Supplement materials

Table S1. The area and location of the sampled rice fields

Rice field	Sampled area	Locality (District, Province)	GPS coordinates
1	~10 rai = 1.6 ha	Sri Banphot, Phatthalung	7°39'13.00"N, 99°57'32.30"E
2	~10 rai = 1.6 ha	Kuanniang, Songkhla	7°12'23.60"N, 100°23'0.10"E
3	~7 rai = 1.12 ha	Kuanniang, Songkhla	7°14'27.40"N, 100°22'1.00"E
4	~8 rai = 1.28 ha	Kuanniang, Songkhla	7°13'50.00"N, 100°20'34.10"E
5	~10 rai = 1.6 ha	Kuanniang, Songkhla	7°12'34.15"N, 100°22'19.30"E
6	~8 rai = 1.28 ha	Hatyai, Songkhla	6°57'38.94"N, 100°20'30.68"E
7	~8 rai = 1.28 ha	Khuan Khanun, Phatthalung	7°45'40.56"N, 100°03'25.27"E
8	~10 rai = 1.6 ha	Khuan Khanun, Phatthalung	7°39'25.65"N, 99°58'22.21"E
9	~8 rai = 1.28 ha	Khuan Khanun, Phatthalung	7°43'8.82"N, 100° 2'44.33"E
10	~7 rai = 1.12 ha	Mueang, Phatthalung	7°33'28.60"N, 100° 4'50.00"E
11	~8 rai = 1.28 ha	Pak Phayun, Phatthalung	7°15'32.57"N, 100°19'24.40"E
12	~10 rai = 1.6 ha	Pa Bon, Phatthalung	7°14'11.06"N, 100°18'22.25"E

Table S2. Vegetation structure and rice field characteristics in each stage of rice growth.

	Tillering	Booting	Flowering (Milky)
Vegetation height (m)	0.56 ± 0.07	0.91 ± 0.06	1.23 ± 0.05
Vegetation contacts	3.01 ± 1.32	7.52 ± 1.64	12.06 ± 2.24
Vegetation complexity	1.70 ± 0.75	6.85 ± 1.62	14.85 ± 2.80
Underlying surface	Water (6-10 cm depth)	Water (3-5 cm depth)	Moist soil

- Height shows the mean of vegetation height (m) in all fields.
- Vegetation contacts defined as the mean number of rice plants or weeds in contact with the measuring pole and the value represents the mean of vegetation contacted in all fields.
- Vegetation complexity defined as the multiply vegetation height by the vegetation contacted.

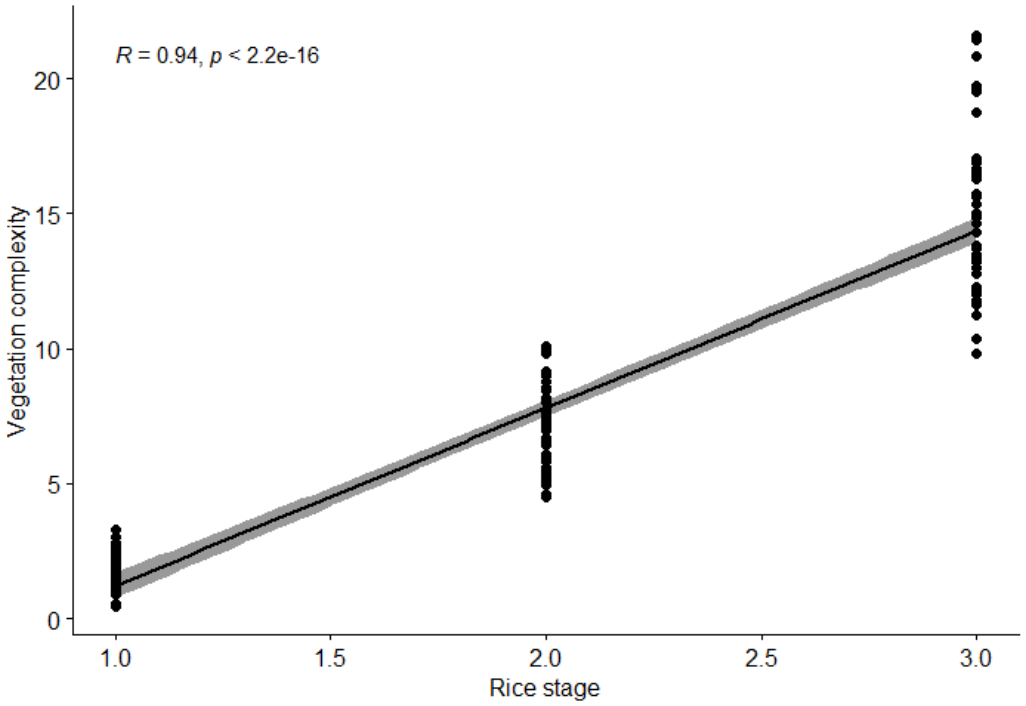

Figure S1. Pearson's correlation analysis between rice stage and vegetation complexity in all studied rice fields.

Table S3. Model selection using Akaike information criterion (AIC) values and Akaike weights for two variables (rice stage (RS) and spider species (SS) on *Tetragnatha* spider numbers in each. Results of GLMM testing for directional (linear effect) and quadratic (nonlinear effect) selection and ranking by lowest AIC.

Response variable	Model	df	logLik	AIC	delta	weight
Overall number of *Tetragnatha* spiders	RS	5	-123.36	256.7	0	0.954
	Null	3	-128.403	262.8	6.09	0.046
Number of *Tetragnatha* spiders of each spider species	RS + SS	10	-389.25	798.5	0	0.895
	RS * SS	20	-381.53	803.1	4.57	0.091
	SS	8	-395.45	806.9	8.4	0.013
	RS	5	-461.07	932.1	133.65	0
	Null	3	-464.80	935.6	137.1	0

Table S4. Model selection using Akaike information criterion (AIC) values and Akaike weights for two variables (vegetation complexity (VC) and spider species (SS) on web diameter and web height. Results of GLMM testing for directional (linear effect) and quadratic (nonlinear effect) selection and ranking by lowest AIC.

Response variable	Model	df	logLik	AIC	delta	weight
Web diameter of *Tetragnatha* spiders	VC2 + SS	10	-2065.42	4150.8	0	0.611
	VC2 * SS	20	-2055.87	4151.7	0.9	0.389
	VC + SS	9	-2075.17	4168.3	17.5	0
	VC * SS	14	-2071.31	4170.6	19.78	0
	SS	8	-2082.42	4180.8	30	0
	VC2	5	-2127.39	4264.8	113.93	0
	VC	4	-2138.27	4284.5	133.71	0
	Null	3	-2144.54	4295.1	144.25	0
Web height of *Tetragnatha* spiders	VC2 + SS	10	-2627.22	5274.4	0	0.684
	VC2 * SS	20	-2618	5276	1.55	0.316
	VC * SS	14	-2637.6	5303.2	28.75	0
	VC + SS	9	-2642.78	5303.5	29.1	0
	VC2	5	-2654.29	5318.6	44.13	0
	SS	8	-2656.47	5328.9	54.48	0
	VC	4	-2667.88	5343.8	69.32	0
	Null	3	-2682	5370	95.55	0

Table S5. Results of logistic regression analyses, indicating estimates of coefficients, standard errors and its statistical significance (P) are provided for linear and quadratic term of the best model with the lowest AIC (from Table A.3.) of vegetation complexity and different spider species on web diameter and web height. The asterisk symbol (*) of significant models has been scaled to represent the magnitude of the respective the significant P value (*: $p < 0.05$; **: $p < 0.01$; ***: $p < 0.001$) and none represent non-significant models ($P > 0.05$).

Response variable		**Estimate**	**Std. Error**	**t value**	**Pr(>|z|)**	
Web diameter of *Tetragnatha* spiders	(Intercept)	3.311	0.035	94.730	< 2e-16	***
	poly(complexity, 2)1	-1.092	0.273	-4.007	0.000	***
	poly(complexity, 2)2	-1.291	0.290	-4.453	0.000	***
	T. mandibulata	0.302	0.031	9.898	< 2e-16	***
	T. maxillosa	0.011	0.029	0.391	0.696	
	T. nitens	0.130	0.056	2.315	0.021	*
	T. praedonia	-0.009	0.065	-0.144	0.886	
	T. virescens	-0.121	0.085	-1.418	0.156	
Web height of *Tetragnatha* spiders	(Intercept)	4.264	0.061	70.400	< 2e-16	***
	poly(complexity, 2)1	-1.963	0.342	-5.733	0.000	***
	poly(complexity, 2)2	-2.064	0.365	-5.659	0.000	***
	T. mandibulata	-0.052	0.038	-1.373	0.170	
	T. maxillosa	-0.239	0.035	-6.736	0.000	***
	T. nitens	-0.133	0.070	-1.902	0.057	.
	T. praedonia	0.018	0.083	0.212	0.832	
	T. virescens	0.117	0.105	1.112	0.266	

Table S6. Model selection using Akaike information criterion (AIC) values and Akaike weights for two variables (Body length (BL) and spider species (SS) on web diameter and web height. Results of GLMM testing for directional (linear effect) selection and ranking by lowest AIC.

Response variable	Model	df	logLik	AIC	delta	weight
Web diameter of *Tetragnatha* spiders	BL + SS	9	-2057.47	4132.9	0	0.922
	BL * SS	14	-2054.95	4137.9	4.95	0.078
	SS	8	-2082.42	4180.8	47.89	0
	BL	4	-2128.07	4264.1	131.19	0
	Null	3	-2144.54	4295.1	162.14	0
Web height of *Tetragnatha* spiders	SS	8	-2656.47	5328.9	0	0.52
	BL + SS	9	-2655.57	5329.1	0.22	0.466
	BL * SS	14	-2654.11	5336.2	7.28	0.014
	BL	4	-2670.1	5348.2	19.27	0
	Null	3	-2682	5370	41.06	0