

Supplementary material for the article:

Rennart, T. Does Soil Organic Matter in Mollic Horizons of Central/East European Floodplain Soils Have Common Chemical Features? *CATENA* **2021**, *200*, 105192. <https://doi.org/10.1016/j.catena.2021.105192>.

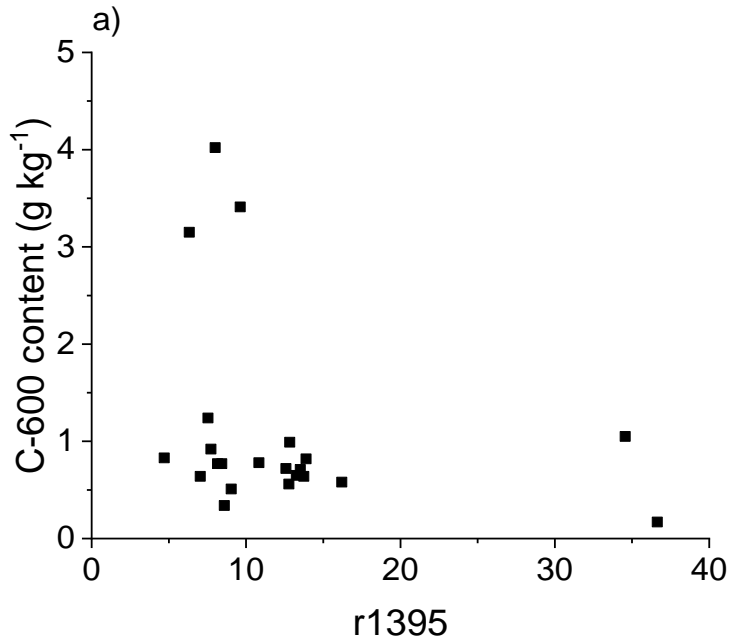


Fig. S1a

Ratio r1395 derived from diffuse reflectance infrared Fourier transform spectroscopy and content of thermostable C (C-600) of non-mollic samples from floodplain soils.

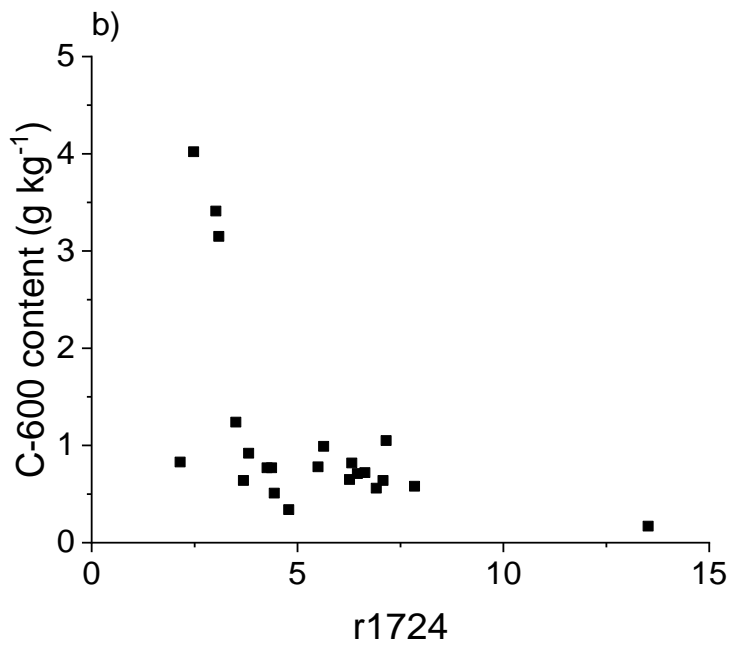


Fig S1b

Ratio r1724 derived from diffuse reflectance infrared Fourier transform spectroscopy and content of thermostable C (C-600) of non-mollic samples from floodplain soils.

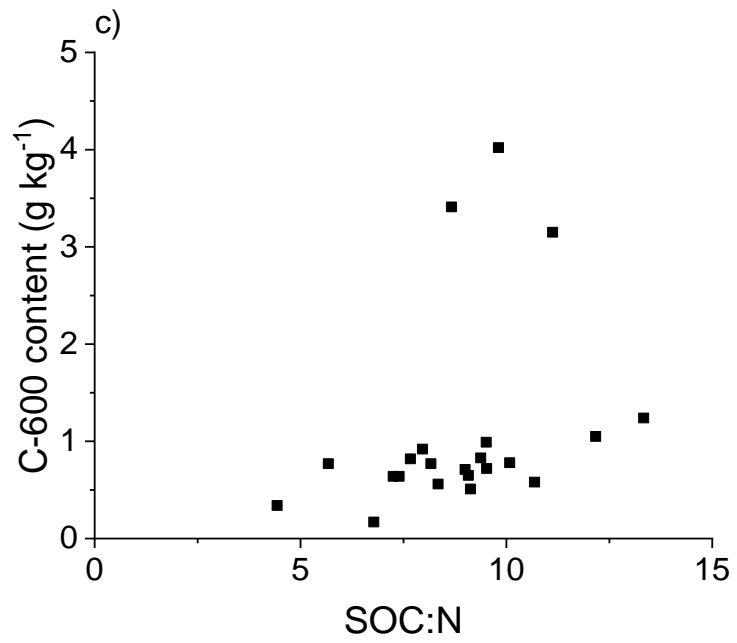


Fig. S1c:  
Contents of thermostable carbon (C-600) and ratio of soil organic carbon to total nitrogen contents of samples from non-mollic samples from floodplain soils.

**Table S1**

Relative proportions of C fractions related to total and organic C, and CaCO<sub>3</sub> contents calculated from inorganic C. Sample numbers marked with an asterisk indicates sampling of corresponding horizons of a soil profile.

	Country	River	relative to total C			relative to organic C		CaCO <sub>3</sub> (g kg <sup>-1</sup> )
			C-450 <sup>1</sup>	C-600 <sup>2</sup>	IC <sup>3</sup> (%)	C-450	C-600	
#01	Austria	Danube	50.6	6.0	43.4	89.4	10.6	214.2
#02		Danube	59.6	5.8	34.6	91.1	8.9	226.4
#03		Danube	52.3	5.4	42.3	90.6	9.4	231.7
#04		Danube	47.3	6.0	46.6	88.7	11.3	219.2
#05		Danube	53.7	5.7	40.6	90.4	9.6	226.4
#06	Belarus	Western Berezina	98.8	1.2	- <sup>4</sup>	98.8	1.2	-
#07*	Croatia	Drava	94.2	4.0	1.8	95.9	4.1	4.3
#08*		Drava	33.0	7.0	60.0	82.5	17.5	65.1
#09*		Drava	39.8	5.4	54.8	88.0	12.0	70.1
#10*		Drava	15.6	1.7	82.6	90.0	10.0	67.1
#11		Drava	75.6	6.0	18.4	92.6	7.4	33.4
#12		Drava	93.4	3.7	2.8	96.2	3.8	3.4

#13		Drava	76.3	6.4	17.2	92.2	7.8	20.6
#14		Drava	83.6	4.9	11.5	94.5	5.5	21.4
#15		Drava	87.3	8.8	3.8	90.8	9.2	6.9
#16		Drava	93.4	4.6	2.1	95.3	4.7	4.0
#17		Drava	50.6	8.8	40.6	85.2	14.8	68.8
#18	Czech Republic	Vltava	93.1	5.4	1.5	94.5	5.5	1.7
#19		Vltava	92.5	5.9	1.6	94.0	6.0	2.1
#20		Vltava	92.2	5.9	1.9	94.0	6.0	2.0
#21		Vltava	93.0	5.4	1.6	94.5	5.5	1.9
#22		Vltava	92.3	5.6	2.1	94.3	5.7	1.7
#23		Labe	90.0	7.4	2.5	92.4	7.6	1.6
#24		Labe	91.7	6.5	1.8	93.4	6.6	1.2
#25		Labe	40.3	9.1	50.6	81.6	18.4	48.9
#26		Labe	96.7	1.9	1.4	98.1	1.9	0.8
#27		Morava	96.0	3.0	0.9	96.9	3.1	0.8
#28		Morava	95.9	3.1	1.0	96.9	3.1	1.1
#29		Morava	95.9	3.4	0.6	96.5	3.5	0.8
#30		Morava	94.9	3.5	1.6	96.4	3.6	1.2
#31		Morava	94.3	4.2	1.5	95.7	4.3	0.9

#32		Litavka	95.1	4.5	0.4	95.5	4.5	1.9
#33		Litavka	95.1	4.5	0.4	95.5	4.5	1.2
#34		Litavka	95.9	3.8	0.3	96.2	3.8	0.8
#35		Litavka	95.3	4.2	0.5	95.8	4.2	3.2
#36		Litavka	81.4	17.4	1.3	82.4	17.6	1.4
#37		Litavka	94.5	4.8	0.7	95.1	4.9	3.3
#38		Litavka	97.5	2.3	0.2	97.7	2.3	0.8
#39		Litavka	95.2	4.5	0.2	95.5	4.5	1.1
#40		Litavka	96.0	3.7	0.2	96.3	3.7	1.2
#41*	Germany	Rhine	46.8	6.3	46.9	88.1	11.9	230.6
#42*		Rhine	40.6	7.0	52.4	85.3	14.7	196.2
#43*		Danube	94.9	4.4	0.7	95.6	4.4	1.4
#44*		Danube	40.6	7.0	52.4	85.3	14.7	196.2
#45*		Danube	96.3	3.2	0.5	96.8	3.2	0.5
#46*		Danube	92.6	5.3	2.1	94.6	5.4	1.1
#47*		Danube	96.9	2.7	0.5	97.3	2.7	0.6
#48*		Danube	96.4	2.9	0.6	97.0	3.0	0.5
#49*		Danube	96.4	2.9	0.7	97.1	2.9	0.4
#50*		Wutach	33.0	5.7	61.4	85.3	14.7	210.3

#51*		Wutach	31.5	4.8	63.7	86.7	13.3	224.7
#52*		Saale	89.6	8.1	2.2	91.7	8.3	11.6
#53*		Saale	90.4	7.9	1.7	91.9	8.1	7.1
#54*		Saale	84.6	8.3	7.1	91.1	8.9	19.2
#55*		Saale	91.3	7.7	0.9	92.2	7.8	5.2
#56*		Saale	91.2	7.0	1.8	92.9	7.1	8.7
#57*		Saale	92.4	6.8	0.9	93.2	6.8	2.8
#58		Wupper	83.3	11.8	4.9	87.6	12.4	25.6
#59		Wupper	71.9	18.5	9.6	79.6	20.4	62.5
#60		Wupper	81.1	13.9	5.0	85.4	14.6	20.7
#61		Wupper	74.8	17.3	7.9	81.2	18.8	28.4
#62*		Ammer	58.0	3.9	38.1	93.8	6.2	242.5
#63*		Ammer	54.1	3.4	42.5	94.2	5.8	204.8
#64*		Ammer	37.9	3.1	59.1	92.5	7.5	375.9
#65*		Ammer	20.7	2.7	76.7	88.6	11.4	416.9
#66*	Poland	Wista	74.1	5.0	20.9	93.7	6.3	74.1
#67*		Wista	56.9	5.3	37.8	91.5	8.5	59.2
#68*		Wista	55.4	5.5	39.1	90.9	9.1	48.4
#69*		Wista	59.5	5.2	35.2	91.9	8.1	32.4

#70*	Wista	72.1	6.0	22.0	92.4	7.6	35.1
#71*	Wista	63.6	6.0	30.4	91.4	8.6	27.2
#72*	Wista	63.9	5.7	30.4	91.8	8.2	33.7
#73*	Wista	58.7	6.4	34.9	90.1	9.9	32.2
#74*	Wista	56.7	5.7	37.6	90.8	9.2	35.5
#75*	Wista	82.4	4.1	13.6	95.3	4.7	31.4
#76*	Wista	74.5	6.4	19.1	92.1	7.9	19.5
#77*	Wista	83.6	6.3	10.1	93.0	7.0	14.2
#78*	Wista	66.9	6.0	27.1	91.8	8.2	27.1
#79*	Wista	95.2	4.1	0.7	95.9	4.1	0.8
#80*	Wista	96.4	3.0	0.7	97.0	3.0	0.5
#81*	Wista	94.4	4.2	1.4	95.7	4.3	1.5
#82	Wista	95.2	4.1	0.6	95.8	4.2	0.8
#83*	Wista	94.6	4.6	0.8	95.4	4.6	0.6
#84*	Wista	96.2	3.5	0.3	96.5	3.5	0.2
#85	Wista	95.0	4.3	0.7	95.7	4.3	1.7
#86	Wista	95.0	4.2	0.8	95.7	4.3	1.2
#87	Wista	83.6	6.5	9.9	92.8	7.2	26.3



#88		Wista	91.7	5.8	2.4	94.0	6.0	14.6
#89		Wista	93.1	6.3	0.6	93.6	6.4	3.1
#90		Wista	89.8	5.5	4.6	94.2	5.8	16.0
#91*	Romania	Aries	96.1	3.3	0.6	96.7	3.3	1.0
#92*		Aries	94.8	4.5	0.7	95.5	4.5	0.6
#93*		Aries	72.4	5.7	21.9	92.8	7.2	61.7
#94*		Aries	65.3	7.0	27.7	90.3	9.7	67.2
#95*		Aries	95.8	3.1	1.0	96.8	3.2	3.7
#96*		Aries	95.1	3.1	1.8	96.9	3.1	2.5
#97	Russian Fed.	Devitsa	71.4	6.2	22.4	92.0	8.0	52.6
#98		Kamushki	94.5	5.2	0.2	94.7	5.3	1.7
#99		Solova	89.8	5.2	5.0	94.6	5.4	26.4
#100	Serbia	Belica	95.5	4.5	-	95.5	4.5	-
#101		Zapadna	92.0	6.0	2.0	93.9	6.1	4.3
		Morava						
#102		Zapadna	91.1	7.1	1.8	92.7	7.3	2.5
		Morava						
#103		Zapadna	83.4	7.7	8.9	91.5	8.5	22.0
		Morava						

#104		Zapadna Morava	96.5	3.5	-	96.5	3.5	-
#105		Zapadna Morava	90.6	6.1	3.3	93.7	6.3	6.9
#106		Jadar	94.8	5.2	-	94.8	5.2	-
#107		Jadar	97.9	2.1	-	97.9	2.1	-
#108		Jadar	96.6	3.4	-	96.6	3.4	-
#109		Jadar	64.5	5.4	30.1	92.3	7.7	78.3
#110		Raca	96.7	3.3	-	96.7	3.3	-
#111		Mlava	90.0	4.7	5.2	95.0	5.0	11.5
#112		Skrapez	94.1	5.1	0.8	94.9	5.1	3.0
#113*	Slovakia	Hron	95.8	4.2	-	95.8	4.2	-
#114*		Hron	96.2	3.8	-	96.2	3.8	-
#115*		Turiec	53.9	4.6	41.5	92.1	7.9	275.4
#116*		Turiec	39.9	4.8	55.3	89.3	10.7	253.9
#117*		Blh	95.2	4.6	0.2	95.4	4.6	0.4
#118*		Blh	94.9	4.9	0.2	95.1	4.9	0.3
#119*		Váh	88.2	4.2	7.5	95.4	4.6	17.7
#120*		Váh	78.2	5.2	16.6	93.8	6.2	29.6

#121*	Danube	42.5	8.1	49.4	84.0	16.0	153.0
#122*	Danube	43.8	10.9	45.3	80.1	19.9	140.0
#123*	Dunaj	37.7	8.2	54.1	82.2	17.8	227.4
#124*	Dunaj	37.1	8.8	54.0	80.8	19.2	194.6

<sup>1</sup> organic carbon combusted at T = 20-450 °C (C-450). <sup>2</sup> organic carbon combusted at T = 451-600 °C (C-600). <sup>3</sup> inorganic carbon. <sup>4</sup> below detection limit.