

Textura e composição de sedimentos finos

GSA0252-Sedimentologia

Composição vs. Granulação

mm	phi	Name	
256	-8	Boulders	
128	-7		
64	-6	Cobbles	
32	-5		Gravel Conglomerate
16	-4		
8	-3	Pebbles	
4	-2		
		Granules	
2	-1		
		Very coarse sand	
1	0		
		Coarse sand	Sand Sandstone
0.5	1		
		Medium sand	
0.25	2		
		Fine sand	
0.125	3		
		Very fine sand	
0.063	4		
		Coarse silt	Mud Mudrock
0.031	5		
		Medium silt	
0.0156	6		
		Fine silt	
0.0078	7		
		Very fine silt	
0.0039	8		
		Clay	

Composição vs. Granulação

Caulinita
 $Al_2(Si_2O_5)(OH)_4$

Esmectita
 $(Na,Ca)_{0.33}(Al,Mg)_2(Si_4O_{10})(OH)_2 \cdot nH_2O$ (montmorilonita)

Ilita
 $K_{0.65}Al_{2.0}[Al_{0.65}Si_{3.35}O_{10}](OH)_2$

Clorita
 $Mg_5Al(AlSi_3O_{10})(OH)_8$
 (Clinocloro)

mm	phi	Name	
256	-8	Boulders	Gravel Conglomerate
128	-7		
64	-6	Cobbles	
32	-5		
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8	-3	Pebbles	
4	-2	Granules	Sand Sandstone
2	-1	Very coarse sand	
1	0	Coarse sand	
0.5	1	Medium sand	
0.25	2	Fine sand	
0.125	3	Very fine sand	
0.063	4	Coarse silt	
0.031	5	Medium silt	Mud Mudrock
0.0156	6	Fine silt	
0.0078	7	Very fine silt	
0.0039	8	Clay	

↑
Fragmentos líticos
↓

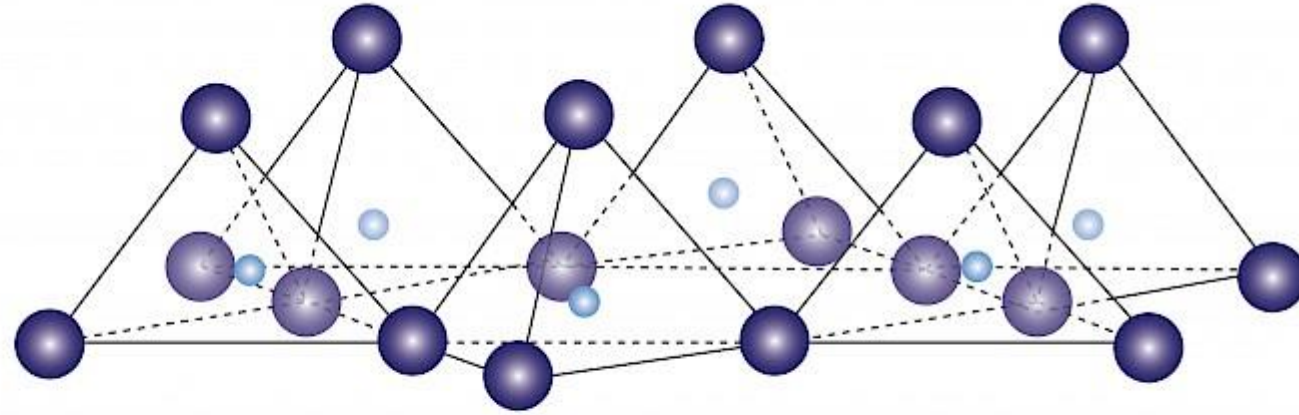
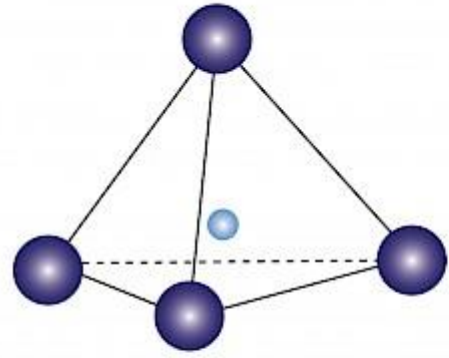
↑
Quartzo e feldspato
↓

↑
Argilominerais
↓

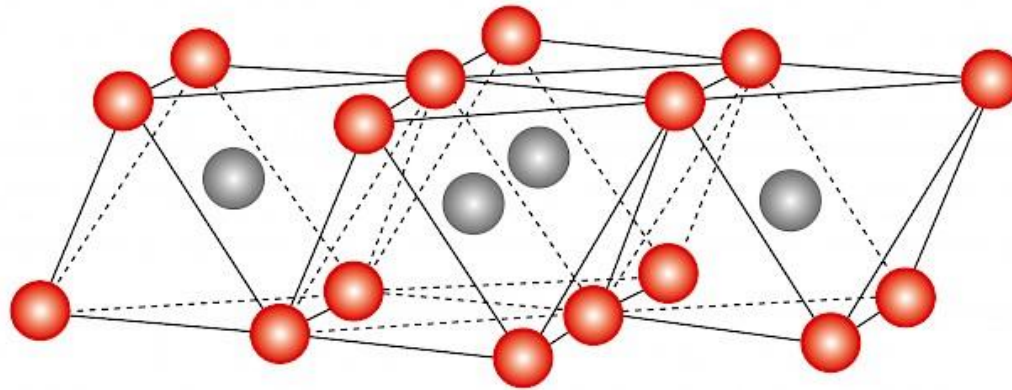
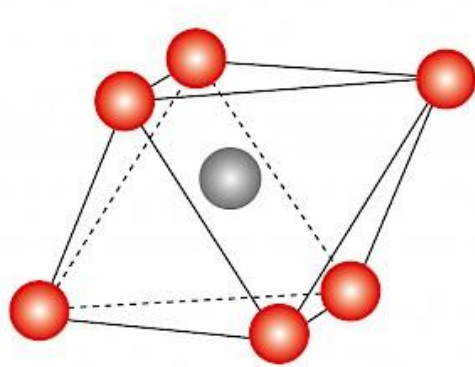
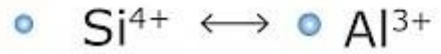
'Bolas misteriosas' tomam praia no litoral de SP e intrigam moradores: 'Impressionante' (G1)



Argilominerais (filossilicatos)




Tetraedros

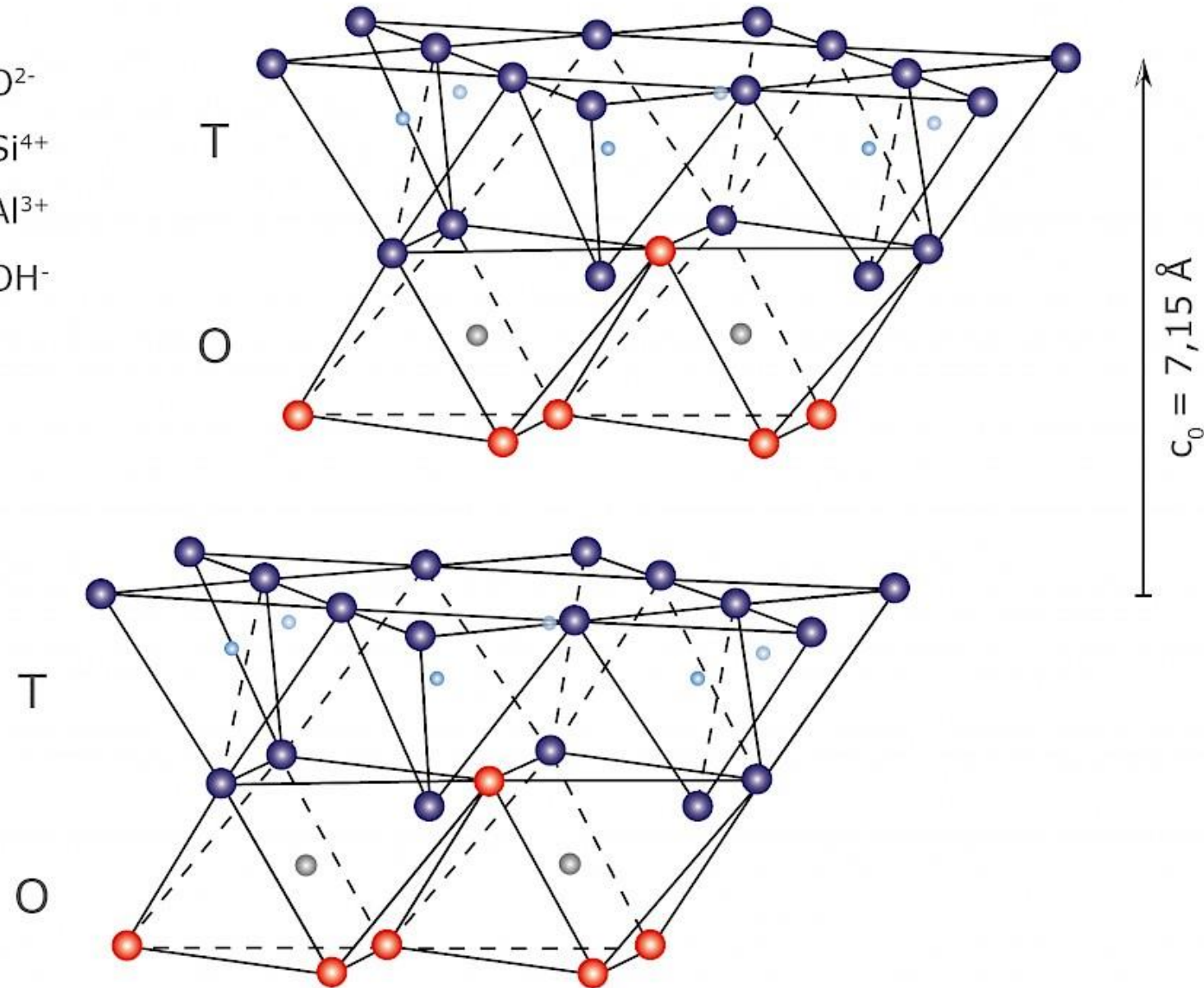


Octaedros

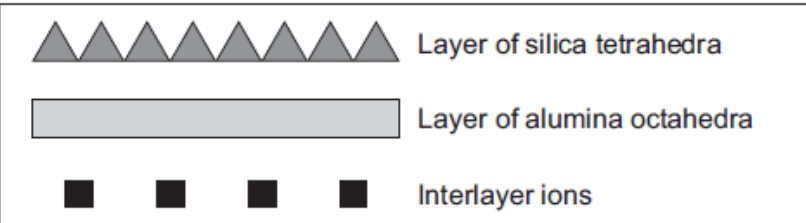


Caulinita

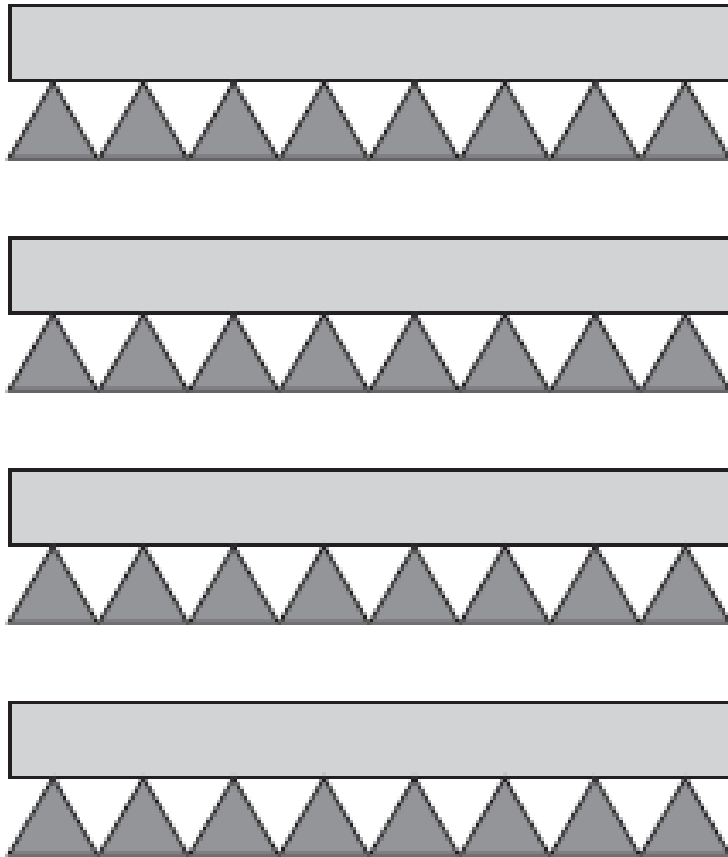
-  O^{2-}
-  Si^{4+}
-  Al^{3+}
-  OH^{-}



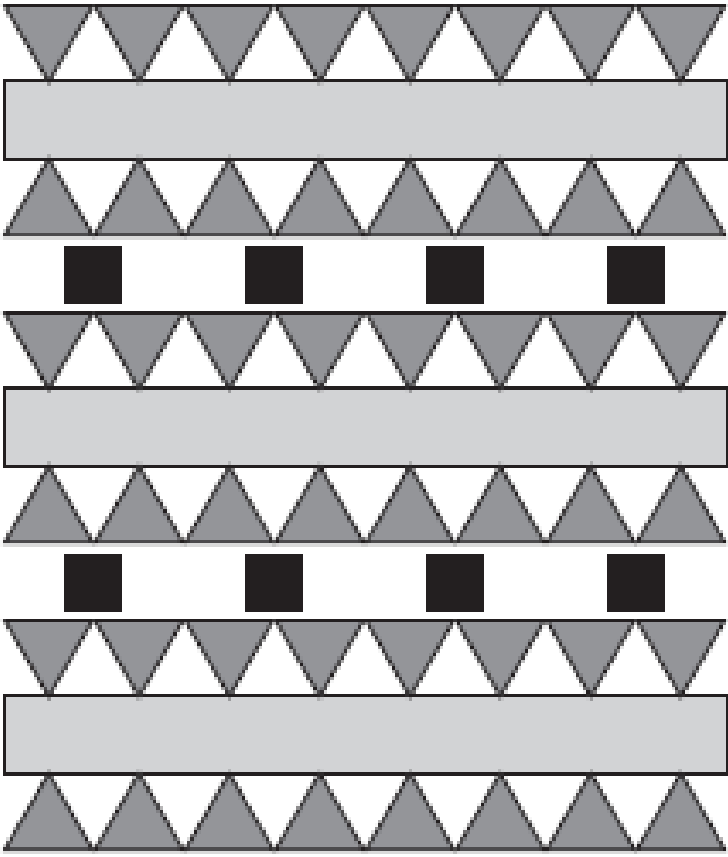
Argilominerais

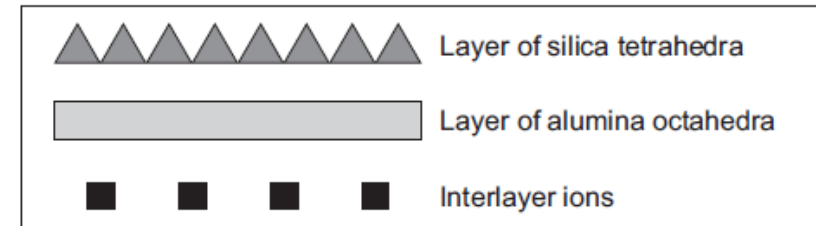


Kaolinite: 2-layer clay



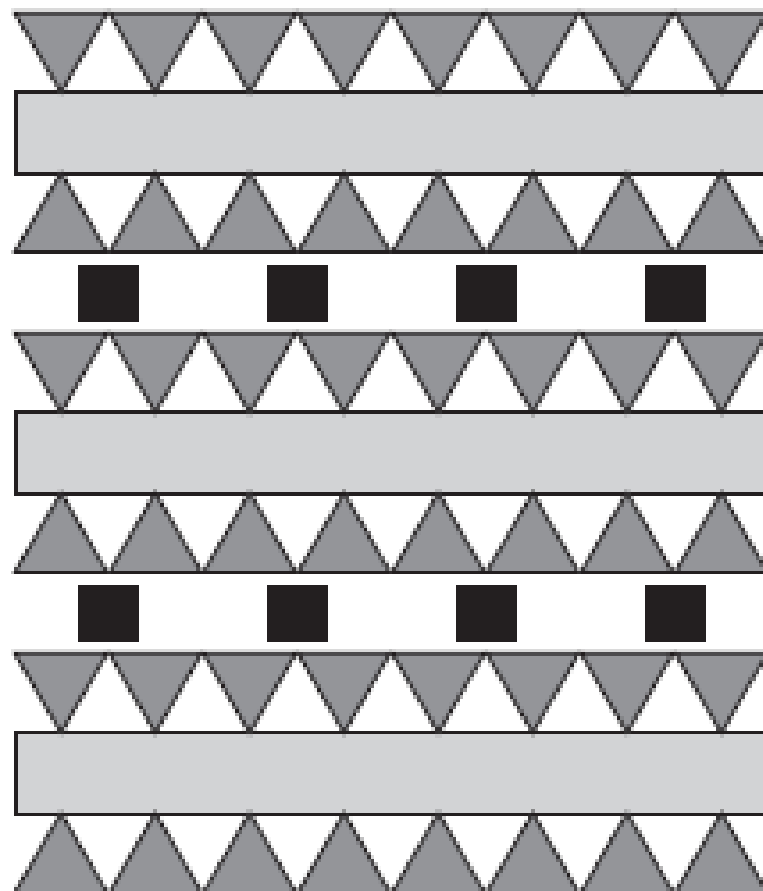
Illite: 3-layer clay
Interlayer ions: K, OH, Fe, Mg



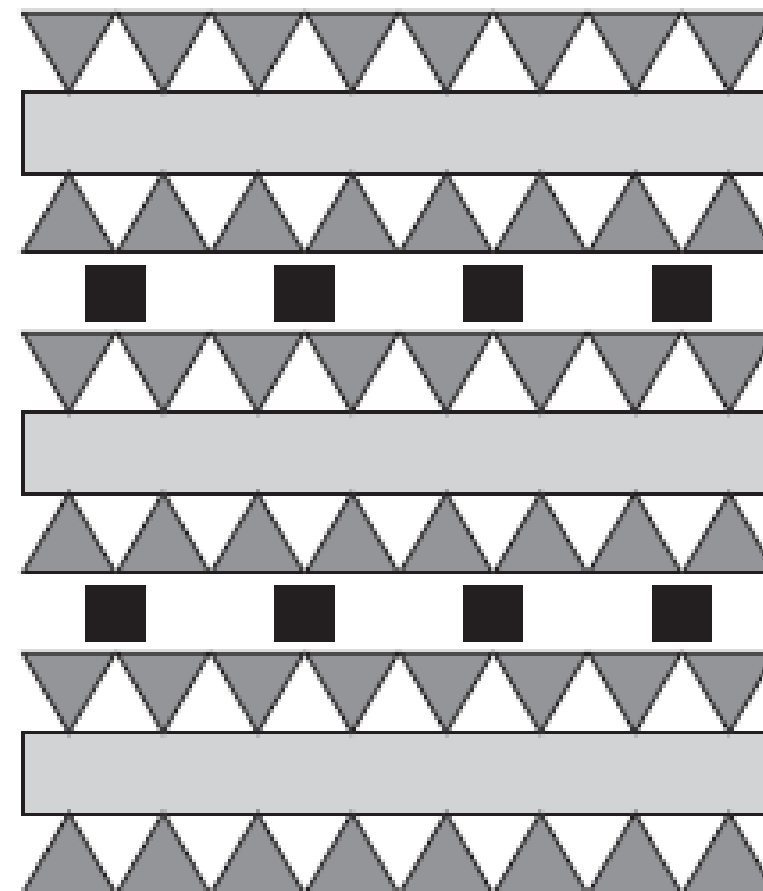


Esmectita

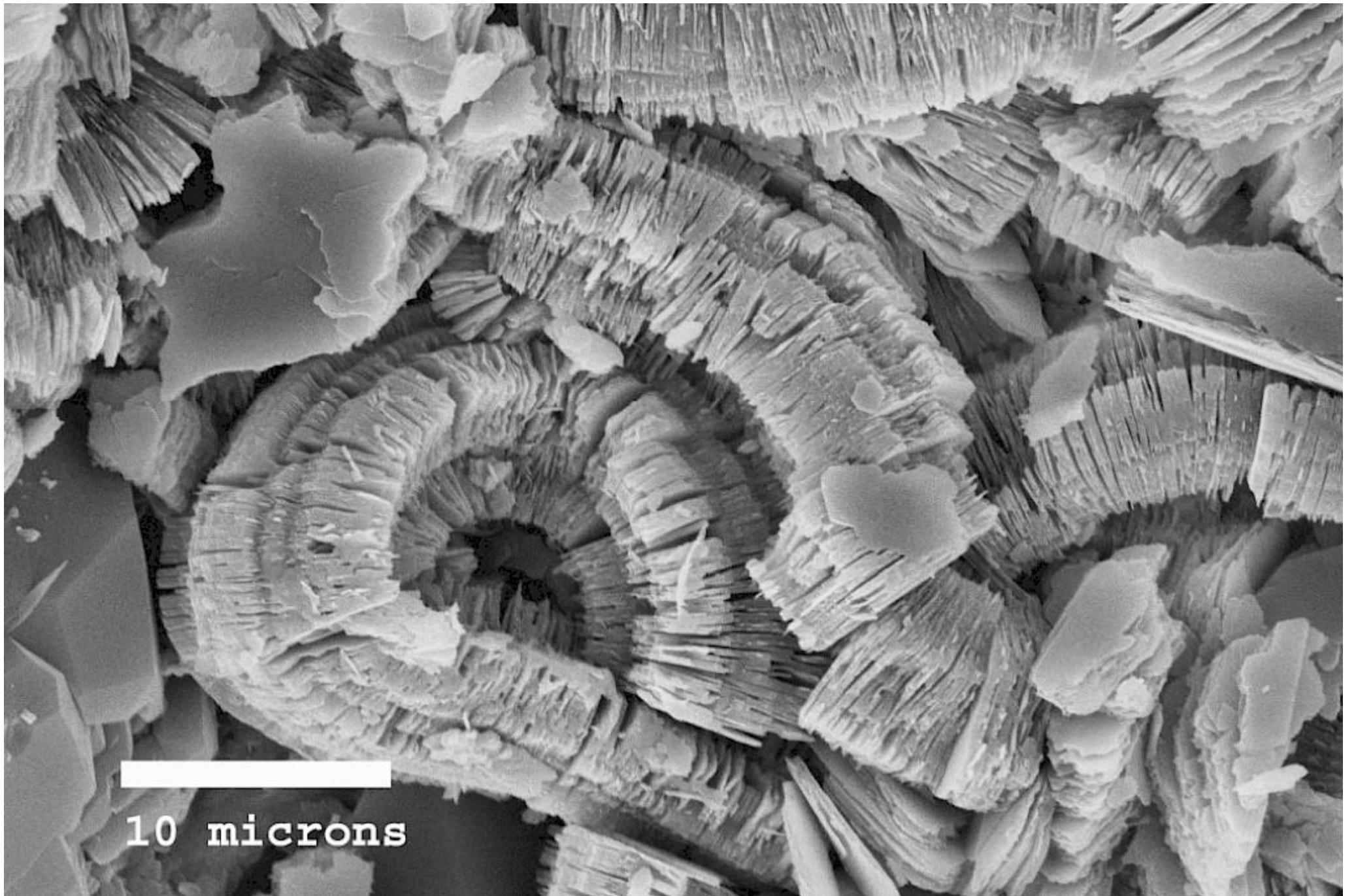
Montmorillonite: 3-layer clay
 Interlayer ions: H₂O, Ca



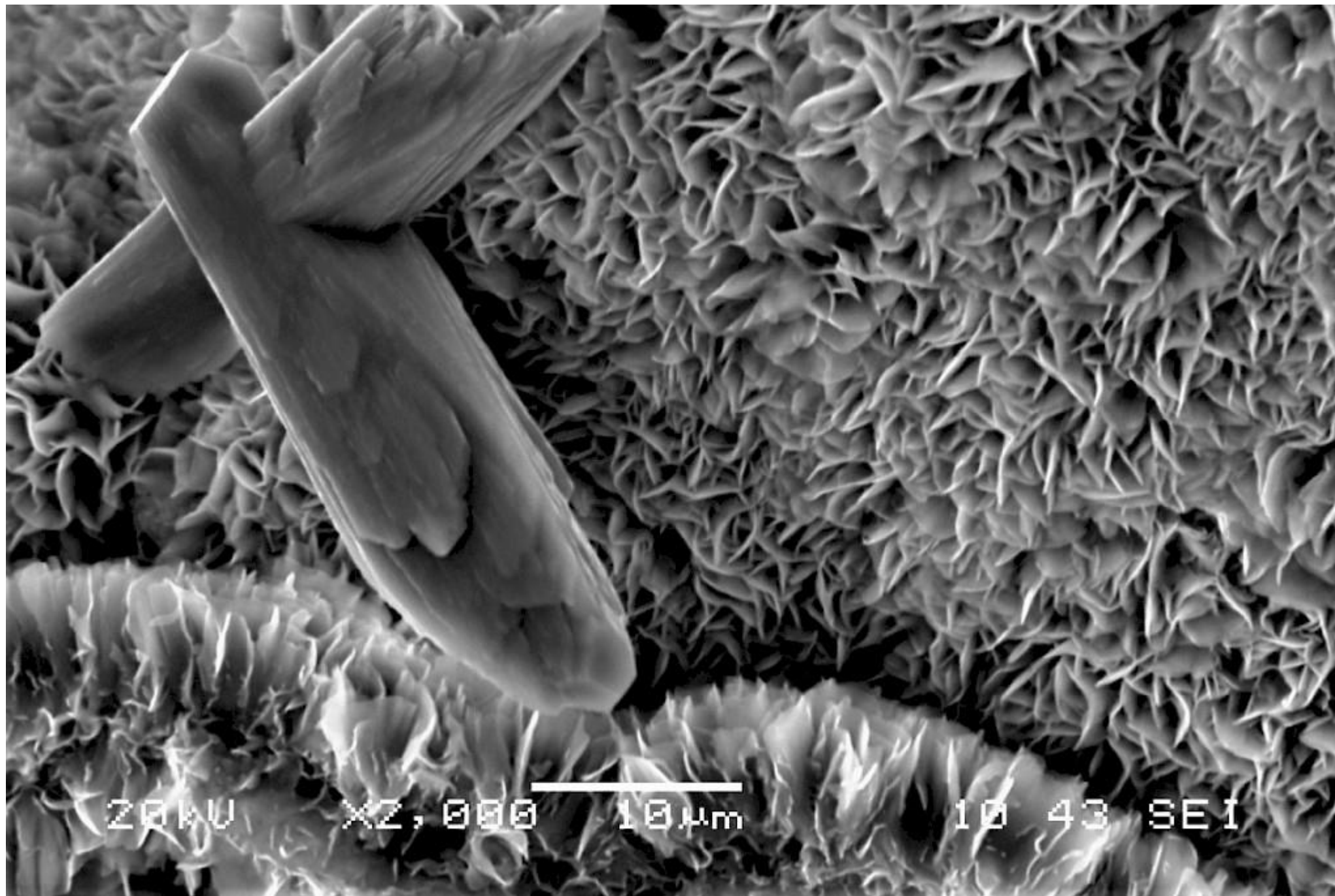
Chlorite: 3-layer clay
 Interlayer ions: Mg, OH



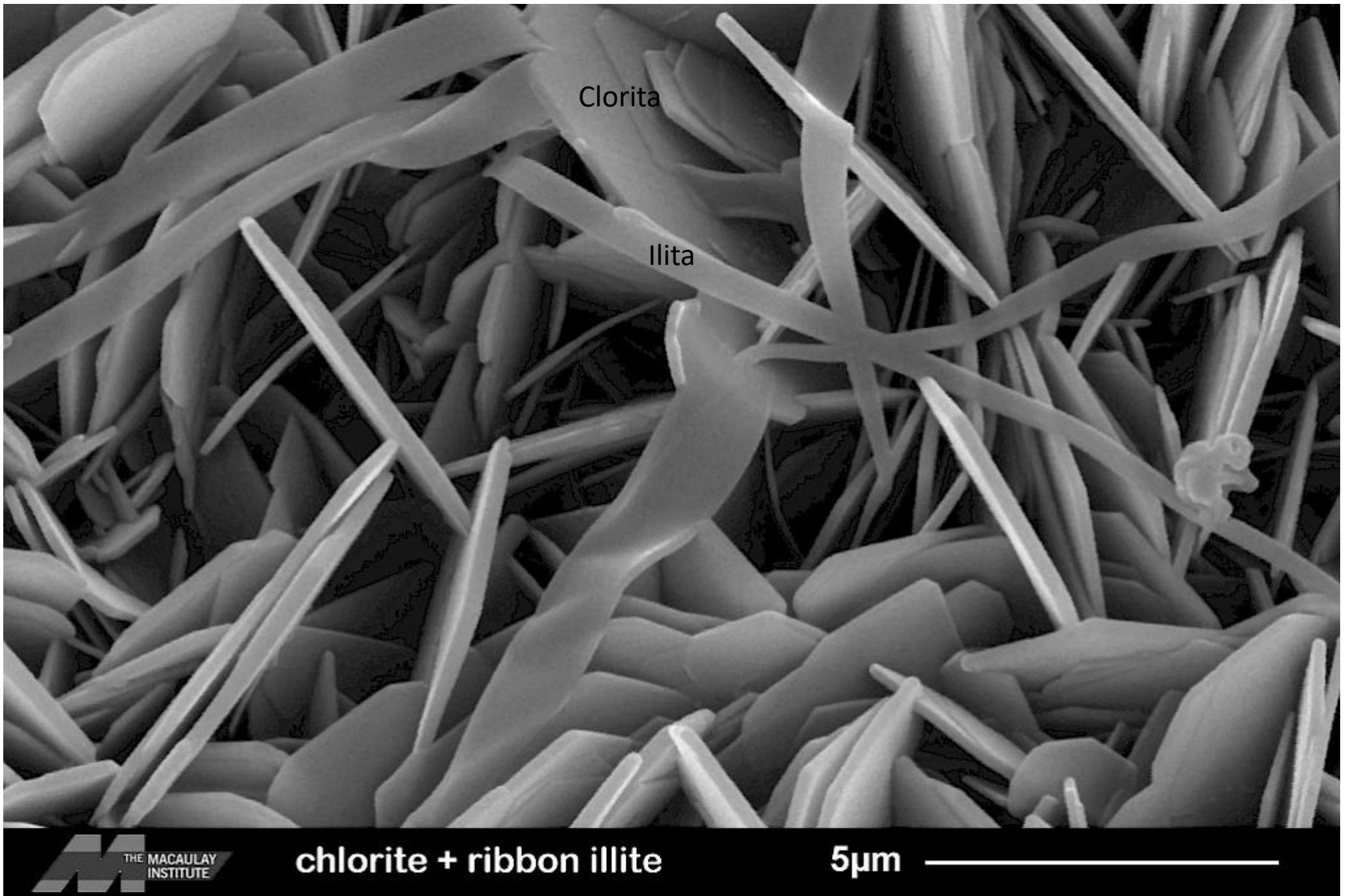
Caulinita



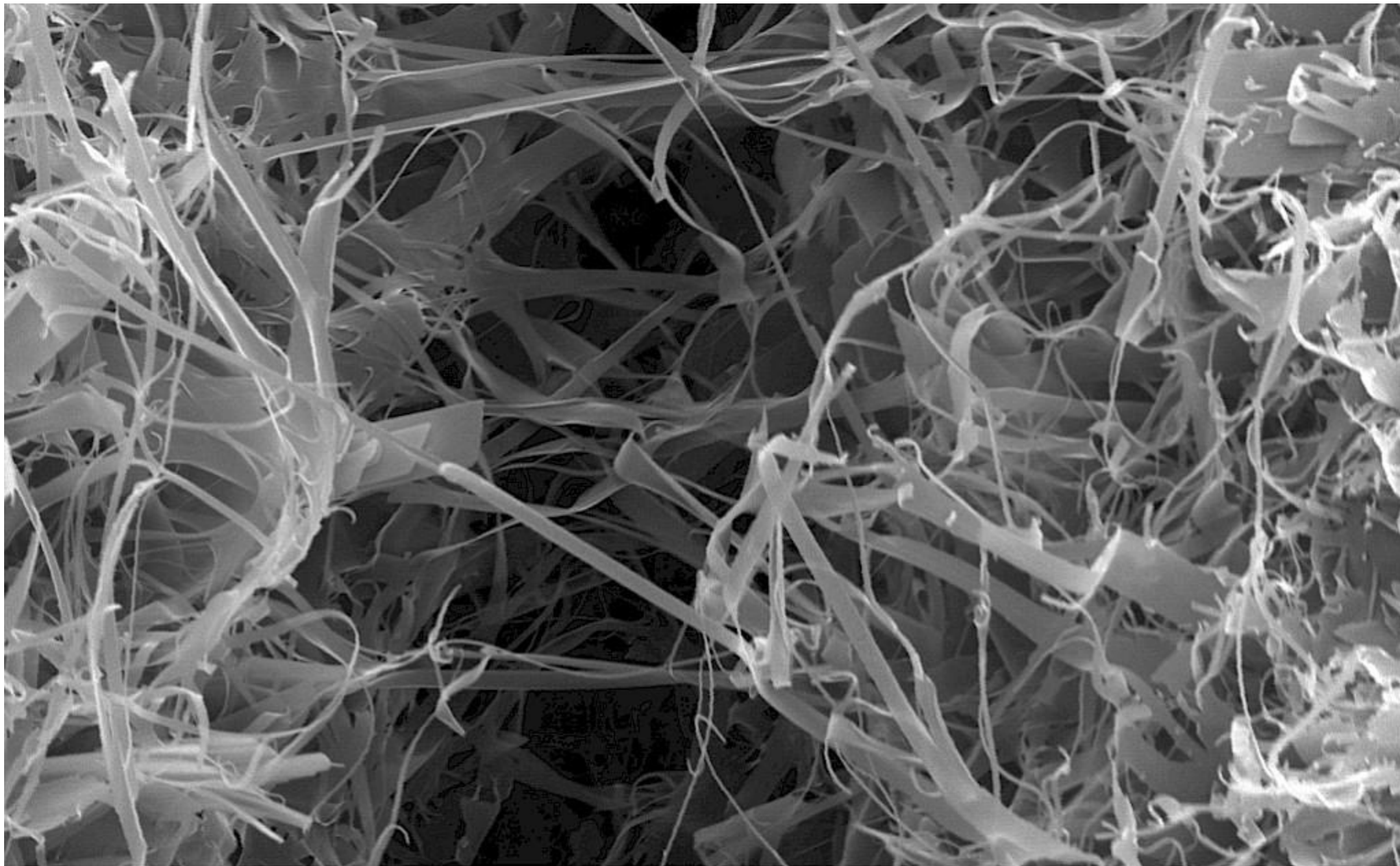
Esmectita



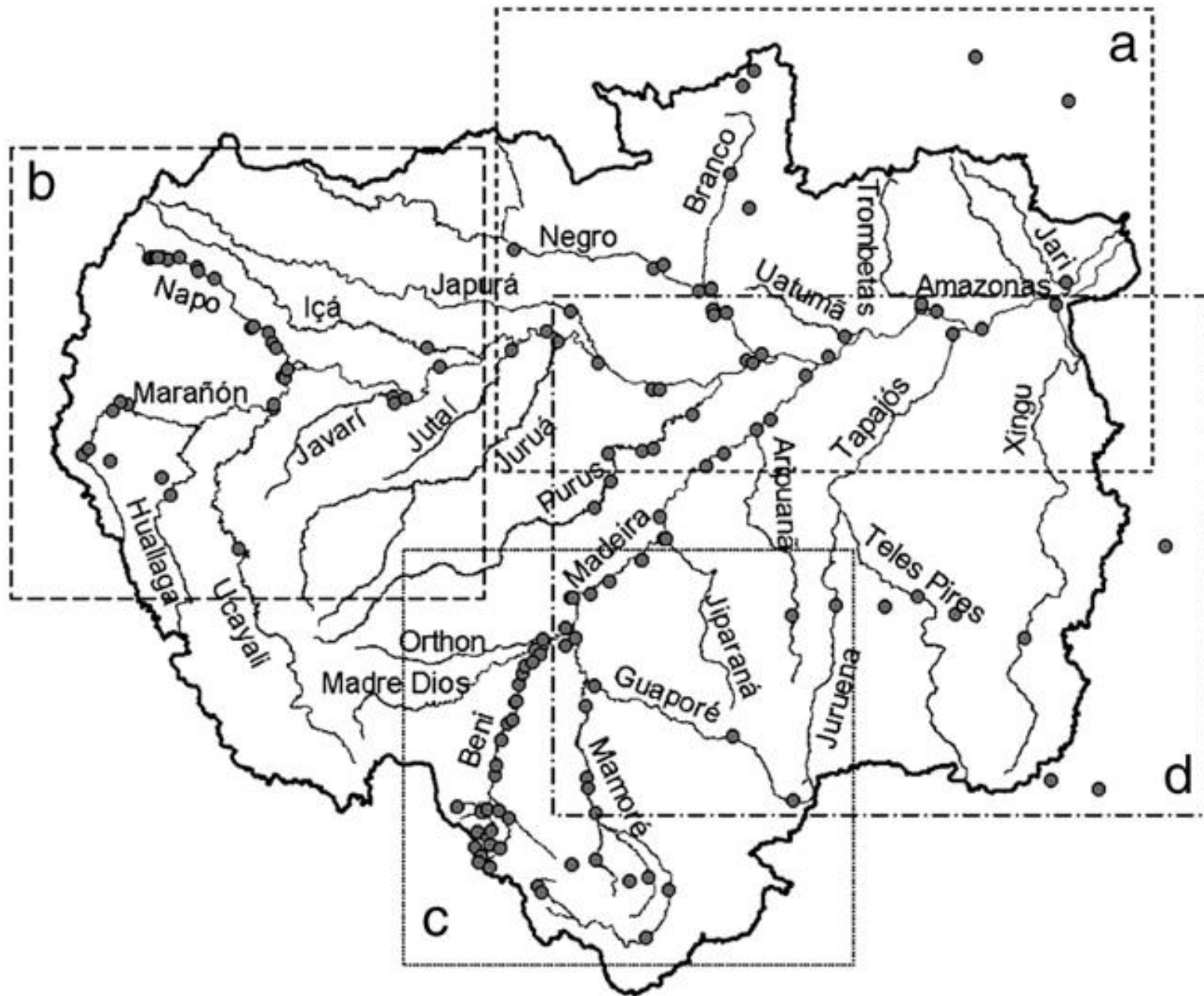
Ilita e clorita



Illite







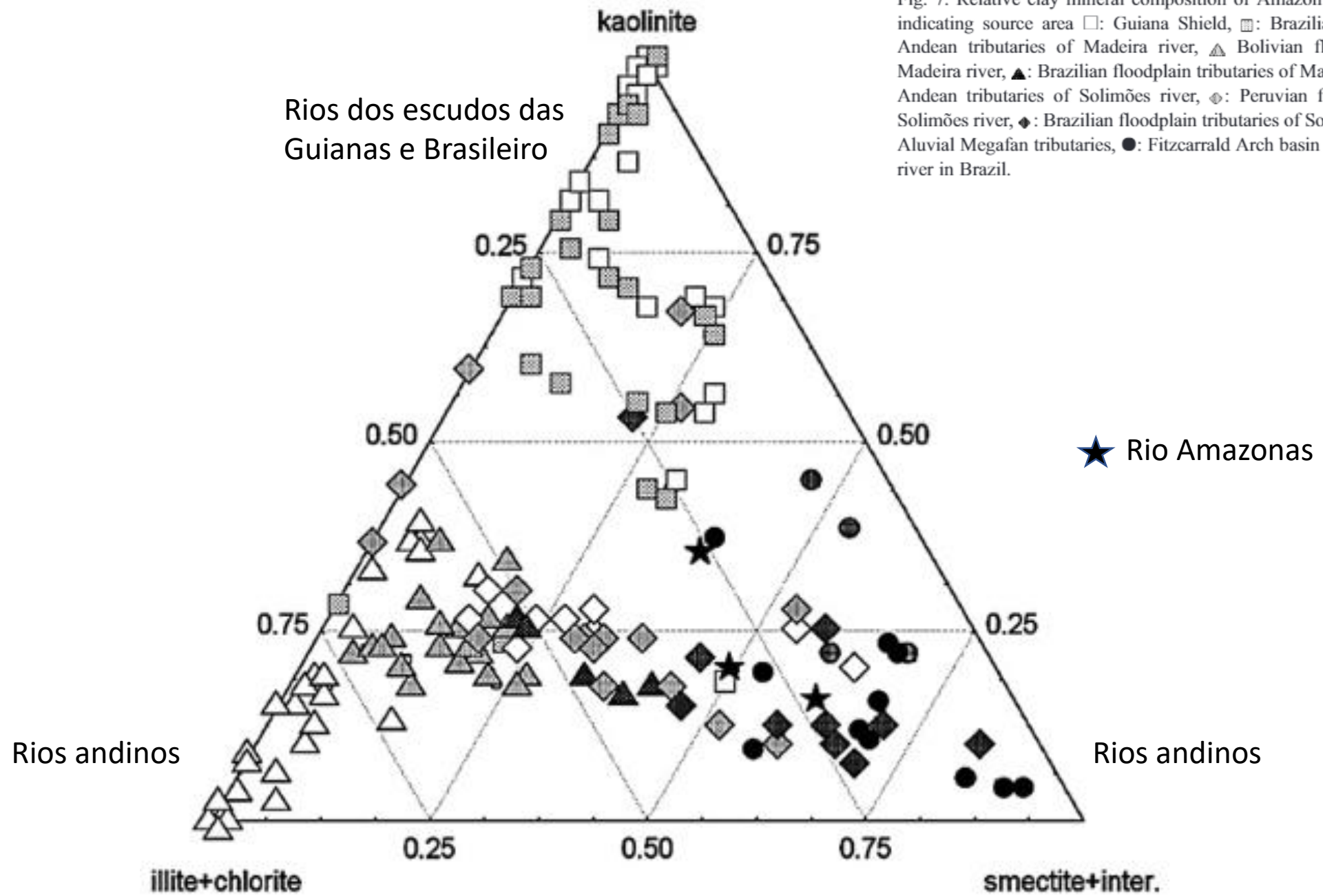
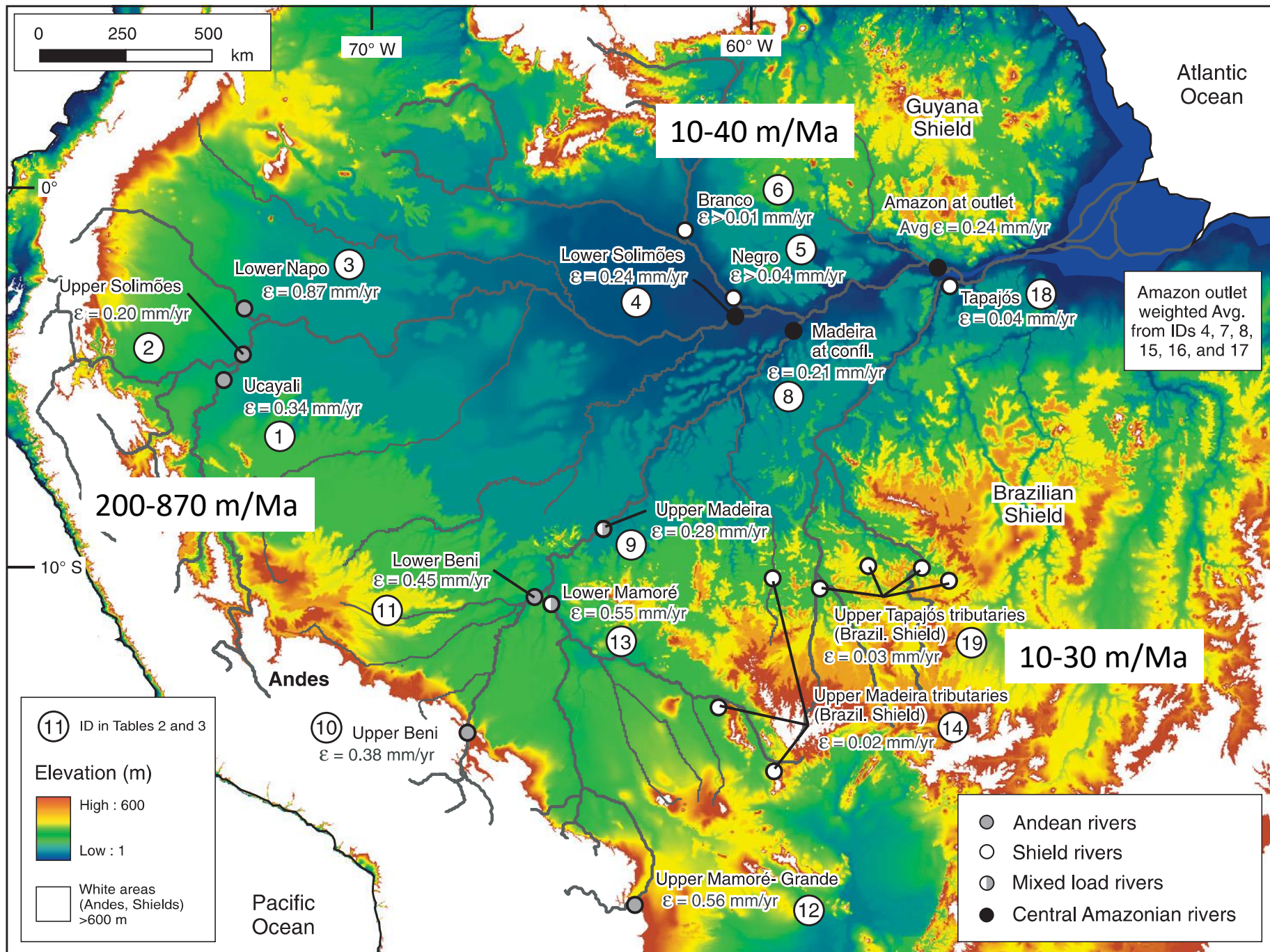
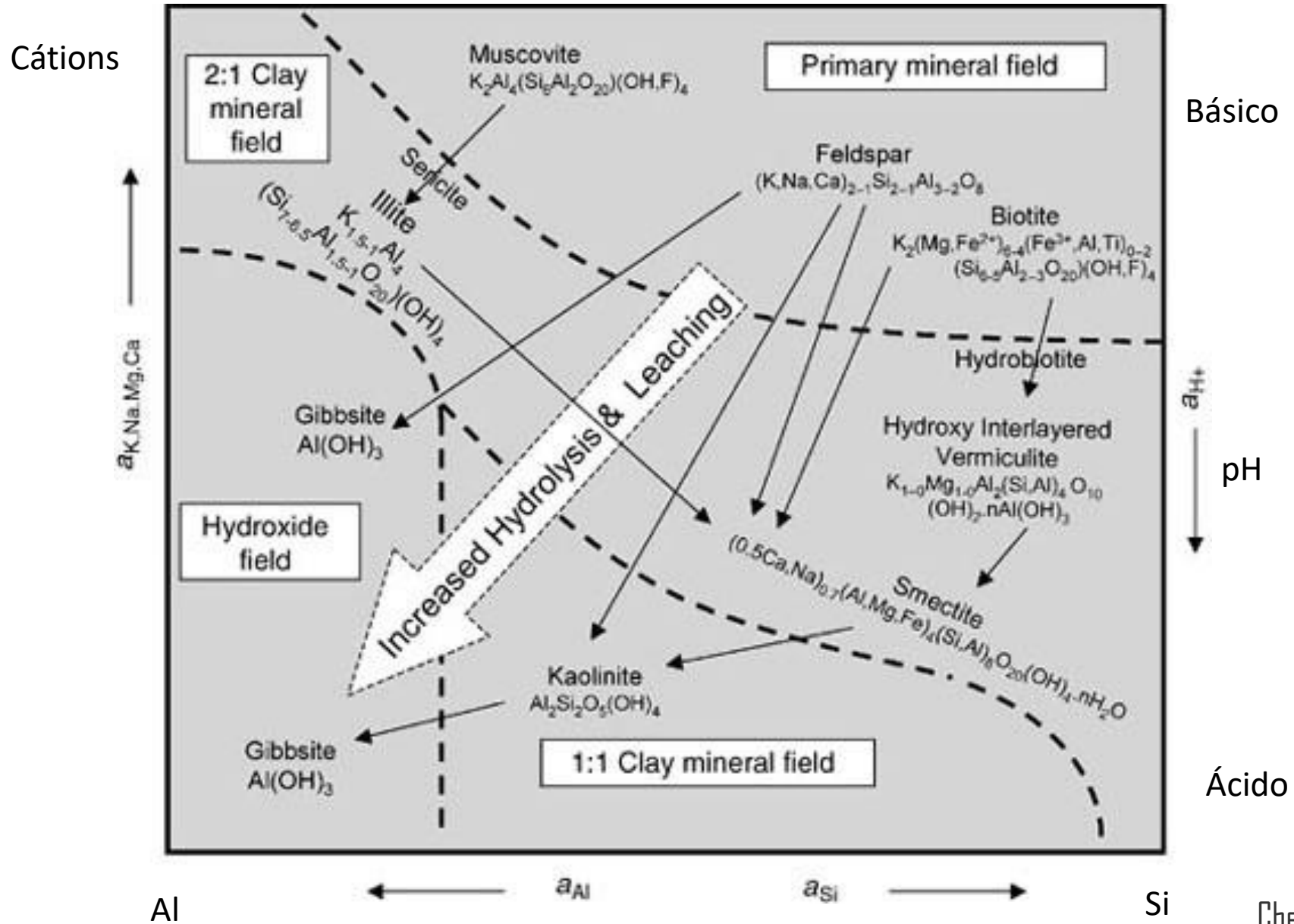


Fig. 7. Relative clay mineral composition of Amazon River basin tributaries, indicating source area □: Guiana Shield, ◻: Brazilian Shield, △: Bolivian Andean tributaries of Madeira river, ◴: Bolivian floodplain tributaries of Madeira river, ▲: Brazilian floodplain tributaries of Madeira river, ◇: Peruvian Andean tributaries of Solimões river, ◈: Peruvian floodplain tributaries of Solimões river, ◆: Brazilian floodplain tributaries of Solimões river, ●: Pastaza Aluvial Megafan tributaries, ●: Fitzcarrald Arch basin tributaries, ★: Amazon river in Brazil.



Formação de argilominerais em solos



Espososolo



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Artigo



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Clay mineral composition of river sediments in the Amazon Basin

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Questão para discussão

Como o relevo e o clima da área fonte influenciam a produção e os tipos de argilominerais?