Li Y, Xu J, Wang H, Nong Y, Sun G, Yu S, Liao L, Ye S (2021).
Long-term effects of thinning and mixing on the spatial structure of Chinese fir plantations
iForest – Biogeosciences and Forestry – doi: 10.3832/ifor3489-014

Supplementary Material

Fig. S1 - The tree points, distribution patterns of the *C. lanceolata* and *M. macclurei* in the mixed forest (MF) and their spatial correlations at the beginning of planting (1993). In the sub-figure of point pattern (a), the blue rings stand for population and grey dots represent *C. lanceolata* population, and the colorful background represents the intensity of individual distribution. The deeper the color, the less the abundance. In each subfigures of spatial distribution (b-d), the red dashed line is the expect value 1, and the black solid line with red dots is observed value. The grey background color is 95% Monte Carlo (MC) simulation area.

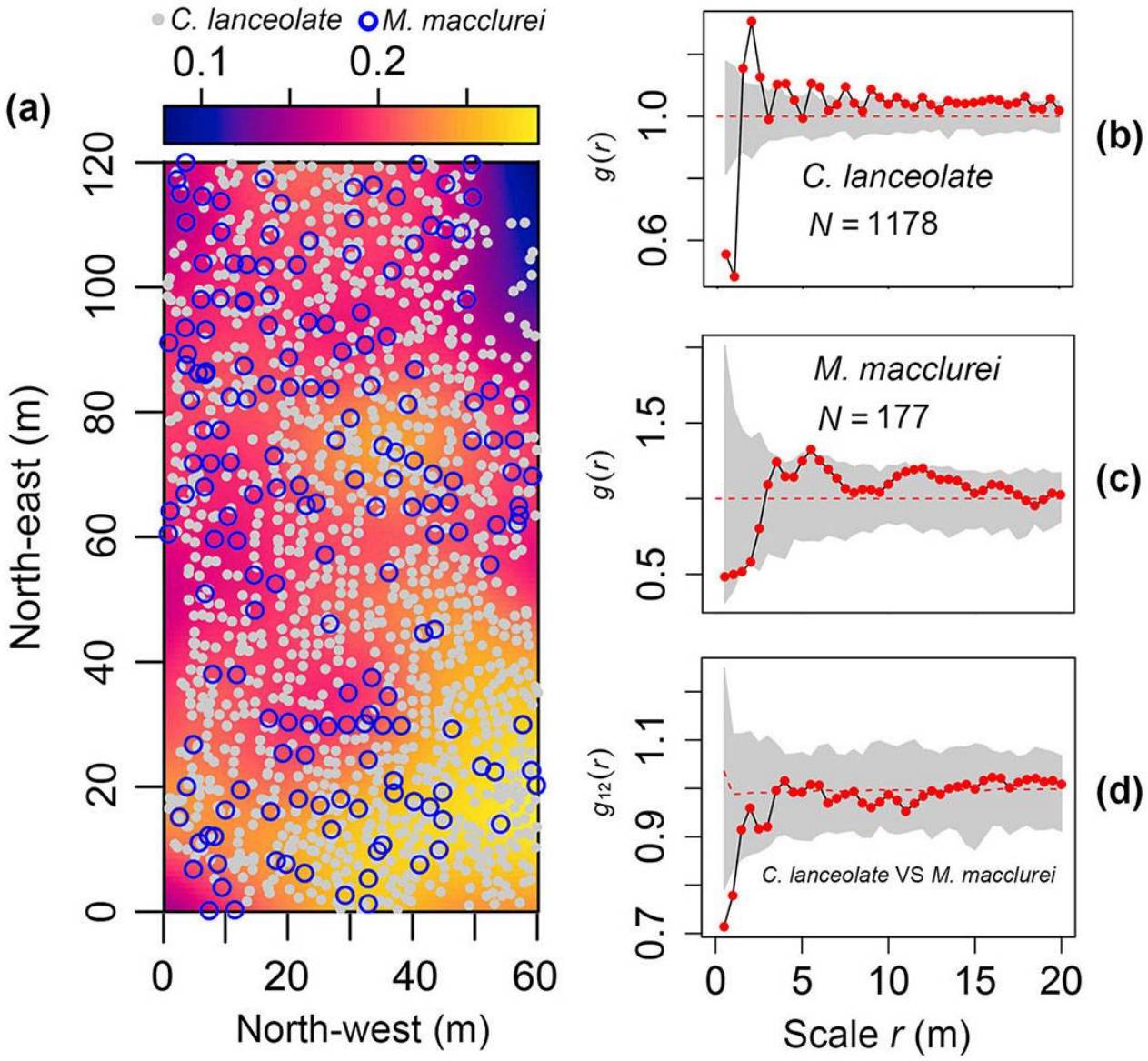


Fig. S2 - The *NND* of the *M. macclurei* in the mixed forest (MF) during the management period (1993-2018) (k = 1, 2, 4, 6, 8, 12).

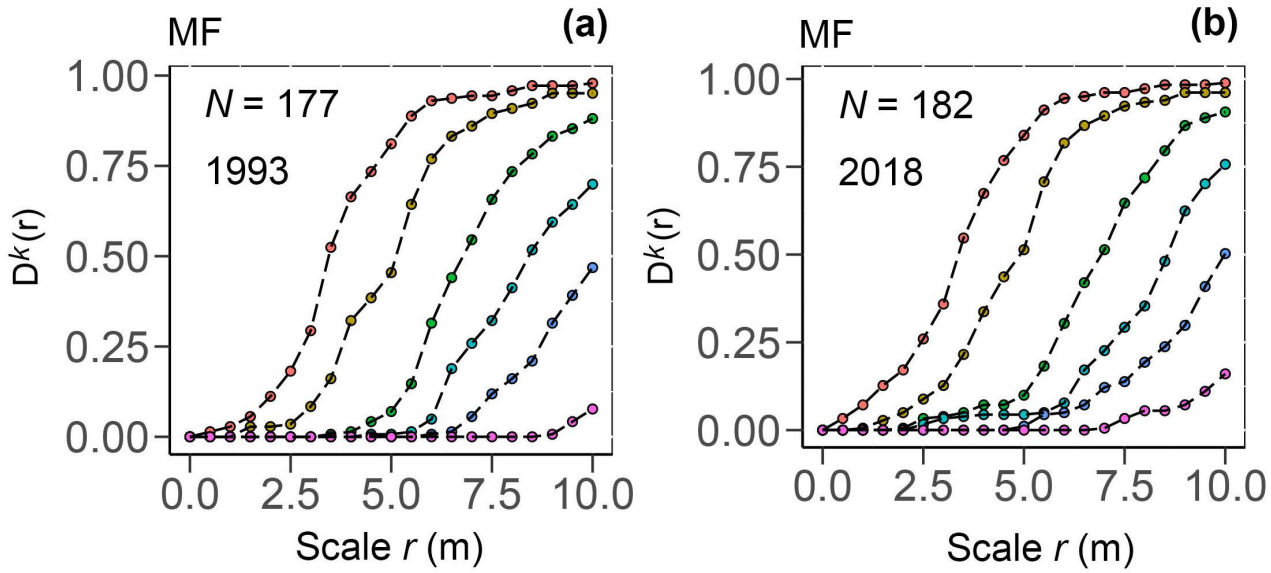


Fig. S3 - The tree points of the six main populations in the mixed forest (MF) over a rotation of 27 years.

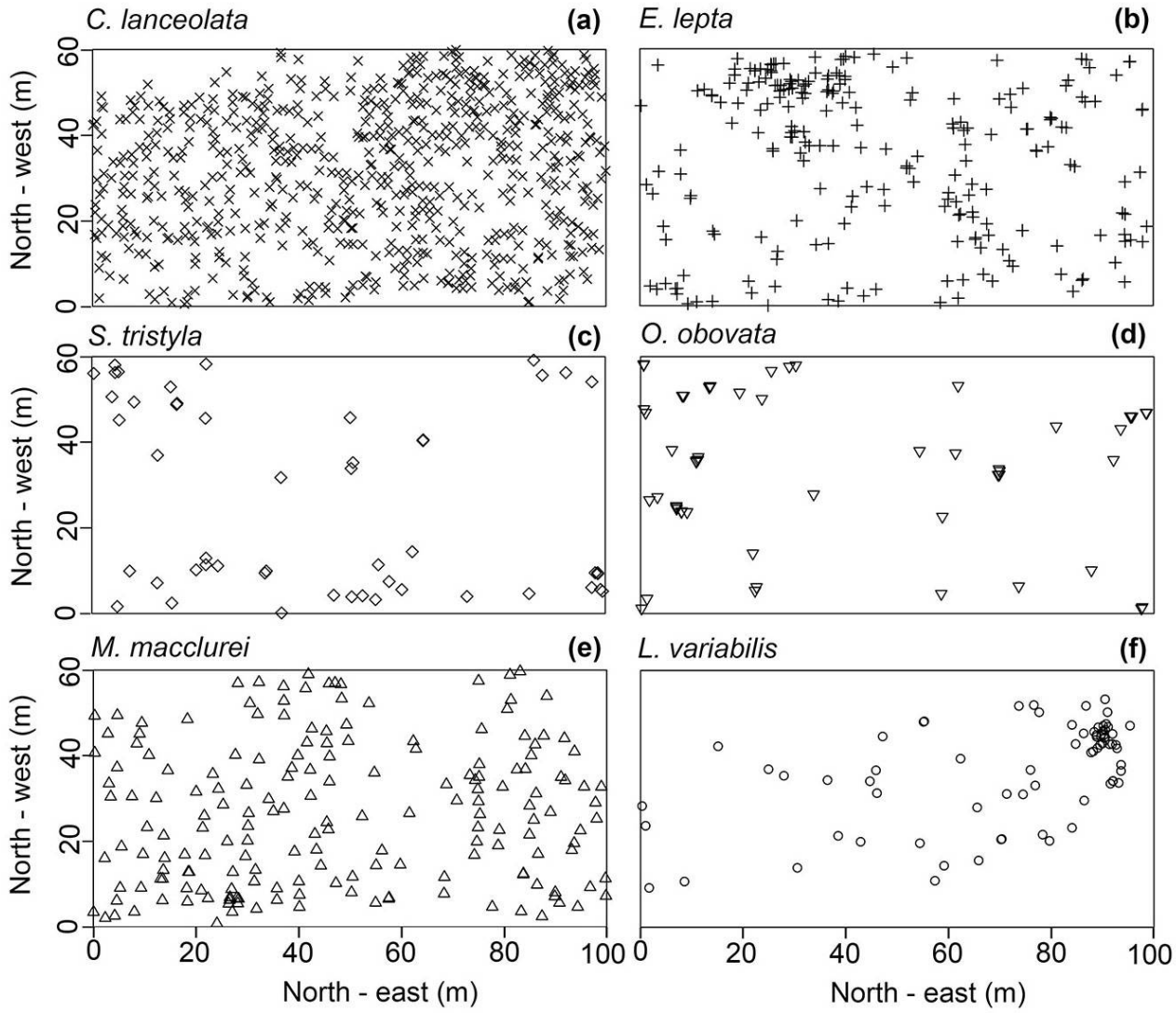


Fig. S4 - The tree points of the six main populations in the thinned forest (TF) above a rotation of 27 years.

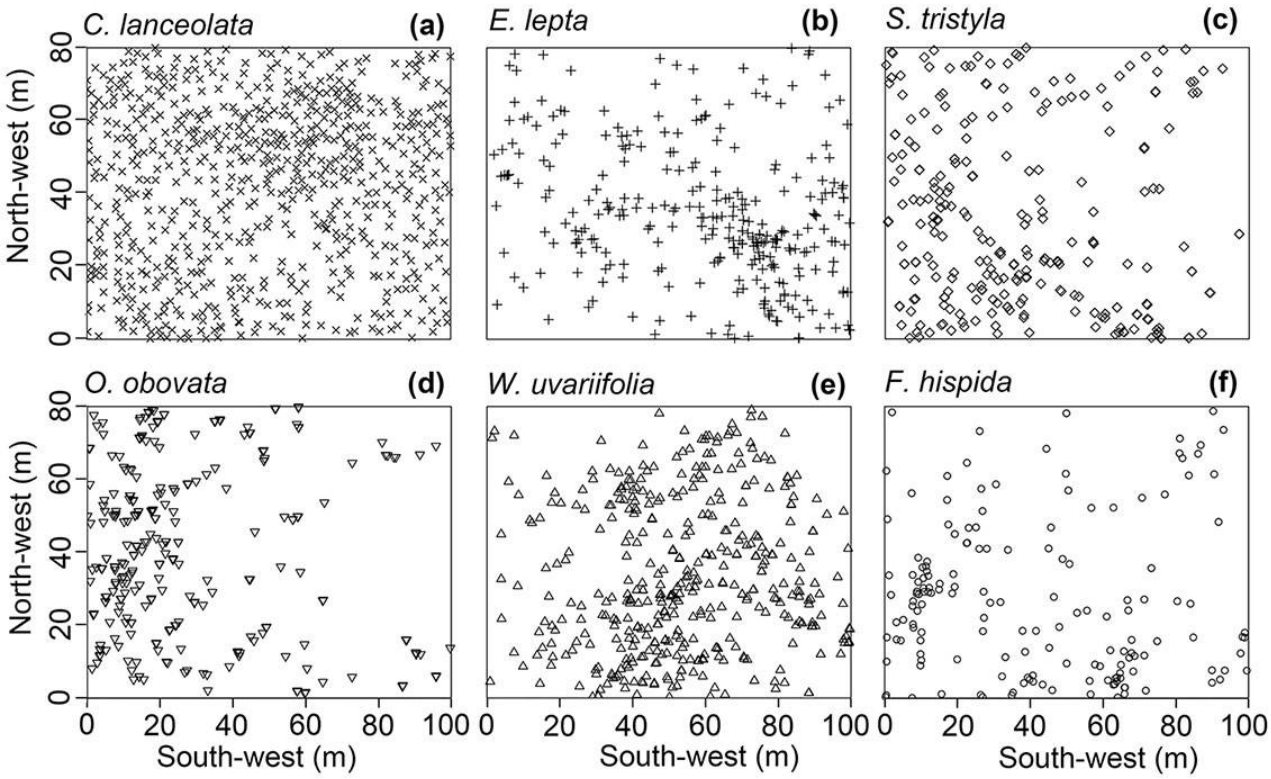
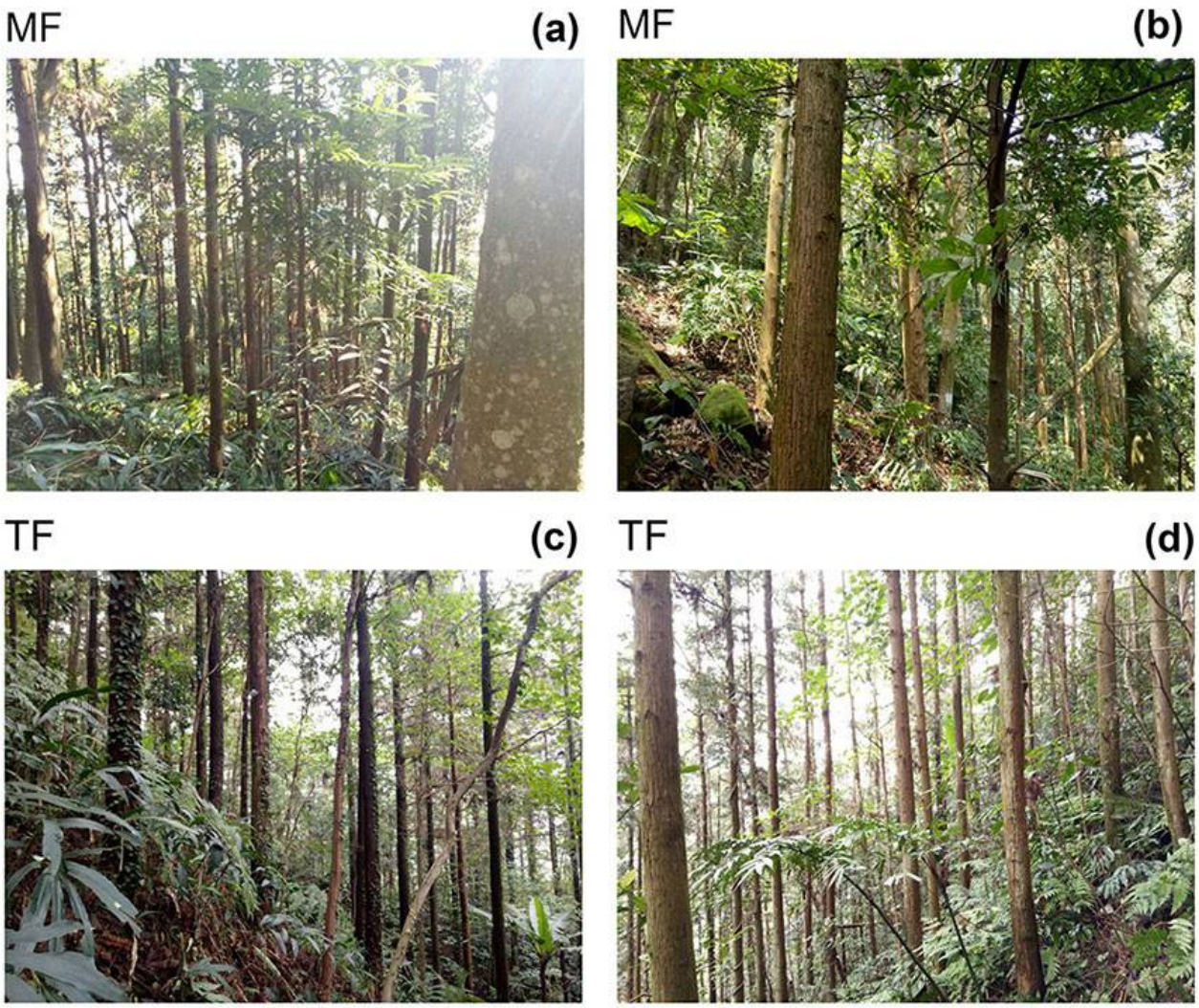


Fig. S5 -The plants in the thinned forest (TF) and mixed forest (MF).



Tab. S1 - The quantitative characteristics of the main trees species in the thinned forest (TF) and mixed forest (MF). Single tree volume (V) is computed by equation $V = g_{1.3} \lozenge (h + 3) \lozenge f\partial$, h is the height of tree, $f\partial$ is the experimental form factor whose value is equal to 0.4 and N is the number of individuals, and SD is standard deviation. The volume of *C. lanceolata* and *M. macclurei* was obtained by inquiring the one-way volume table, and their height was obtained by inquiring the two-way volume table whose data was collected in Gguangxi, China.

Stand	Species	Mean DBH ± SD (cm)	h ± (m)	Basal area (m^2)	V (m^3)	N
MF	*Cunninghamia lanceolata* (Lamb.) Hook.	16.70 ± 4.86	17.7	15.58	124.7	655
	Michelia macclurei Dandy	21.27 ± 10.35	22.0	7.990	72.87	182
	Evodia lepta (Spreng.) Merr.	3.20 ± 2.02	3.53 ± 1.61	0.255	0.850	226
	Saurauia tristyla DC.	2.61 ± 1.73	2.68 ± 1.15	0.038	0.106	50
	Litsea variabilis Hemsl.	3.06 ± 2.37	3.70 ± 1.76	0.086	0.310	73
	Oreocnide obovata (C. H. Wright) Merr. var. *mucronata* C. J. Chen）	1.48 ± 0.50	2.49 ± 0.89	0.013	0.035	54
	Macropanax oreophilus Miq.	2.64 ± 1.53	3.04 ± 1.46	0.021	0.067	30
	Aphanamixis polystachya (Wall.) R.N. Parker	2.78 ± 1.84	4.02 ± 2.46	0.042	0.690	49
	Diplospora dubia (Lindl.) Masam.	2.30 ± 1.30	2.71 ± 1.08	0.019	0.054	36
	Psychotria rubra (Lour.) Poilfr.	2.25 ± 1.06	2.79 ± 0.97	0.017	0.043	37
	Aidia cochinchinensis Lour. Fl. Cochinch.	3.21 ± 2.59	4.0 ± 2.12	0.039	0.160	30
	Ficus erecta Thunb. var. *beecheyana* (Hook. et Arn.)	2.42 ± 1.91	2.89 ± 1.02	0.024	0.069	33
	Chassalia curviflora Thwaites	1.52 ± 0.69	2.35 ± 0.50	0.009	0.021	45
	Schefflera octophylla (Lour.) Harms	4.20 ± 3.32	5.11 ± 3.14	0.075	0.370	34
	Macaranga denticulata (Bl.) Muell. Arg.	9.42 ± 6.47	7.84 ± 4.02	0.428	2.410	42
	Other species	4.17 ± 4.75	4.55 ± 3.35	1.045	5.710	332
TF	*Ficus hirta* Vahl	2.34 ± 4.60	3.91 ± 1.91	0.055	0.210	93
	Ficus hispida	2.85 ± 4.37	3.96 ± 1.84	0.142	0.501	160
	Wendlandia uvariifolia Hance	4.85 ± 2.98	6.50 ± 2.94	1.050	5.197	412
	Castanopsis hystrix Miq.	4.79 ± 4.17	6.31 ± 3.54	0.144	0.889	46
	Viburnum farreri W. T. Stearn	1.90 ± 0.61	3.74 ± 1.10	0.011	0.033	37
	Machilus chinensis (Champ. ex Benth.) Hemsl.	6.14 ± 3.44	7.95 ± 3.95	0.135	0.753	35
	Litsea variabilis Hemsl.	5.36 ± 2.95	6.70 ± 3.19	0.143	0.690	49
	Psychotria rubra (Lour.) Poir.	2.13 ± 1.01	2.84 ± 1.03	0.042	0.110	98
	Diospyros morrisiana Hance	8.98 ± 4.60	9.59 ± 4.49	0.246	1.553	31
	Mytilaria laosensis Lec.	10.17 ± 4.87	11.15 ± 4.13	1.288	8.570	129
	Evodia lepta (Spreng.) Merr.	4.08 ± 3.44	5.10 ± 2.88	0.645	3.271	289
	Cunninghamia lanceolata (Lamb.) Hook.	21.29 ± 5.87	21.5	25.00	260.6	654

Stand	Species	Mean DBH ± SD (cm)	h ± (m)	Basal area (m^2)	V (m^3)	N
	Saurauia tristyla DC.	5.25 ± 3.43	5.06 ± 2.57	0.788	3.330	255
	Oreocnide obovata (C. H. Wright) Merr. var. *mucronata* C. J. Chen	1.57 ± 0.53	2.69 ± 0.80	0.061	0.145	276
	Litsea panamonja (Nees) Hook.	5.38 ± 4.12	6.46 ± 4.01	0.154	0.872	43
	Schefflera octophylla (Lour.) Harms	5.77 ± 4.41	7.13 ± 4.73	0.139	0.890	34
	Macaranga denticulata (Bl.) Muell. Arg.	10.59 ± 5.03	10.38 ± 3.90	0.375	2.344	35
	Other species	4.54 ± 4.96	5.64 ± 4.00	1.450	12.06	408