

Supporting information

Table S1

Putative species and proportion of each species of BLAST-based result using all of obtained sequences.

	reads	proportion
Total sequences	2240769	
Nematoda	1144206	51.06%
Protozoa	263146	11.74%
Arthropoda	230080	10.27%
Annelida	186670	8.33%
Platyhelminthes	162848	7.27%
Fungi	121444	5.42%
Tradigrada	75004	3.35%
Rotifera	43776	1.95%
Gastrotricha	10985	0.49%
Coelenterata	2610	0.12%

Table S2

Nematode family relative abundance (%), ordered by feeding type present in Xishuangbanna, Ailaoshan and Lijiang FDPs. Om and Ca indicate Omnivores and Carnivores.

Feeding type	Xishuangbanna FDP	Ailaoshan FDP	Lijiang FDP
Bacterial feeding			
<i>Alaimidae</i>	1.26%	1.31%	1.01%
<i>Aulolaimidae</i>	0.00%	<0.01%	0.00%
<i>Bastianiidae</i>	0.57%	0.28%	0.07%
<i>Bathydontidae</i>	0.01%	0.12%	0.07%
<i>Brevibuccidae</i>	0.02%	0.00%	0.00%
<i>Cephalobidae</i>	5.31%	14.10%	1.16%
<i>Chromadoridae</i>	0.39%	0.86%	0.81%
<i>Cryptonchidae</i>	0.25%	<0.01%	0.00%
<i>Desmodoridae</i>	0.01%	0.00%	0.03%
<i>Diplogasteridae</i>	1.22%	0.36%	0.72%
<i>Leptosomatidae</i>	1.06%	0.00%	0.07%
<i>Leptolaimidae</i>	0.32%	0.00%	0.00%
<i>Linhomoeidae</i>	0.02%	0.00%	<0.01%
<i>Monhysteridae</i>	0.95%	0.37%	0.34%
<i>Panagrolaimidae</i>	0.01%	0.00%	0.00%
<i>Plectidae</i>	0.21%	1.20%	1.99%
<i>Prismatolaimidae</i>	11.11%	29.72%	20.04%
<i>Rhabditidae</i>	8.23%	1.61%	14.02%
<i>Rhabdolaimidae</i>	0.02%	0.00%	0.00%
<i>Steinernematidae</i>	4.99%	0.54%	0.16%
<i>Teratocephalidae</i>	1.41%	1.25%	2.18%
<i>Xyalidae</i>	0.01%	0.04%	0.05%
Total	37.37%	51.78%	42.73%
Fungal feeding			
<i>Allantonematidae</i>	0.07%	<0.01%	0.15%
<i>Anguinidae</i>	0.34%	0.44%	0.26%
<i>Aphelenchidae</i>	3.64%	1.17%	0.52%
<i>Diphtherophoridae</i>	0.03%	0.01%	0.35%
Total	4.08%	1.62%	1.28%
Plant feeding			
<i>Belonidiridae</i>	0.04%	0.28%	0.00%
<i>Belonolaimidae</i>	0.01%	<0.01%	0.00%
<i>Criconematidae</i>	19.31%	2.09%	2.97%
<i>Dolichodoridae</i>	0.72%	0.24%	0.19%
<i>Heteroderidae</i>	0.58%	0.06%	0.17%
<i>Hoplolaimidae</i>	5.73%	0.40%	0.08%
<i>Longidoridae</i>	1.60%	2.04%	<0.01%

<i>Meloidogynidae</i>	0.02%	0.01%	<0.01%
<i>Pratylenchidae</i>	0.02%	0.02%	<0.01%
<i>Telotylenchidae</i>	0.07%	0.01%	0.04%
<i>Trichodoridae</i>	0.14%	0.25%	0.10%
<i>Tylenchidae</i>	1.95%	1.63%	1.07%
<i>Tylenchorhynchidae</i>	0.23%	0.35%	0.26%
<i>Tylenchulidae</i>	0.19%	0.63%	0.00%
<i>Xiphinematidae</i>	3.96%	0.97%	0.56%
Total	34.53%	8.98%	5.45%

Om and Ca

<i>Anatonchidae</i>	0.32%	0.19%	0.26%
<i>Aporcelaimidae</i>	0.06%	2.77%	<0.01%
<i>Dorylaimidae</i>	4.71%	6.90%	7.60%
<i>Ironidae</i>	7.68%	0.93%	0.06%
<i>Mononchidae</i>	2.33%	3.88%	15.63%
<i>Nygolaimidae</i>	0.20%	2.68%	4.83%
<i>Oncholaimidae</i>	0.05%	0.00%	0.00%
<i>Oxystominidae</i>	0.29%	0.97%	<0.01%
<i>Qudsianematidae</i>	1.81%	13.53%	8.62%
<i>Tripylidae</i>	6.14%	4.49%	6.46%
Total	23.59%	36.34%	43.46%

Animal parasites

<i>Fergusobiidae</i>	0.00%	0.00%	<0.01%
<i>Gongylonematidae</i>	0.00%	<0.01%	0.00%
<i>Mermithidae</i>	0.58%	1.04%	6.89%
<i>Sphaerulariidae</i>	0.00%	0.00%	0.00%
<i>Thelaziidae</i>	<0.01%	<0.01%	<0.01%
Total	0.58%	1.04%	6.89%

unknown feeding type

<i>Atractidae</i>	0.00%	<0.01%	0.00%
<i>Axonolaimidae</i>	0.05%	0.05%	0.15%
<i>Camallanidae</i>	0.00%	0.00%	<0.01%
<i>Ceramonematidae</i>	0.01%	<0.01%	0.00%
<i>Comesomatidae</i>	0.01%	<0.01%	<0.01%
<i>Enoplidae</i>	0.00%	0.00%	<0.01%
Total	0.16%	0.20%	0.15%

Table S3

The environmental factors that correlated with nematode communities of three sites (Xishuangban, Ailaoshan and Lijiang FDPs) are listed below. The correlations (r^2) and significance (P) were determined by function envfit () between the nematode community and environmental variables.

Environmental variables	r^2	P
C:N	0.6844	< 0.001
Moisture	0.6722	< 0.001
NH ₄ ⁺	0.4808	< 0.001
pH	0.2979	< 0.001
NO ₃ ⁻	0.2411	< 0.001
Terrain	0.0951	0.003

Table S4

The environmental factors that correlated with nematode communities of three sites FDP are listed below. The correlations (r^2) and significance (P) were determined by function envfit () between the nematode community and environmental variables.

Environmental variables	Xishuangbanna		Ailaoshan		Lijiang	
	r^2	P	r^2	P	r^2	P
Terrain	0.3124	< 0.001	0.4032	< 0.001	0.4053	< 0.001
Moisture	0.3166	< 0.001	0.0239	0.592	0.3493	< 0.001
pH	0.3429	< 0.001	0.2602	0.004	0.03	0.466
NH ₄ ⁺	0.1294	0.062	0.0744	0.169	0.0436	0.367
NO ₃ ⁻	0.0437	0.364	0.3239	< 0.001	0.2365	0.003
C:N	0.0584	0.26	0.0096	0.798	0.035	0.459

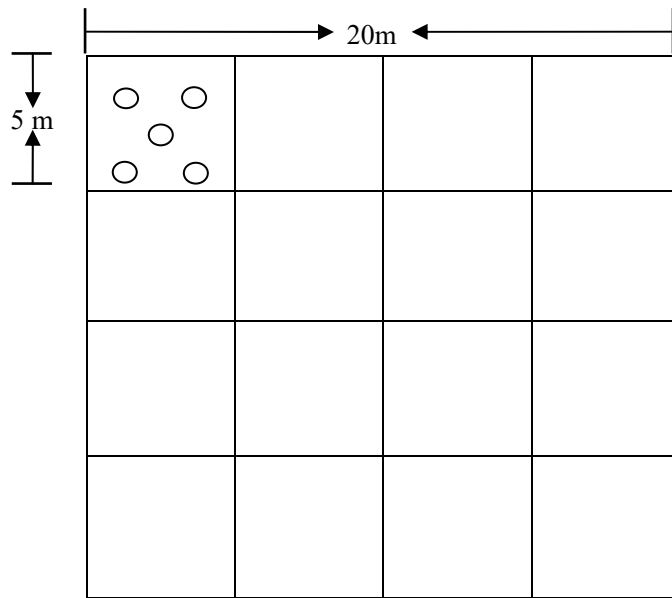


Fig. S1. Schematic diagram of soil sampling in a 20×20 plot.