Supplementary material

Figure S1: Dimensions of the Bassioué pond (map from Google map) and sampling points for the autumn campaign (November 2018)

Table S1: Pesticide concentrations in µg.kg^{-1} in the pond sediments for both campaigns (Autumn and summer)

	Site	metolachlor	boscalid	epoxyconazole	tebuconazole	aclonifen	pendimethaline
Autumn	PM	1.90	5.21	2.73	7.51	0.31	0.20
	AM2	2.21	5.18	2.14	7.56	0.25	0.16
	AMC1	2.46	5.52	2.48	10.57	0.37	0.15
	AMC2	2.67	6.46	2.83	9.87	0.33	0.19
	AMC3	2.52	5.78	2.58	10.13	0.34	0.17
	C1	2.70	4.65	2.12	11.26	0.22	0.17
	C3	3.70	5.82	2.62	7.15	0.34	0.19
	C5	2.96	4.30	1.76	8.49	0.18	0.19
	AVC1	2.16	4.01	1.83	12.19	0.22	0.16
	AVC3	3.13	6.25	2.95	6.56	0.38	0.21
	AVC5	3.07	5.22	2.46	10.04	0.33	0.16
	AV1	1.19	4.72	1.54	7.47	0.17	0.13
	AV3	3.76	6.24	2.95	5.86	0.35	0.19
	AV5	2.45	7.68	1.99	9.75	0.23	0.15
Summer - Surface	PM	0.61	2.87	2.17	7.39	0.75	0.68
	AM2	1.06	3.41	2.38	24.65	0.68	0.72
	C1	1.33	3.45	2.19	24.12	0.70	0.70
	C3	1.71	3.33	2.85	27.36	0.81	0.72
	C5	1.43	3.46	2.08	24.68	0.69	0.70
	AV1	1.21	2.66	1.53	28.15	0.57	0.68
	AV3	1.64	3.54	2.79	23.08	0.87	0.70
	AV5	1.39	3.30	2.20	13.88	0.82	0.68
Summer - Depth	PM	0.68	18.71	2.20	2.35	1.09	0.63
	AM2	5.36	12.74	4.33	8.93	0.69	0.64
	C1	3.40	10.29	2.87	10.93	0.70	0.63
	C3	3.95	9.44	2.87	9.34	0.71	0.64
	C5	4.07	9.61	3.05	10.72	0.79	0.68
	AV1	3.46	6.92	2.22	9.00	0.74	0.68
	AV3	4.19	10.06	3.02	8.17	0.79	0.65
	AV5	4.01	8.73	3.04	6.59	0.80	0.66

Table S2: Sediment physico-chemical characteristics

Season	Site	Clay (%)	Fine silt (%)	Coarse silt (%)	Sand (%)	Gravel (%)	POC ($mg.g^{-1}$)	C/N
Autumn - Surface	PM	9.6	57.3	17.7	14.6	0.8	11.6	6.4
	AM1	11.7	63.7	14.4	8.3	1.8	10.5	5.8
	AM2	9.4	61.3	17.4	11.4	0.4	9.8	5.6
	AM3	11.5	66.1	16.3	6.0	0.3	11.0	5.6
	AMC1	14.5	73.5	10.0	2.0	0.0	11.9	5.6
	AMC2	16.8	72.0	10.1	1.1	0.0	11.3	5.5
	AMC3	13.7	73.7	9.4	3.0	0.2	11.6	5.4
	C1	11.5	77.0	9.3	2.1	0.1	11.7	5.3
	C2	15.5	76.4	6.5	1.4	0.2	10.6	5.3
	C3	15.6	75.7	7.1	1.5	0.1	10.1	5.8
	C4	16.6	75.5	6.1	1.7	0.1	10.8	5.2
	C5	11.7	80.9	6.3	1.2	0.0	11.2	5.2
	AVC1	15.0	77.1	7.4	0.5	0.0	13.5	5.2
	AVC2	16.4	76.6	6.0	1.0	0.2	11.3	5.5
	AVC3	20.3	71.5	5.1	2.7	0.4	10.5	5.1
	AVC4	18.7	72.9	5.3	2.5	0.5	10.5	5.7
	AVC5	16.7	76.9	5.9	0.5	0.0	10.6	5.3
	AV1	16.6	59.5	17.2	6.7	0.0	13.1	5.5
	AV2	17.5	77.2	4.3	0.8	0.2	11.2	4.9
	AV3	17.1	75.5	5.2	1.8	0.4	11.1	5.0
	AV4	17.6	74.7	5.4	1.9	0.4	10.7	5.0
	AV5	13.8	79.4	6.4	0.4	0.0	12.3	4.8
Summer -Surface	PM	9.7	65.1	17.5	7.2	0.5	9.2	7.8
	AM2	7.6	65.6	17.5	6.8	2.5	7.6	6.4
	C1	11.8	78.5	7.8	1.7	0.3	11.9	6.1
	C3	11.0	81.0	6.0	1.7	0.3	11.1	6.6
	C5	11.3	82.4	4.1	1.7	0.5	11.5	7.0
	AV1	12.1	73.8	6.2	4.7	3.2	12.3	6.0
	AV3	13.7	80.8	3.8	1.1	0.6	11.8	6.3
	AV5	14.7	80.9	4.2	0.2	0.0	11.3	6.2
Summer -Middle	PM	2.4	15.6	4.7	3.0	74.4	9.3	7.4
	AM2	14.4	79.6	5.1	1.0	0.0	11.1	7.1
	C1	13.0	75.0	8.7	2.9	0.4	12.6	6.9
	C3	13.9	72.7	10.1	3.2	0.1	11.3	7.2
	C5	14.4	79.6	5.1	1.0	0.0	12.8	6.6
	AV1	12.3	73.4	9.4	4.5	0.5	12.8	6.4
	AV3	16.0	74.0	7.0	2.3	0.7	11.7	6.8
	AV5	12.8	81.7	5.1	0.3	0.0	12.2	6.8
Summer - Depth	PM	3.2	15.9	3.2	4.8	72.8	6.8	6.3
	AM2	17.4	58.3	10.6	12.5	1.2	9.4	6.3
	C1	19.0	64.4	9.2	6.7	0.7	9.2	6.0
	C3	19.9	65.6	9.9	3.1	1.5	8.9	5.9
	C5	17.9	71.1	7.2	3.4	0.5	9.2	5.6
	AV1	19.1	71.3	7.7	1.8	0.1	10.2	5.9
	AV3	20.4	67.3	7.2	3.8	1.3	8.8	5.5
	AV5	20.9	69.5	6.8	2.7	0.1	9.0	5.5

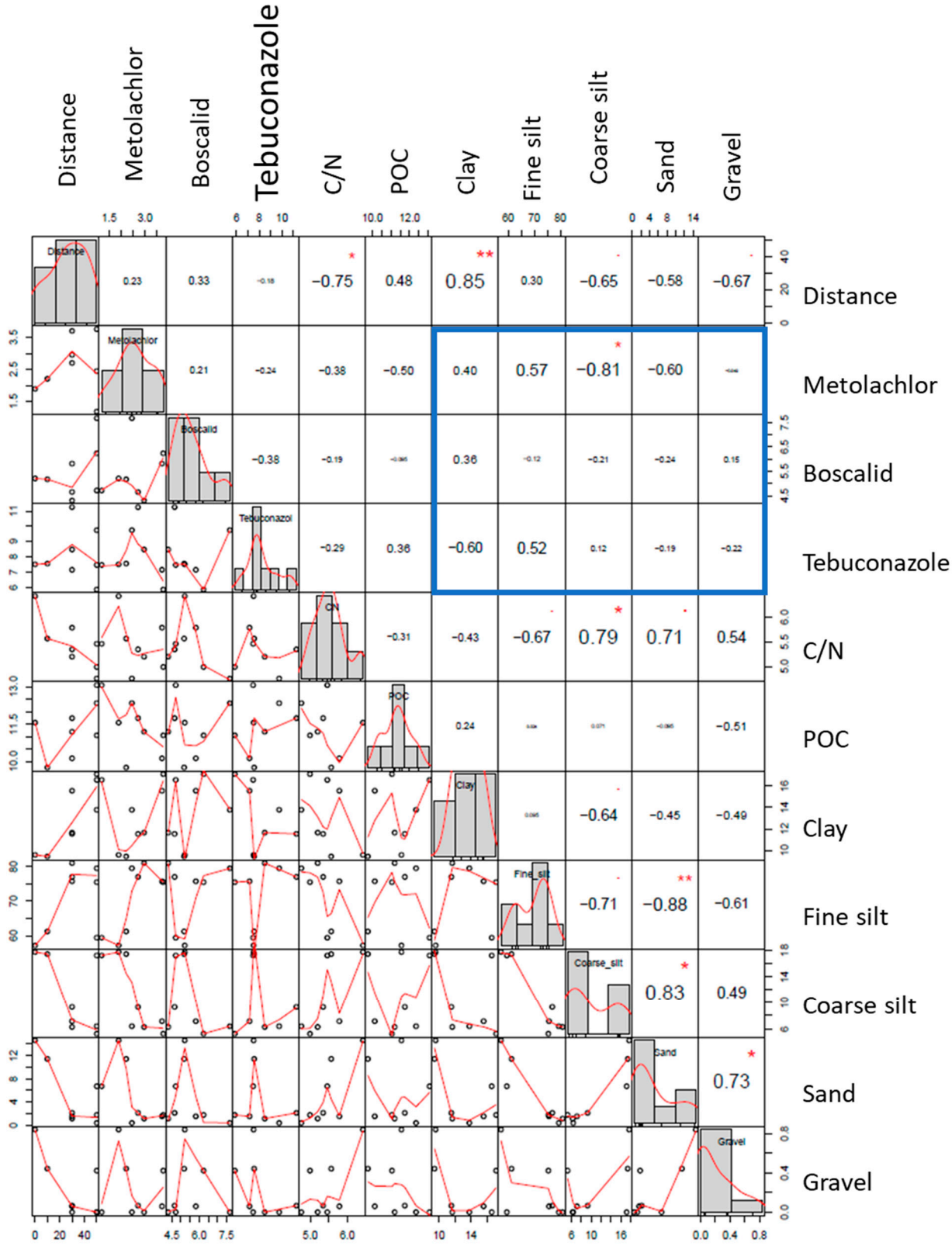

*Figure S2: Correlation matrix (Spearman r_s) for parameters measured in the sediment samples collected during the autumn campaign at the surface. The upper triangular matrix shows the correlation strength with the significance levels (red stars): no star means not significant, * p-value < 0.05, ** p-value <0.01, *** p-value <0.001. Histograms are kernel density estimation. The lower triangular matrix is composed by the bivariate scatter plots with a fitted smooth line. The r_s underlined by the blue rectangle refers to the relationships between pesticide content and sediment texture.*

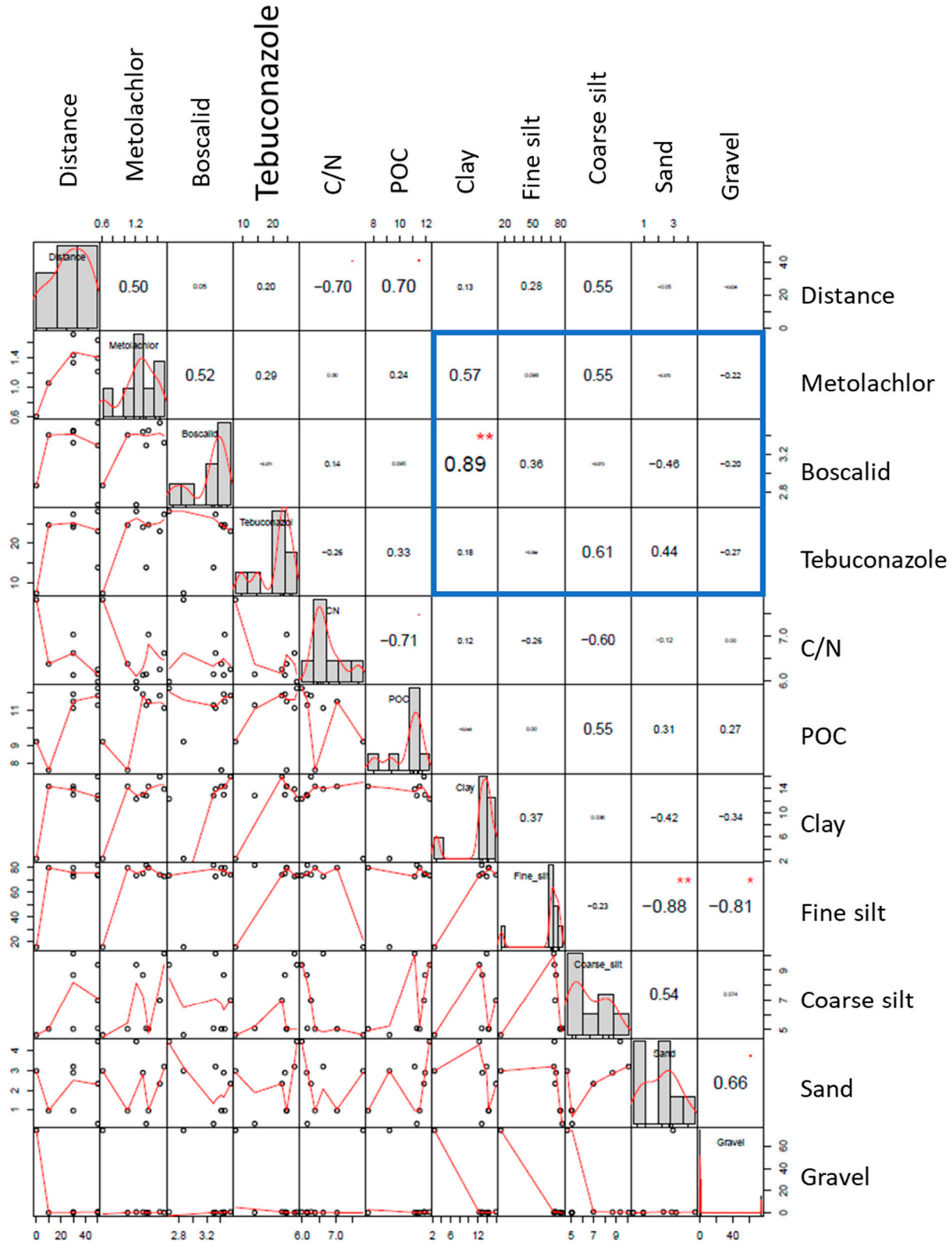

*Figure S3: Correlation matrix (Spearman r_s) for parameters measured in the sediment samples collected during the summer campaign at the surface. The upper triangular matrix shows the correlation strength with the significance levels (red stars): no star means not significant, * p-value < 0.05, ** p-value <0.01, *** p-value <0.001. Histograms are kernel density estimation. The lower triangular matrix is composed by the bivariate scatter plots with a fitted smooth line. The r_s underlined by the blue rectangle refers to the relationships between pesticide content and sediment texture.*

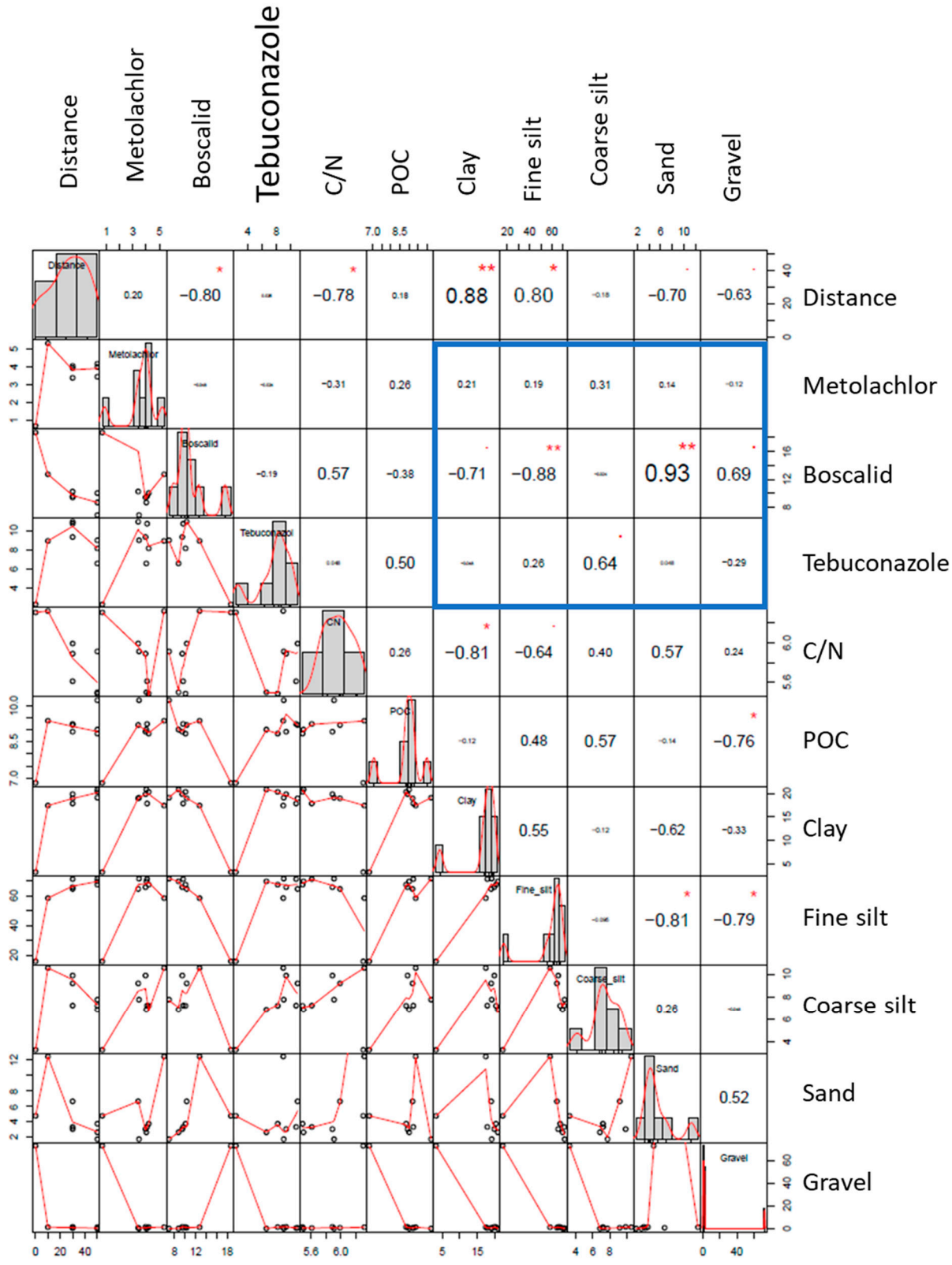

*Figure S4: Correlation matrix (Spearman r_s) for parameters measured in the sediment samples collected during the summer campaign at the depth. The upper triangular matrix shows the correlation strength with the significance levels (red stars): no star means not significant, * p-value < 0.05, ** p-value <0.01, *** p-value <0.001. Histograms are kernel distribution estimation. The lower triangular matrix is composed by the bivariate scatter plots with a fitted smooth line. The r_s underlined by the blue rectangle refers to the relationships between pesticide content and sediment texture.*