lake	<i>Limnophila heterophylla</i>	10	19	37	22	13.7477271	0.067807059
Ratu Lake	<i>Limnophila indica</i>	27	54	35	38.6666667	13.8684294	0.0672566
Ratu Lake	<i>Limnophila sessiliflora</i>	21	46	51	39.3333333	16.0727513	0.058572868
Ratu Lake	<i>Lobelia alsinoides</i>		55	26	40.5	20.5060967	0.046498443
Ratu Lake	<i>Louisiella paludosa</i>	28	40	25	31	7.93725393	0.111891192
Ratu Lake	<i>Ludwigia adscendens</i>	45	56	63	54.6666667	9.07377173	0.099267685
Ratu Lake	<i>Ludwigia perennis</i>		49		49		
Ratu Lake	<i>Ludwigia prostrata</i>		57	62	59.5	3.53553391	0.220481209
Ratu Lake	<i>Marsilea minuta</i>	16	16	21	17.6666667	2.88675135	0.257284274
Ratu Lake	<i>Najas minor</i>	23	31	14	22.6666667	8.50490055	0.105208886
Ratu Lake	<i>Nelumbo nucifera</i>	26	22	15	21	5.56776436	0.152258812
Ratu Lake	<i>Nitella mucronata</i>		45	52	48.5	4.94974747	0.16807436
Ratu Lake	<i>Nitella sonderi</i>	36		47	41.5	7.77817459	0.113918901
Ratu Lake	<i>Nymphaea nouchali</i>	32	65	48	48.3333333	16.5025251	0.057134613
Ratu Lake	<i>Nymphaea pubescens</i>	17	14	13	14.6666667	2.081666	0.3244998
Ratu Lake	<i>Nymphoides hydrophyllum</i>	24	28	22	24.6666667	3.05505046	0.246606056
Ratu Lake	<i>Oldenlandia corymbosa</i>		67	53	60	9.89949494	0.09174737
Ratu Lake	<i>Oryza rufipogon</i>		35	23	29	8.48528137	0.105426498
Ratu Lake	<i>Ottelia alismoides</i>	46		54	50	5.65685425	0.150221105
Ratu Lake	<i>Panicum repens</i>	40	33	28	33.6666667	6.02771377	0.142293786
Ratu Lake	<i>Paspalum distichum</i>	42	41	44	42.3333333	1.52752523	0.395643924
Ratu Lake	<i>Paspalum scrobiculatum</i>	43	42		42.5	0.70710678	0.585786438
Ratu Lake	<i>Persicaria glabra</i>		60	41	50.5	13.4350288	0.069275927
Ratu Lake	<i>Phyla nodiflora</i>	30	39	56	41.6666667	13.2035349	0.070405009
Ratu Lake	<i>Pontederia crassipes</i>	44	37	49	43.3333333	6.02771377	0.142293786

Ratu Lake	<i>Pontederia vaginalis</i>	50	50	61	53.6666667	6.35085296	0.136038635
Ratu Lake	<i>Potamogeton crispus</i>	25	38	29	30.6666667	6.65832812	0.130576803
Ratu Lake	<i>Potamogeton nodosus</i>	18	29	12	19.6666667	8.6216781	0.103931974
Ratu Lake	<i>Pouzolzia zeylanica</i>	47	58	57	54	6.08276253	0.141187848
Ratu Lake	<i>Rotala rotundifolia</i>	12	7	3	7.33333333	4.50924975	0.181512918
Ratu Lake	<i>Scleromitron brachypodium</i>	38	47	46	43.6666667	4.93288286	0.168552123
Ratu Lake	<i>Setaria flavida</i>	39	26		32.5	9.19238816	0.098112433
Ratu Lake	<i>Spirodela polyrhiza</i>	5	3	8	5.33333333	2.51661148	0.284364652
Ratu Lake	<i>Torenia crustacea</i>	37	43		40	4.24264069	0.19074357
Ratu Lake	<i>Utricularia inflexa</i>	48	61	58	55.6666667	6.80685929	0.128092484
Ratu Lake	<i>Utricularia stellaris</i>	49	64	55	56	7.54983444	0.116961329
Ratu Lake	<i>Vallisneria spiralis</i>	31	59	50	46.6666667	14.2945211	0.065382891
