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Annual dynamics of plant litter calcium and magnesium stocks in a subtropical forest headwater stream

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Electronic Supplementary Material (ESM)

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Table S1. Summary of the five-year precipitation in the study area

Year	Precipitation (mm)	Data source
March 2021–Feb 2022	1 262.54	field measurement
2018	1 344.63	ERA5-Land
2019	1 488.97	ERA5-Land
2020	1 556.80	ERA5-Land
2021	1 452.60	ERA5-Land
2022	1 751.17	ERA5-Land
2018–2022 average	1 518.83	ERA5-Land (average)

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Table S2. Basic information of the studied stream

Reach	Longitude	Latitude	Tributary	Riparian forest type	Active channel width (cm)	Stream gradient (°)
1	117°35'36"E	26°19'21"N	no	broadleaved forest	246	1.39
2	117°35'37"E	26°19'17"N	yes	mixed forest	138	19.46
3	117°35'45"E	26°19'23"N	no	mixed forest	214	15.77
4	117°35'50"E	26°19'23"N	no	broadleaved forest	253	11.79
5	117°35'54"E	26°19'23"N	no	broadleaved forest	279	13.36
6	117°35'54"E	26°19'23"N	no	broadleaved forest	275	11.36
7	117°35'57"E	26°19'26"N	no	broadleaved forest	310	13.94
8	117°36'01"E	26°19'29"N	no	broadleaved forest	135	9.06
9	117°36'09"E	26°19'32"N	no	mixed forest	400	9.14
10	117°36'17"E	26°19'30"N	no	broadleaved forest	527	13.07
11	117°36'18"E	26°19'29"N	yes	broadleaved forest	423	14.05
12	117°36'21"E	26°19'28"N	yes	broadleaved forest	265	14.05
13	117°36'27"E	26°19'39"N	no	broadleaved forest	421	5.33
14	117°36'27"E	26°19'39"N	yes	broadleaved forest	145	18.97
15	117°36'37"E	26°19'34"N	yes	broadleaved forest	415	12.93
16	117°36'29"E	26°19'46"N	yes	broadleaved forest	204	12.64
17	117°35'40"E	26°19'42"N	no	mixed forest	562	6.25

Table S3. Stream physicochemical characteristics of the studied stream

Reach	Flow (m/s)	Discharge (m^3/h)	Water depth (cm)	pH	WT (°C)	DO (mg/L)
1	0.04	9.76	5.8	7.03	17.39	9.14
2	0.07	6.9	3.8	7.05	17.85	8.75
3	0.10	142.85	12.1	6.97	17.97	9.59
4	0.13	147.33	14.4	7.0	17.96	9.8
5	0.07	88.37	13.6	7.01	17.64	9.6
6	0.10	77.65	12.6	7.07	17.65	10.15
7	0.11	149.76	11.9	7.07	17.57	9.87
8	0.12	92.54	12.3	6.92	17.89	9.77
9	0.09	80.1	7.6	7.08	18.35	9.53
10	0.07	81.95	7.9	7.0	18.4	9.53
11	0.04	5.31	3.8	7.02	17.69	9.82
12	0.07	16.76	6.5	7.1	18.0	9.78
13	0.07	83.93	10.3	7.14	18.7	9.89
14	0.04	2.76	3.8	7.17	17.81	9.45
15	0.11	66.61	8.9	7.05	18.44	9.42
16	0.06	12.56	5	7.0	18.38	9.18
17	0.17	203.44	10.4	7.03	18.79	9.85

Values are means; WT – water temperature; DO – dissolved oxygen

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Table S4. Concentrations of Ca and Mg in the plant litter in this study and comparison with different literature

Habitats	Species	Ca	Mg	References
		(mg/g)		
Subtropical climate	mixed forest	9.9	0.7	this study
Subalpine climate	coniferous forest	20.1	0.6	Yue et al. (2016)
Tropical climate	broadleaf forest	3.1	0.2	Dezzeo et al. (1998)
Temperate climate	mixed forest	4.1	0.5	Allen et al. (2020)

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