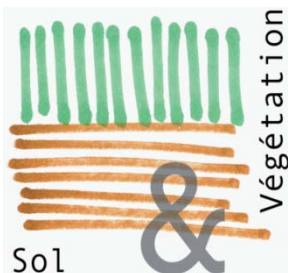


LE RÔLE FILTRE DU SOL FORESTIER DANS LA QUALITE DE L'EAU

Approche descriptive et analytique
de la station du Gibloux (FR)


Laboratoire Sol & Végétation

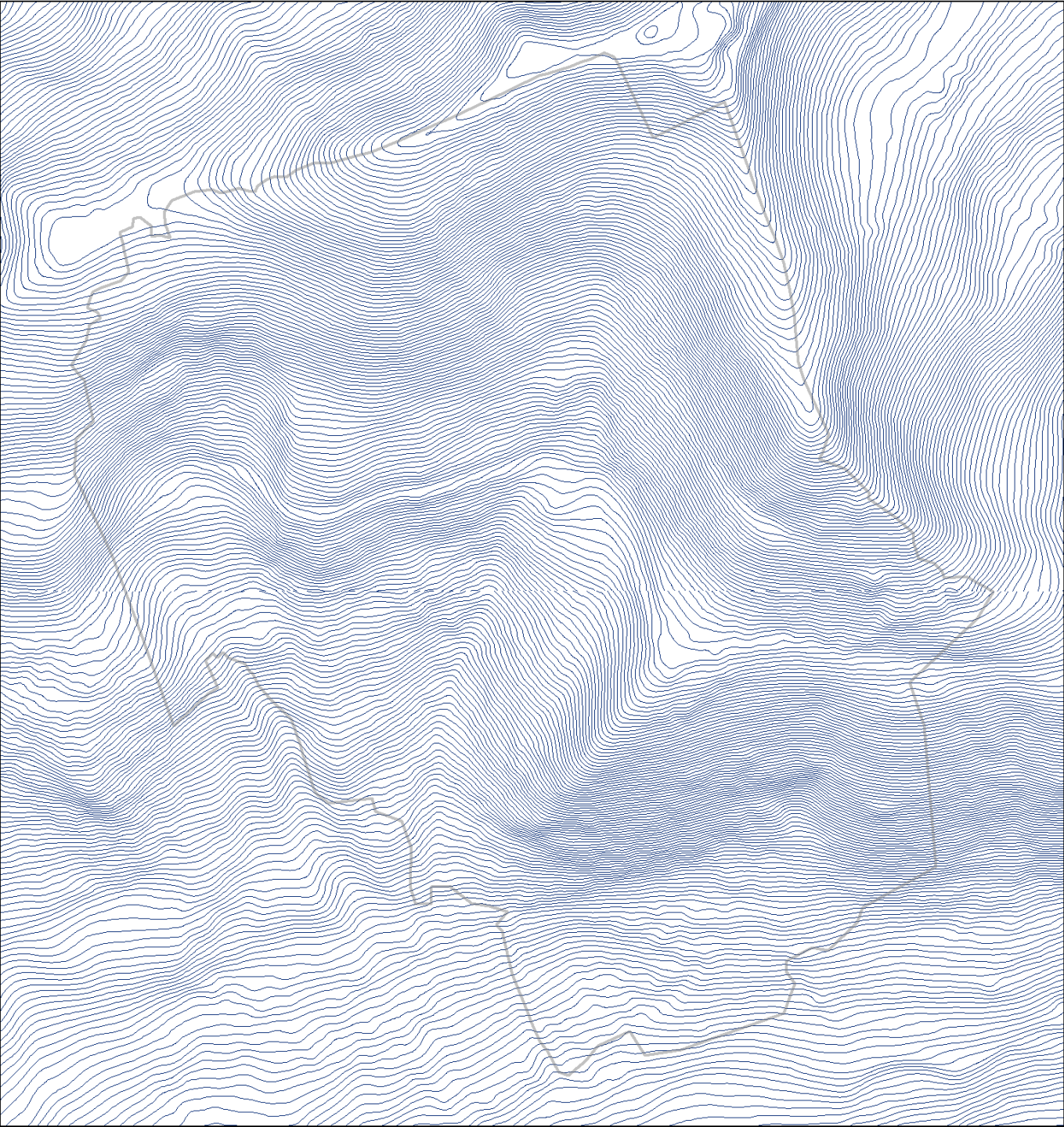
Jonathan Sottas



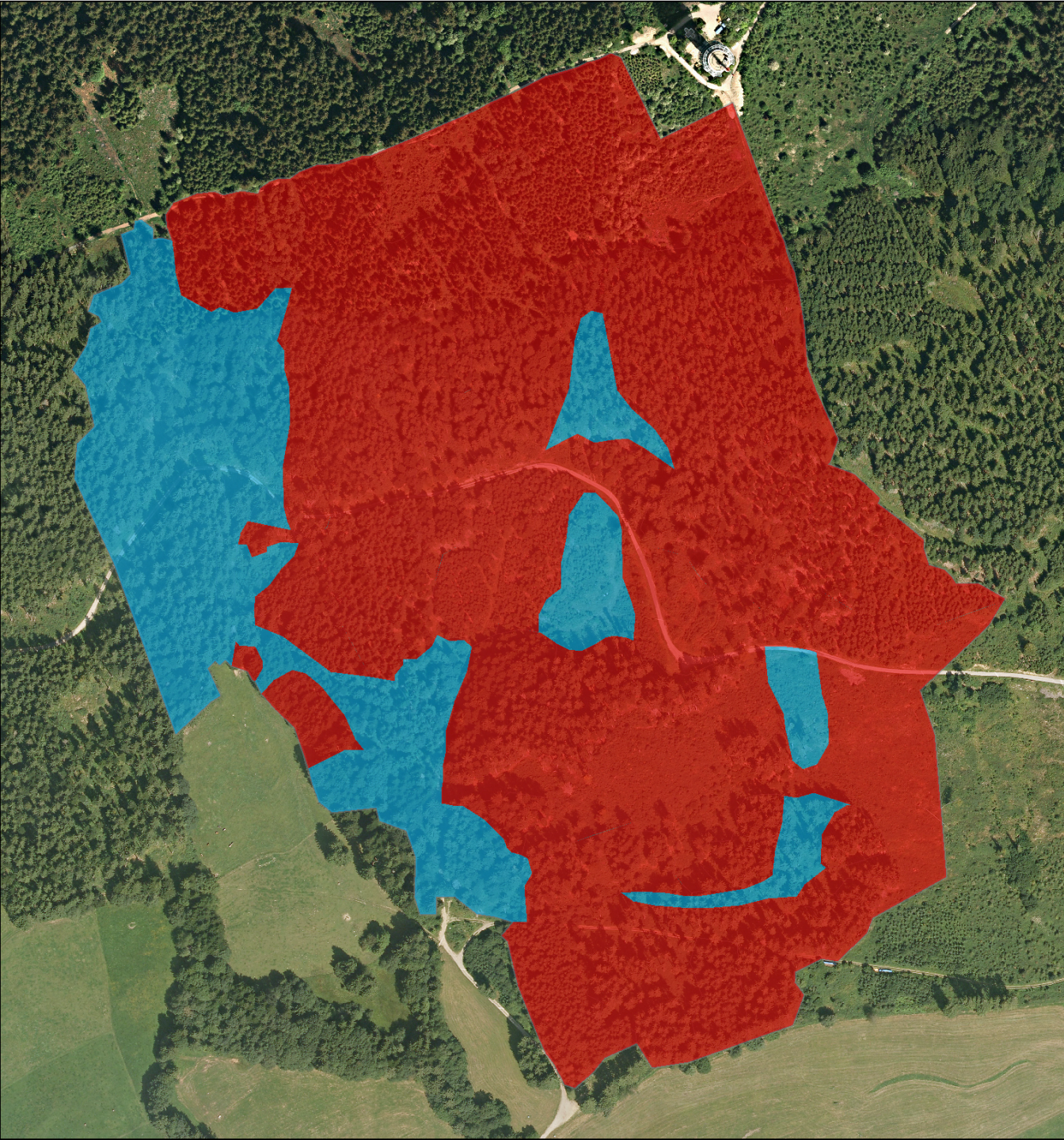


Légende

 Zone d'étude pedo



SOLS



Légende

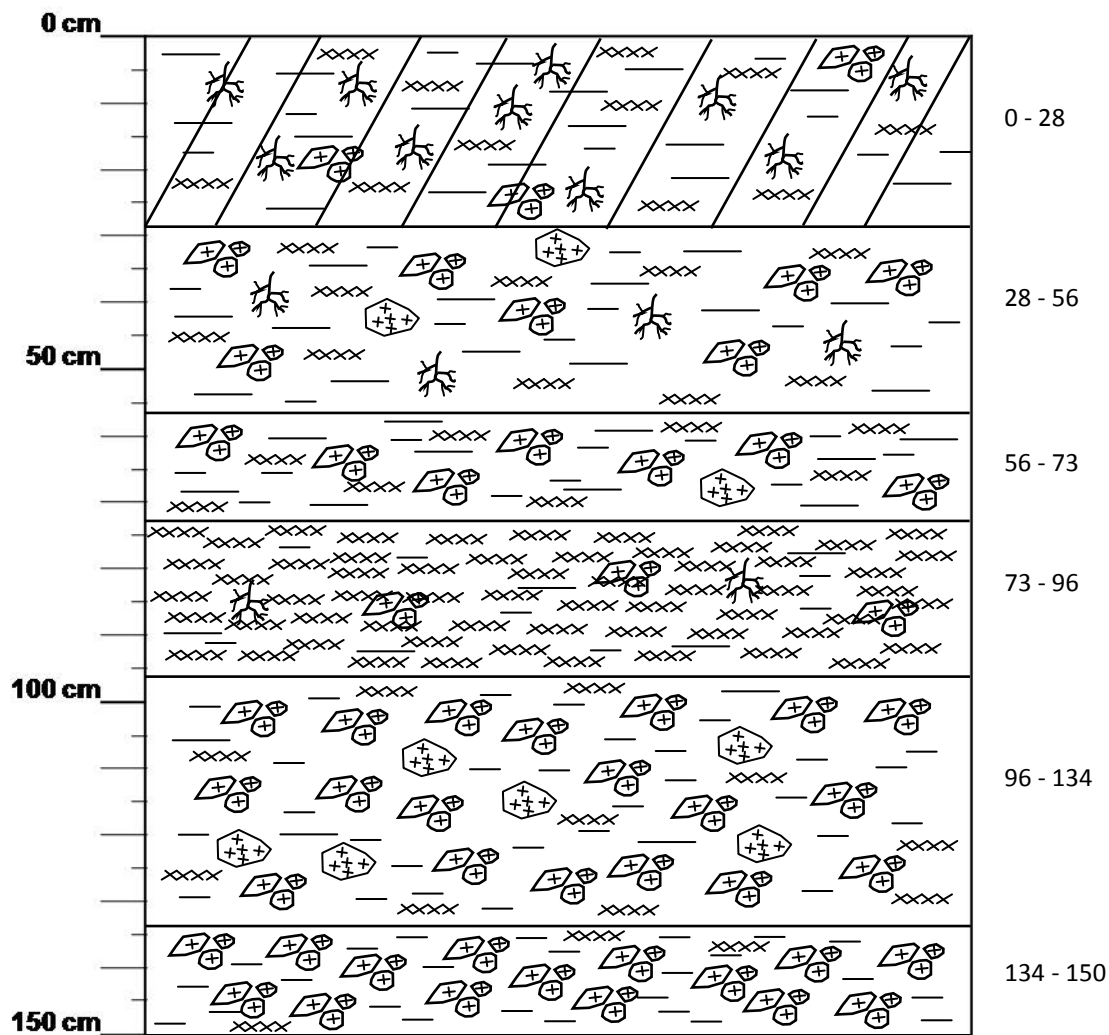
Carte_pedo

SOL

BRUNISOL

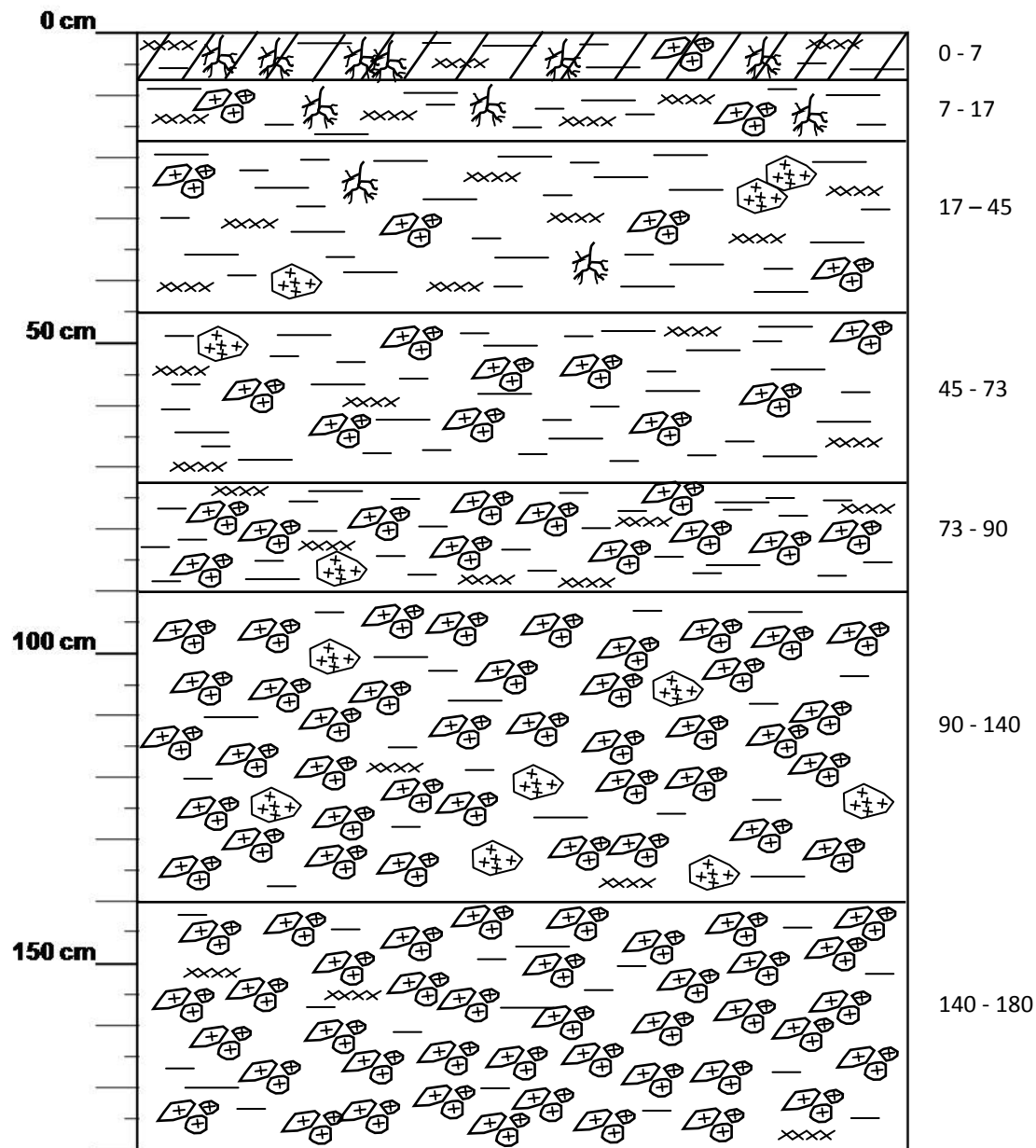
BRUNISOL pseudoluviq

Gib. 6 : BRUNISOL DYSTRIQUE pseudoluvique à mésomull



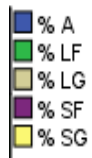
A / Sh / S / S-BT / D / II M

Gib. 10 BRUNISOL DYSTRIQUE à dysmoder



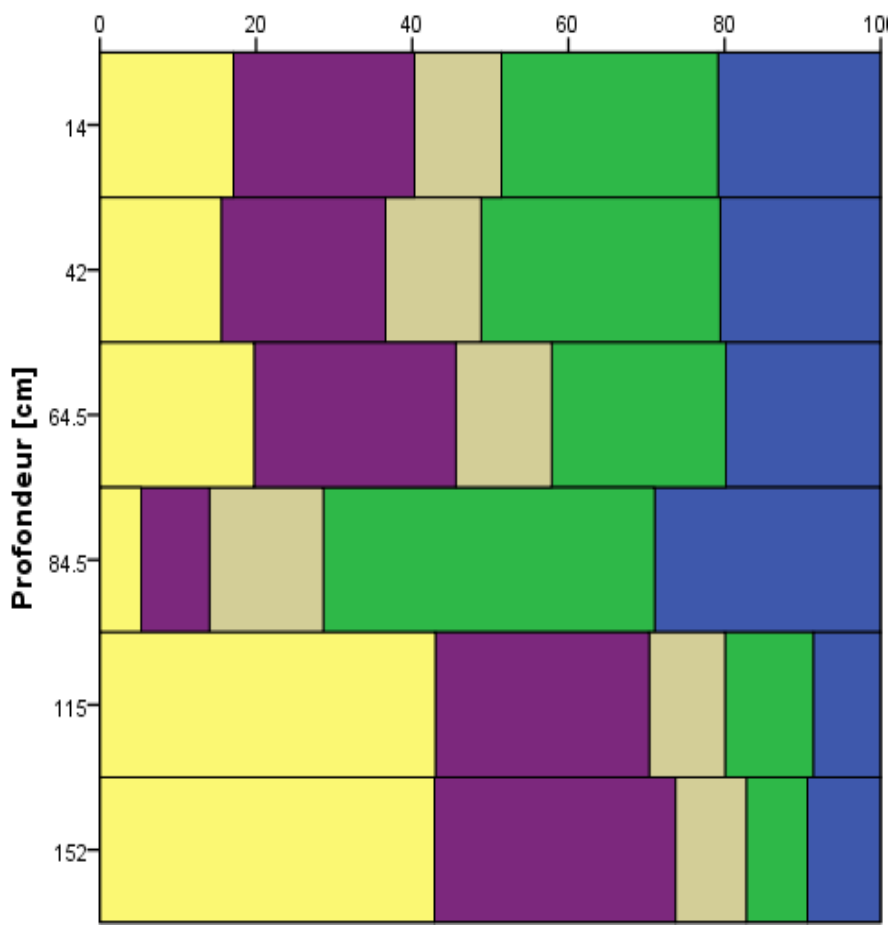
A / Sh1 / Sh2 / S / D / IID / IIM

Granulométrie



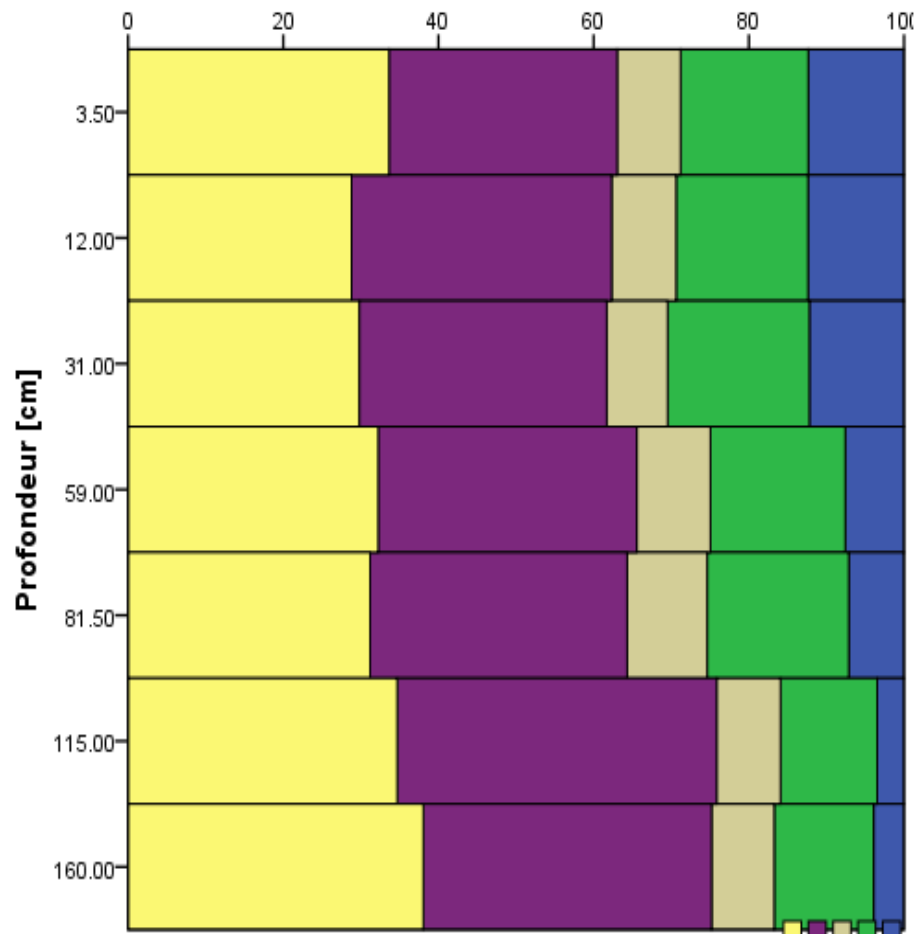
BRUNISOL pseudoluvique

Pourcentage de fractions granulométriques



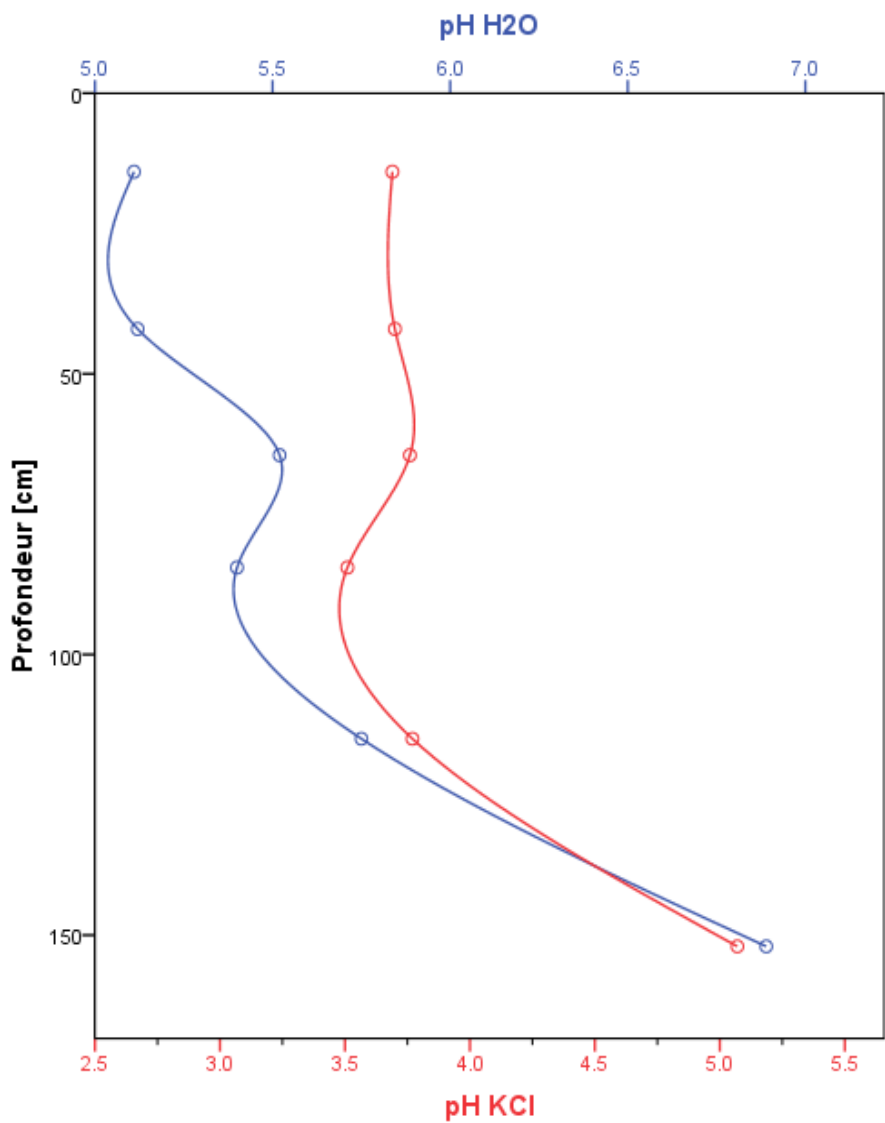
BRUNISOL

Pourcentage de fractions granulométriques

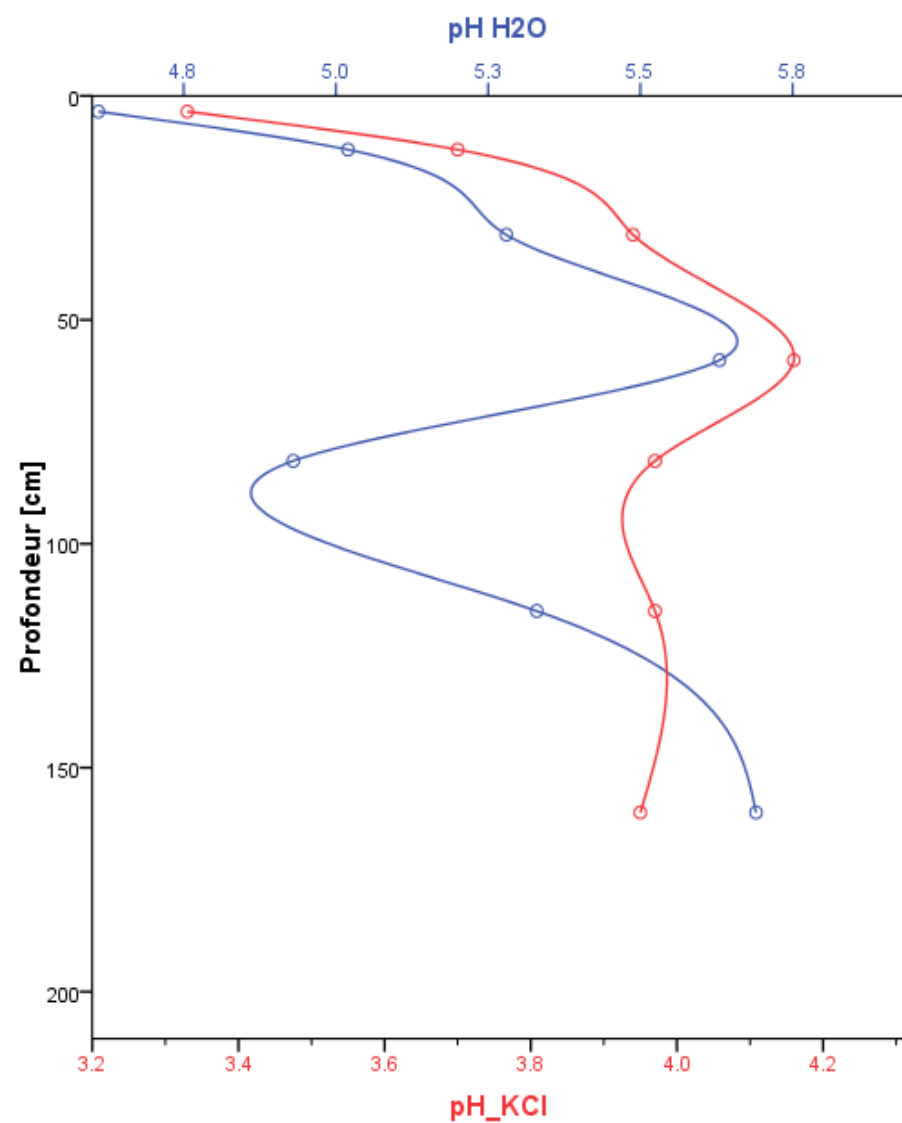


pH

BRUNISOL pseudoluviq

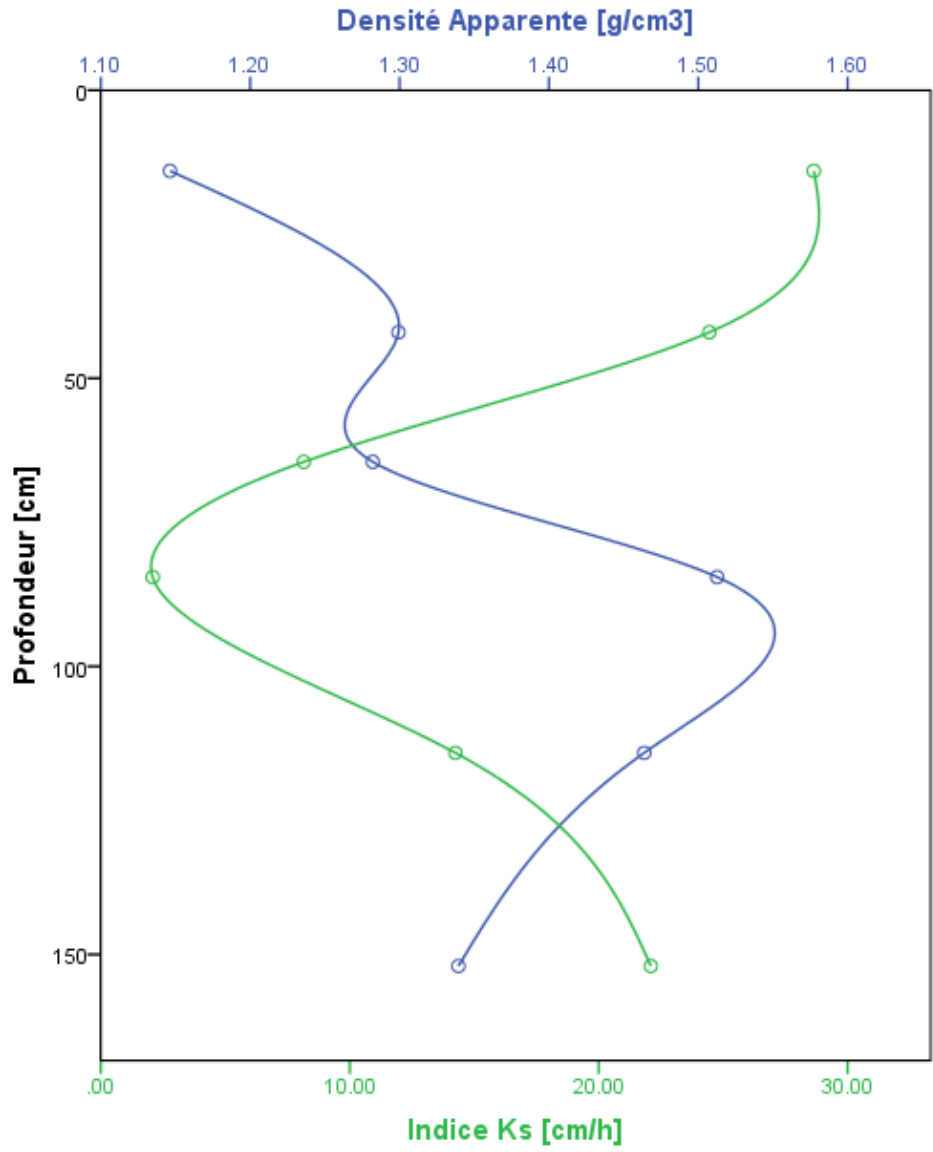


BRUNISOL

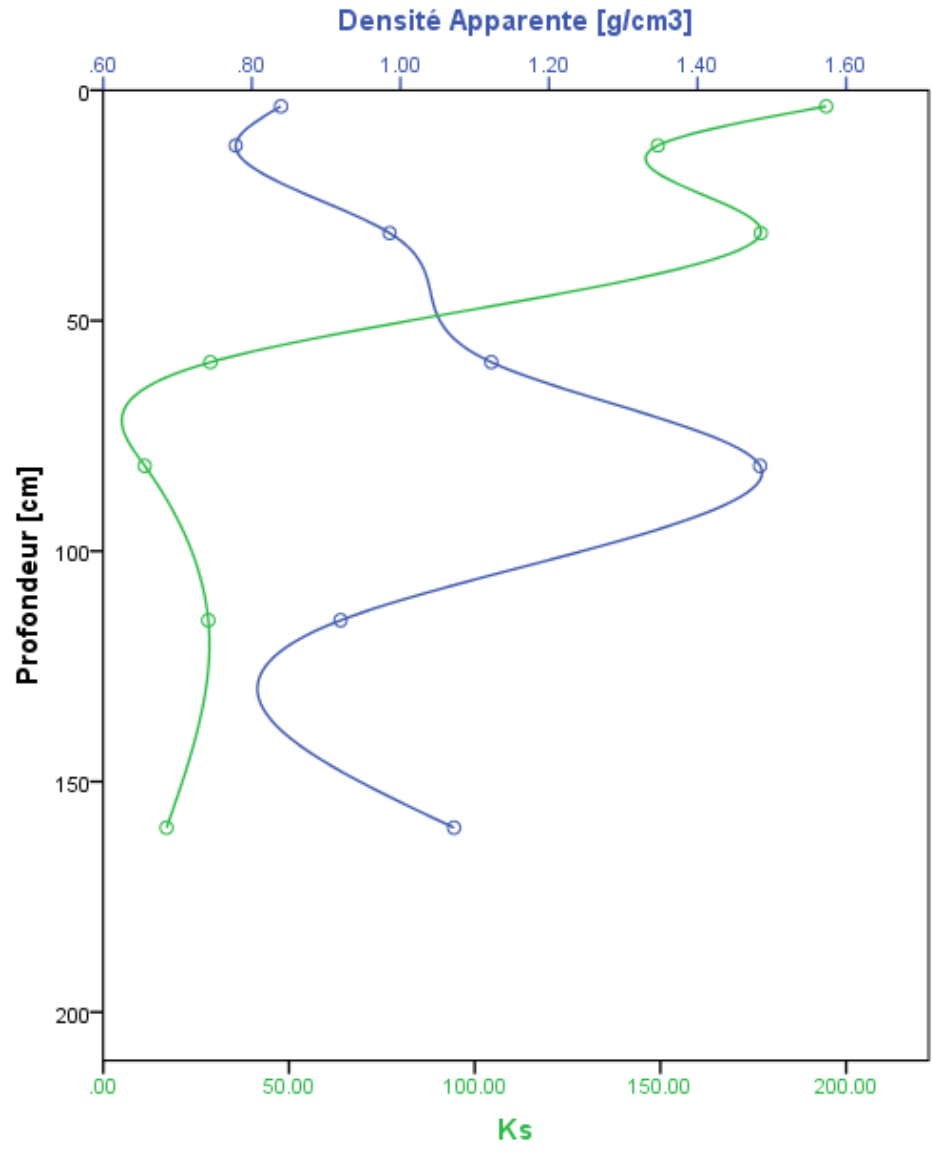


Densité apparente & Percolation

BRUNISOL pseudoluviq

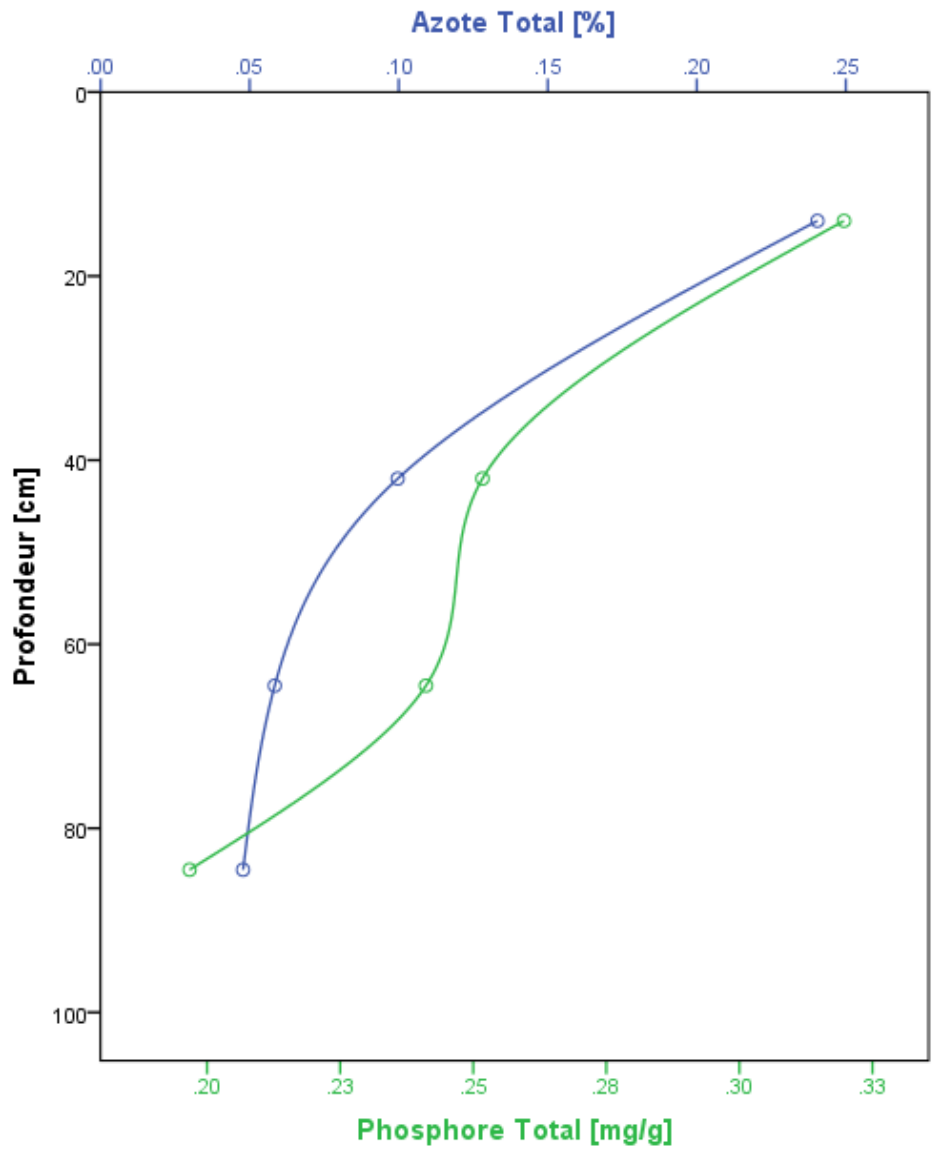


BRUNISOL

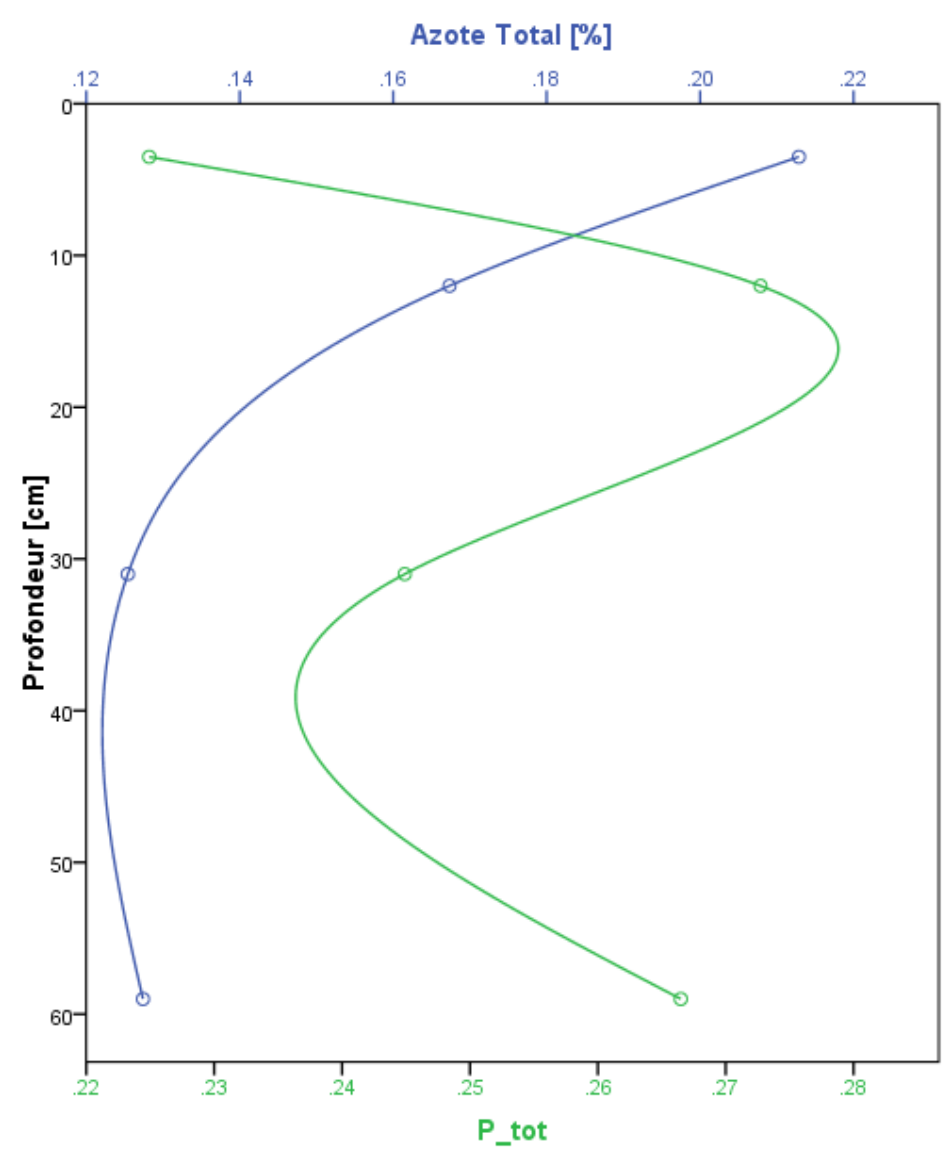


Azote total & Phosphore total

BRUNISOL pseudoluviq

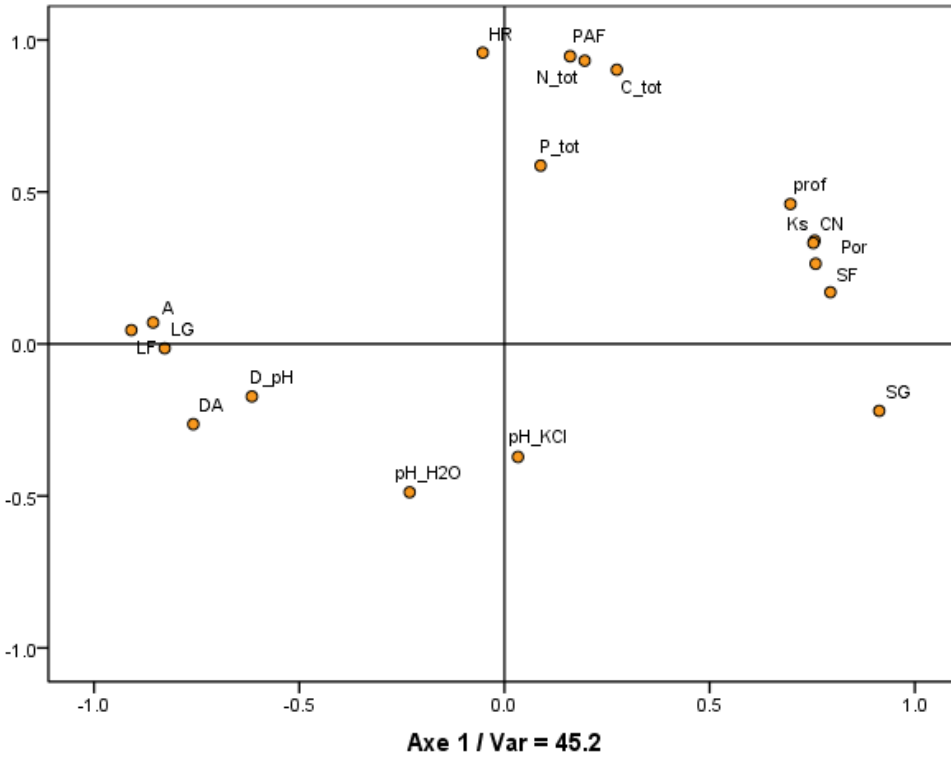


BRUNISOL



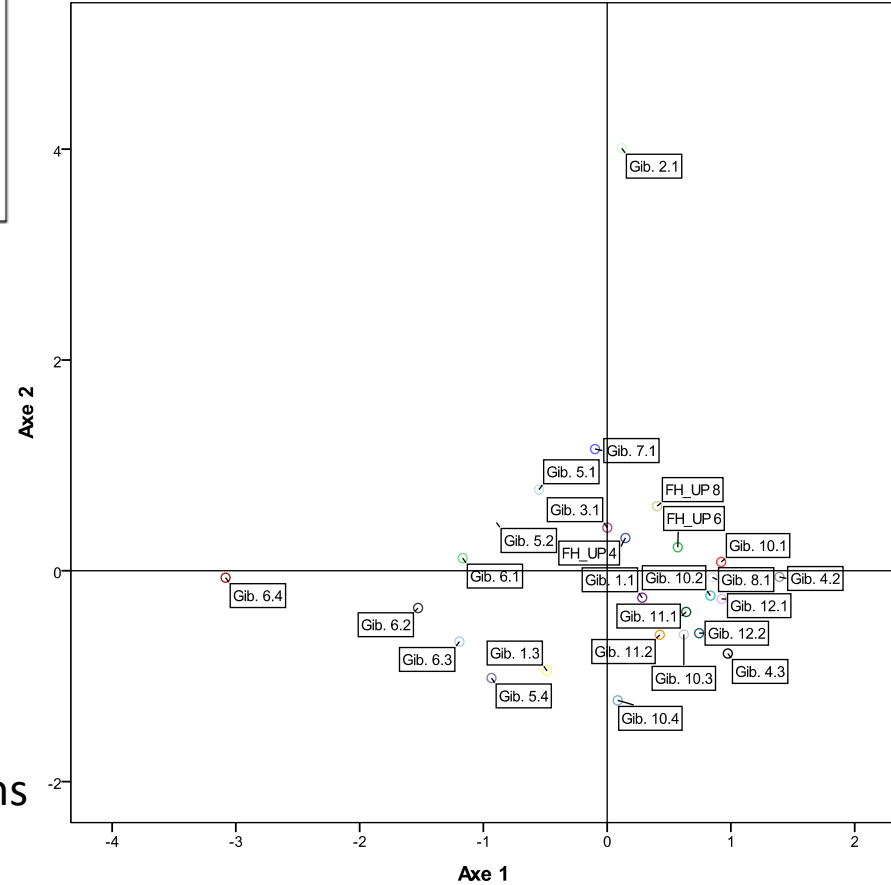
n°Labo	n° perso	H. ped	Prof. M	% Hr	% PAF	ph H2O	pH KCl	Δ pH	% A	% LF	% LG	% SF	% SG	"Dens. App." [g/cm3]	Poro. Estim. [%]	Ks [cm/h]	CEC (T)	Ntot [%]	Ptot [mg/g]	Ctot [%]	C/N	
11266	Gib. 1.1	A	-6.5	2.01	9.63	7.2	6.6	0.6	15.85	17.59	12.54	31.97	22.06	0.9	64.7	116.7		0.24	0.33	3.5	14.3	Gib. 1.1
11268	Gib. 1.3	S1	-38.0	1.61	5.56	7.2	6.1	1.1	18.50	19.10	11.76	30.15	20.49	1.2	52.9	42.9		0.12	0.21	1.3	11.1	Gib. 1.3
11271	Gib. 2.1	OH	-2.0	5.38	38.91	3.9	2.9	1.0	12.39	14.95	8.84	41.66	22.16	1.0	61.2	155.5		1.10	0.39	19.4	17.7	Gib. 2.1
11275	Gib. 2.5	C	-80.0	1.56	3.91	7.1	5.7	1.3	14.92	10.87	8.15	36.36	29.70	1.2	52.9	49.7		\	\	\	\	Gib. 2.5
11276	Gib. 3.1	A	-5.0	1.93	9.11	5.0	3.7	1.3	19.17	19.34	12.03	28.87	20.58	0.8	68.6	173.3		0.22	0.41	3.0	13.6	Gib. 3.1
11280	Gib. 3.5	D	-100.0	1.34	3.25	5.3	3.8	1.5	22.75	25.03	12.97	24.29	14.95	1.5	42.3	4.1		\	\	\	\	Gib. 3.5
11281	Gib. 4.1	A	-0.5	2.47	15.24	4.4	3.2	1.2	13.12	11.57	8.25	34.69	32.38	\	\	\		0.47	0.26	7.8	16.7	Gib. 4.1
11282	Gib. 4.2	Ae	-2.5	1.90	9.84	4.6	3.4	1.2	10.57	12.86	6.97	35.10	34.50	0.6	77.7	138.7		0.24	0.26	3.9	16.0	Gib. 4.2
11283	Gib. 4.3	S	-17	1.50	6.01	5.29	3.77	1.5	13.44	11.99	7.56	33.18	33.83	0.9	64.7	189.1		0.11	0.16	1.9	16.9	Gib. 4.3
11284	Gib. 4.4	I D1	-43.5	1.30	4.84	5.26	3.99	1.3	13.30	11.87	9.16	40.39	25.28	1.2	56.3	108.8		\	\	\	\	Gib. 4.4
11287	Gib. 5.1	A	-2.5	2.24	10.82	5.0	3.6	1.4	22.4	24.3	12.4	25.1	15.9	0.8	70.1	84.0		0.26	0.42	3.4	13.2	Gib. 5.1
11288	Gib. 5.2	Sh	-13.5	2.16	8.61	5.2	3.6	1.6	22.93	24.78	11.57	25.21	15.52	1.0	61.0	65.3		0.21	0.40	2.5	11.6	Gib. 5.2
11290	Gib. 5.4	II S1	-61.5	1.42	4.07	6.4	4.8	1.6	20.19	20.43	11.25	25.39	22.74	1.3	51.9	12.3		0.06	0.25	0.4	6.5	Gib. 5.4
11292	Gib. 6.1	A	-14.0	2.01	9.37	5.1	3.7	1.4	20.84	27.73	11.14	23.18	17.11	1.1	56.7	28.6		0.24	0.32	0.1	0.3	Gib. 6.1
11293	Gib. 6.2	Sh	-42.0	1.66	5.60	5.1	3.7	1.4	20.55	30.64	12.23	21.05	15.54	1.3	51.0	24.4		0.10	0.25	0.0	0.5	Gib. 6.2
11294	Gib. 6.3	Se	-64.5	1.67	4.40	5.5	3.8	1.8	19.82	22.32	12.28	25.85	19.73	1.3	51.6	8.2		0.06	0.24	0.4	6.4	Gib. 6.3
11295	Gib. 6.4	S-BT	-84.5	2.11	4.74	5.4	3.5	1.9	28.96	42.44	14.56	8.77	5.27	1.5	42.9	2.1		0.05	0.20	0.2	4.1	Gib. 6.4
11296	Gib. 6.5	I D	-115.0	1.38	2.70	5.8	3.8	2.0	8.64	11.30	9.71	27.38	42.97	1.5	44.8	14.2		\	\	\	\	Gib. 6.5
11297	Gib. 6.6	II M	-152.0	1.26	2.37	6.9	5.1	1.8	9.39	7.82	9.09	30.85	42.85	1.3	49.5	22.1		\	\	\	\	Gib. 6.6
11298	Gib. 7.1	A	-2.5	2.57	13.74	4.9	3.7	1.2	18.78	24.83	9.93	23.15	23.30	0.9	67.6	179.9		0.34	0.55	5.3	15.3	Gib. 7.1
11303	Gib. 7.6	Sh	-99.0	1.41	3.61	6.1	4.5	1.6	11.18	20.85	11.20	27.10	29.67	1.4	46.6	15.7		\	\	\	\	Gib. 7.6
11306	Gib. 8.1	A	-7.0	1.47	8.84	5.0	3.9	1.2	13.33	16.29	8.19	31.27	30.92	0.7	72.2	137.2		0.24	0.41	3.3	14.0	Gib. 8.1
11310	Gib. 8.5	D2	-116.0	1.30	2.65	5.4	3.9	1.5	2.93	12.61	11.46	35.89	37.11	1.3	52.6	12.0		\	\	\	\	Gib. 8.5
11312	Gib. 10.1	A	-3.5	2.13	11.24	4.6	3.3	1.3	12.33	16.47	8.16	29.41	33.63	0.8	68.3	194.6		0.21	0.22	4.0	18.8	Gib. 10.1
11313	Gib. 10.2	Sh1	-12.0	1.76	8.12	5.0	3.7	1.3	12.36	17.01	8.31	33.51	28.81	0.8	70.6	149.3		0.17	0.27	2.7	16.4	Gib. 10.2
11314	Gib. 10.3	Sh2	-31.0	1.56	6.41	5.3	3.9	1.3	12.20	18.27	7.84	31.91	29.78	1.0	62.8	177.0		0.13	0.24	1.9	15.1	Gib. 10.3
11315	Gib. 10.4	S	-59.0	1.19	3.60	5.6	4.2	1.5	7.56	17.40	9.48	33.33	32.23	1.1	57.6	28.9		0.13	0.27	0.3	2.3	Gib. 10.4
11316	Gib. 10.5	D1	-81.5	1.24	2.89	4.9	4.0	1.0	7.12	18.26	10.30	33.12	31.20	1.5	44.0	11.2		\	\	\	\	Gib. 10.5
11317	Gib. 10.6	D2	-115.0	1.24	2.57	5.3	4.0	1.4	3.45	12.47	8.25	41.15	34.69	0.9	65.3	28.3		\	\	\	\	Gib. 10.6
11318	Gib. 10.7	D-M	-160.0	1.22	2.19	5.7	4.0	1.7	3.92	12.80	8.09	37.14	38.05	1.1	59.5	17.1		\	\	\	\	Gib. 10.7
12321	Gib. 11.1	A	-6.0	1.81	8.55	5.9	5.0	0.9	13.48	14.65	9.60	33.02	29.24	1.0	61.6	120.9		0.22	0.26	3.3	15.4	Gib. 11.1
12322	Gib. 11.2	Sh	-20.0	1.71	7.24	6.0	5.2	0.8	14.53	15.94	10.96	31.04	27.52	1.0	63.5	91.2		0.16	0.21	2.4	14.9	Gib. 11.2
12328	Gib. 12.1	A	-4.0	1.62	7.82	4.3	3.5	0.8	13.46	15.30	5.68	32.78	32.78	1.0	62.6	114.0		0.20	0.29	2.8	13.8	Gib. 12.1
12329	Gib. 12.2	Sh	-17.5	1.47	5.85	4.3	3.6	0.7	13.21	14.50	6.79	31.95	33.56	1.2	55.2	129.5		0.14	0.25	1.8	13.1	Gib. 12.2
12338	FH_UP 4	A	-5.0	2.33	10.62	6.2	5.4	0.8	19.26	22.94	9.13	26.38	22.29	0.9	67.5	169.4		0.28	0.41	3.5	12.4	FH_UP 4
12343	FH_UP 6	A	-4.0	1.90	9.01	4.8	3.9	0.9	15.37	18.89	9.66	23.70	32.39	0.8	68.2	218.9		0.26	0.42	3.3	12.8	FH_UP 6
12342	FH_UP 8	A	-5.0	2.28	11.15	5.7	4.8	0.9	16.64	20.56	9.97	27.55	25.28	0.7	73.4	155.8		0.32	0.55	4.5	14.0	FH_UP 8
TOTAL								37											27			

ACP



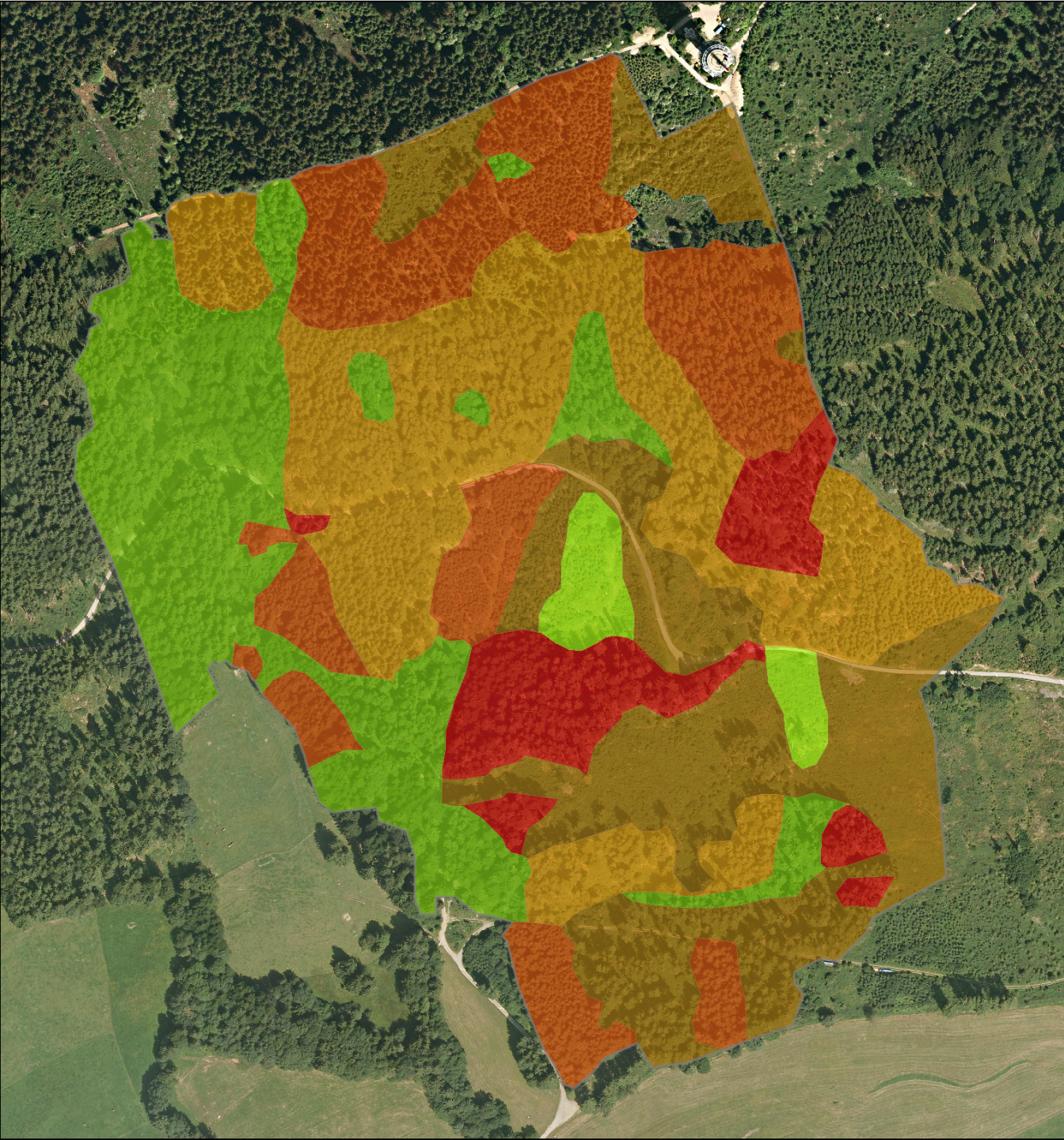
Projection des variables

Score des échantillons sur axes de projection de l'ACP




Projections des échantillons


FORMES D'HUMUS





Légende


 Zone d'étude pédologique


Formes d'humus


 1 : Eumull


 2 : Mésomull

 3 : Oligomull

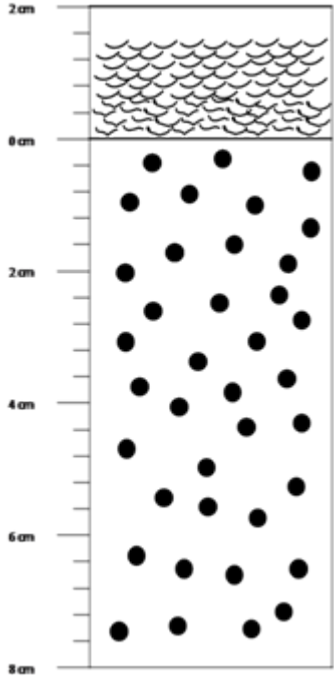
 4 : Dysmull / Hémimoder

 5 : Dysmoder

 6 : Humimor

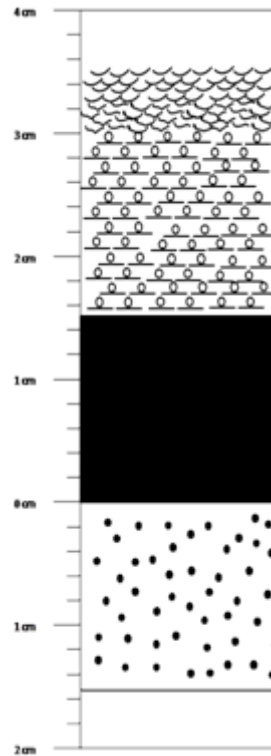
 FH_UP_CARTO

FORMES D'HUMUS

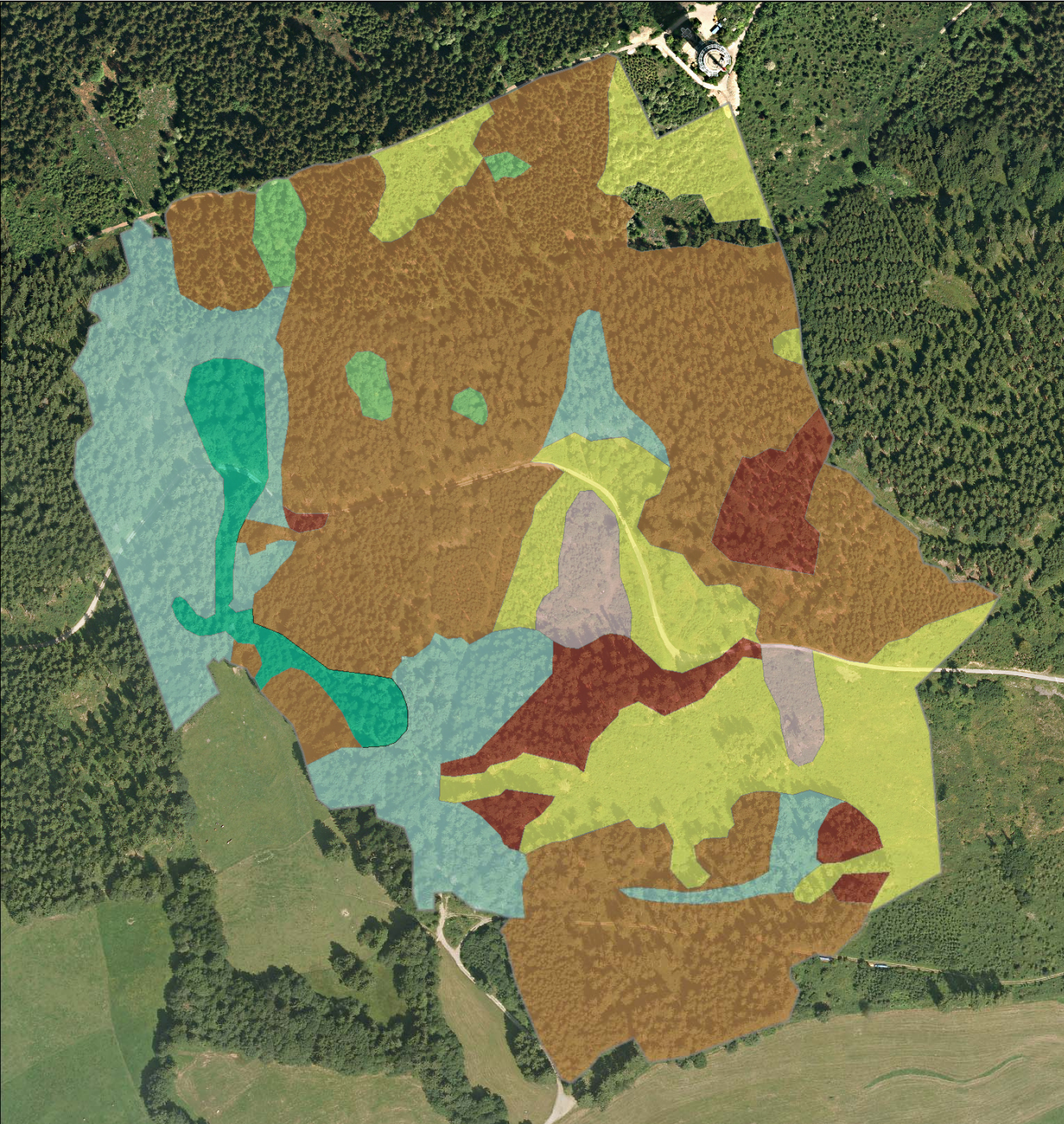


BRUNISOL DYSTRIQUE pseudoluvique
(Gib. 6)


BRUNISOL DYSTRIQUE
(Gib. 10)



VEGETATION




Légende


 Zone d'étude pédologique


Unités de végétation selon CAH logiciel Ginkgo

 Facies Humide

 Abieti fagenion

 Facies acide

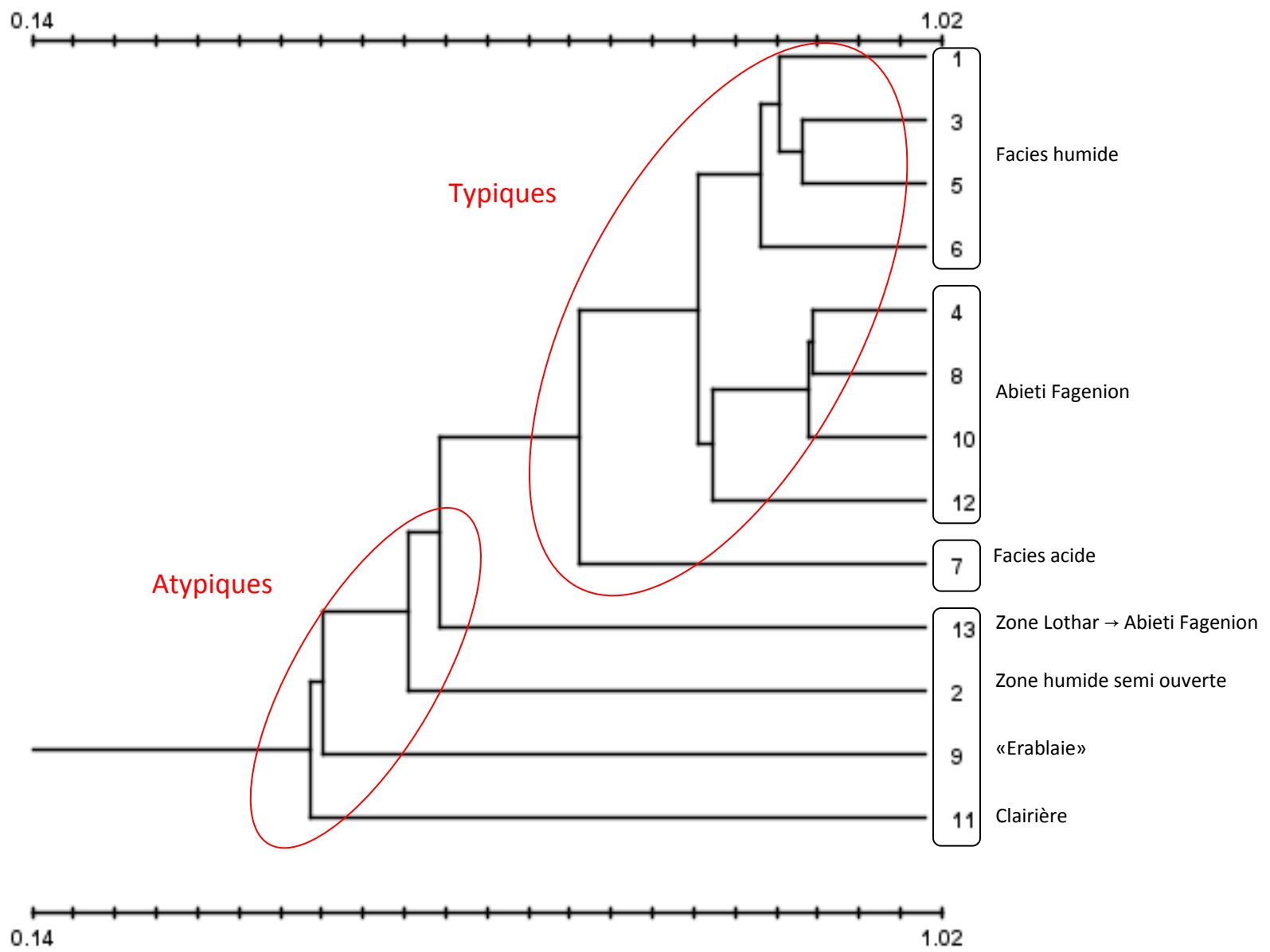
 Zone lothar

 Zone humide semi ouverte

 "Erablaie"

 Clairière

Classification & Ordination des relevés de végétation à l'aide du logiciel Ginkgo





Unité de végétation n°5. Zone à Neoluvisol. Assez humide



Unité de végétation n°3. Milieu légèrement plus sec. Peuplement plus fermé. Forment avec l'unité 5 le « type de forêt » le plus courant sur le site. L'unité n°2 y ressemble très fortement mais se démarque par une dominance prononcée de *Luzula luzuloides* en strate herbacée.



Unité de végétation n°1. Caractérisée par son acidité. *Vaccinium myrt* et *Blechnum spicant* y sont observables.

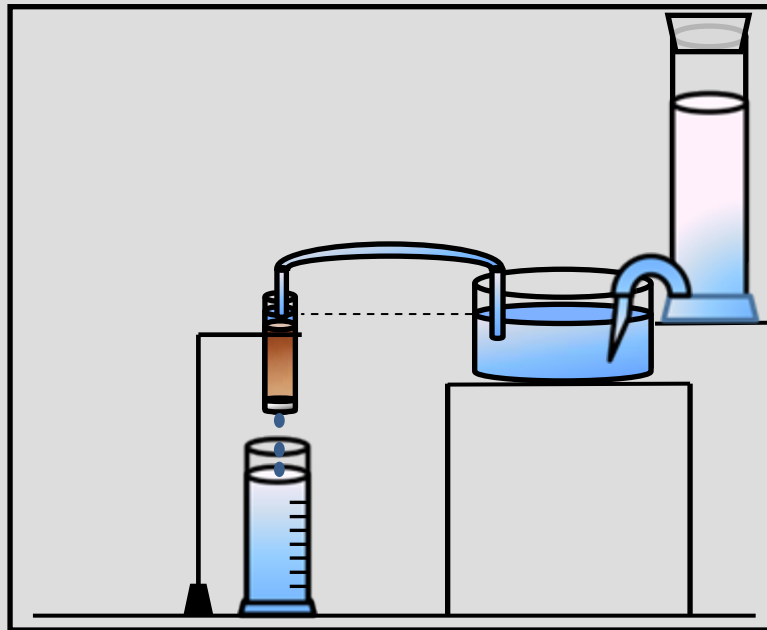


Unité de végétation n°8. Composée uniquement d'*Acer pseudoplatanus* en strate arborescente. (probablement artificiel...)



Unité de végétation n°10, « Zone Lothar ». Caractéristique d'une reprise forestière après destruction (presque) totale de sa strate arborescente

Expérimentation: mesures de percolation sur horizons reconstitués



n° perso	prof médiane (cm)	Horizons Pedo	Ks [cm/h]	
1.1	6.5	A	116.7	■
1.3	38	S2	42.9	■
2.1	2	A	155.5	■
2.5	80	II C	49.7	■
3.1	5	A	173.3	■
3.5	100	I C	4.1	■
4.2	2.5	Sh	138.7	■
4.3	17	S	189.1	■
5.2	13.5	S 1	65.3	■
5.4	61.5	I C	12.3	■
6.1	14	A	28.6	■
6.2	42	S	24.4	■
6.3	64.5	S / BT	8.2	■
6.4	84.5	BT	2.1	■
6.5	115	I C	14.2	■
6.6	152	II C	22.1	■
7.1	2.5	A	179.9	■
7.6	99	I C	15.7	■
8.1	7	A	137.2	■
8.5	116	I C	12.0	■
10.1	3.5	A	194.6	■
10.2	12	Sh	149.3	■
10.3	31	S 1	177.0	■
10.4	59	S2	28.9	■
10.5	81.5	I C	11.2	■
10.6	115	II C	28.3	■
10.7	160	II C	17.1	■

Variation de l'indice Ks en fonction du type d'horizon pédologique

