

**Table S1.** List of the studied mineral springs and observed richness (S), estimated richness (S.chao1), Shannon and Piélou indexes. The substrate sampled is also presented: artificial construction (AI).

Number	Name	S	S.chao1	Shannon index	Piélou index	Substrate sampled
1	Tennis	1	1.0	0.0	0.0	AI
2	Ile	6	9.0	0.8	0.1	AI
3	Sourcin	6	12.0	0.8	0.1	sediments
4	Petit Jean	13	28.0	1.5	0.1	sediments
5	Tambour	5	5.0	0.8	0.2	AI
6	Petit Saladis	8	10.0	0.7	0.1	AI
7	Roc Bleu	21	54.0	1.3	0.1	sediments
8	Seepage	8	11.0	0.7	0.1	travertine
9	Geyser	5	6.0	0.8	0.2	Pipe
10	Valois	6	9.0	0.7	0.1	travertine
11	mare	2	2.0	0.1	0.0	sediments
12	Sail	20	20.6	2.3	0.1	stones
13	Grand Saladis	8	9.0	0.9	0.1	travertine
14	Lys	7	7.5	0.8	0.1	AI
15	Croizat	2	2.0	0.5	0.3	AI
16	Felix	11	16.0	0.7	0.1	stones
17	Bard	5	5.0	0.5	0.1	AI
18	Bard 2	26	35.0	1.9	0.1	sediments
19	Saurier 1	12	17.0	1.3	0.1	sediments
20	Saurier 1 cascade	7	8.0	1.2	0.2	travertine
21	Saurier 2	12	15.3	1.1	0.1	stones
22	Saurier 3 grotte	22	22.0	2.5	0.1	travertine
23	Tête de Lion	12	13.5	0.8	0.1	sediments
24	Tête de Lion 2	46	48.0	3.5	0.1	sediments
25	La Salet	23	32.3	1.9	0.1	sediments
26	Giraudon	8	14.0	1.0	0.1	travertine
27	Moranges	5	5.0	0.8	0.2	sediments
28	Route de Sapchat	12	12.3	1.9	0.2	travertine
29	Anthonia	9	12.0	1.4	0.2	travertine
30	Antonia zone humide	9	12.0	1.2	0.1	sediments
31	La Poste	13	16.0	1.5	0.1	sediments
32	Marais salé	27	30.0	2.4	0.1	sediments
33	Bélonie	15	22.5	1.8	0.1	sediments
34	Charles	5	5.0	0.9	0.2	AI
35	Lefort	3	3.0	0.2	0.1	AI
36	Saint-Cyr	4	4.0	0.2	0.1	AI
37	Laplace	2	2.0	0.3	0.1	travertine
38	la Colline	3	3.0	0.7	0.2	AI
39	Unknown Augnat-sur-Ardes	19	24.0	2.0	0.1	sediments
40	Cerisier	8	14.0	1.2	0.1	sediments
41	Zagat	28	33.3	2.3	0.1	sediments

42	Chassolles	26	29.5	2.2	0.1	stones
43	Gargouilloux	18	21.3	1.5	0.1	stones
44	Communale	12	15.0	0.8	0.1	AI
45	Puits de Ceix	4	4.0	0.5	0.1	AI
46	Saint Coust	28	30.5	2.1	0.1	sediments
47	Châtel-Guyon1	7	10.0	0.2	0.0	AI
48	Châtel-Guyon2	1	1.0	0.0	0.0	travertine
49	Bénédictins	5	5.0	1.0	0.2	travertine
50	Font Salado 1	31	42.3	1.5	0.0	AI
51	Font Salado Griffon	28	50.8	1.0	0.0	sediments
52	Poix 1	20	25.3	2.1	0.1	sediments
53	Poix 3	15	17.0	1.7	0.1	stones
54	La combelle	9	9.5	1.3	0.1	AI
55	Les graviers	7	7.0	1.1	0.2	sediments
56	Etoile	6	6.0	1.0	0.2	AI
57	Etoile bassin	14	24.0	1.3	0.1	AI
58	Daguillon	8	9.5	0.6	0.1	sediments
59	Ours	5	6.0	0.9	0.2	AI
60	Geyser (Vals)	6	6.0	0.6	0.1	AI
61	Camuse	12	17.0	1.2	0.1	AI
62	Adrienne	9	10.5	1.1	0.1	stones
63	Saute Bedel	10	15.0	0.5	0.0	stones
64	Mille Fontaines	1	1.0	0.0	0.0	stones
65	Font de Vie	6	7.0	1.2	0.2	AI
66	Chantejail	16	23.0	0.9	0.1	stones
67	Ceyssat	9	9.0	1.4	0.2	AI
68	Vallée Couze d'Ardes	24	29.6	1.4	0.1	sediments
69	Trois Sauts	26	42.5	1.7	0.1	sediments
70	Salée	19	21.0	2.0	0.1	sediments
71	Bonnefont	67	137.9	3.1	0.0	sediments
72	Saillus	16	19.8	1.3	0.1	sediments
73	Pont des Eaux	9	9.3	1.0	0.1	sediments
74	Ceix	14	17.3	0.9	0.1	sediments
75	Chemin	13	23.0	1.3	0.1	sediments
76	Salut	22	25.3	1.7	0.1	sediments
77	La Montoute	5	5.0	0.7	0.1	sediments
78	Pyronnée	8	8.5	0.9	0.1	stones
79	Pranal-Ste Barbe	10	13.0	1.6	0.2	sediments

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**Table S2.** List of the diatom species encountered.

<i>Achnanthes brevipes</i> Agardh	<i>Navicula salinarum</i> Grunow in Cleve & Grunow
<i>Achnanthidium eutrophilum</i> (Lange-Bertalot) Lange-Bertalot	<i>Navicula tenelloides</i> Hustedt
<i>Achnanthidium microcephalum</i> Kützing sensu W. Smith	<i>Navicula veneta</i> Kützing
<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	<i>Navicula vilaplani</i> (Lange-Bertalot & Sabater) Lange-Bertalot & Sabater in U. Rumrich Lange-Bertalot & M. Rumrich
<i>Achnanthidium rivulare</i> Potapova & Ponader	<i>Nitzschia</i> sp.
<i>Achnanthidium subhudsonis</i> (Hustedt) H. Kobayasi	<i>Nitzschia</i> sp.1
<i>Achnanthidium saprophilum</i> (Kobayasi et Mayama) Round & Bukhtiyarova	<i>Nitzschia</i> sp.2
<i>Adlafia bryophila</i> (Petersen) Moser Lange-Bertalot & Metzeltin	<i>Nitzschia</i> sp.3
<i>Adlafia minuscula</i> var. <i>muralis</i> (Grunow) Lange-Bertalot	<i>Nitzschia</i> aff. <i>perminuta</i> (Grunow) M. Peragallo
<i>Adlafia suchlandtii</i> (Hustedt) Monnier & Ector	<i>Nitzschia</i> aff. <i>archibaldii</i> Lange-Bertalot
<i>Anomoeoneis sphaerophora</i> (Ehr.) Pfitzer	<i>Nitzschia</i> aff. <i>bulnheimiana</i>
<i>Crenotia thermalis</i> (Rabenhorst) Wojtal	<i>Nitzschia</i> aff. <i>liebethruthii</i> Rabenhorst
<i>Crenotia angustior</i> (Grunow) Wojtal	<i>Nitzschia amphibia</i> Grunow
<i>Amphora</i> sp.	<i>Nitzschia austriaca</i> Hustedt
<i>Amphora copulata</i> (Kütz) Schoeman & Archibald	<i>Nitzschia costei</i> Tudesque, Rimet & Ector
<i>Amphora indistincta</i> Levkov	<i>Nitzschia communis</i> Rabenhorst
<i>Amphora ovalis</i> (Kützing) Kützing	<i>Nitzschia commutata</i> Grunow in Cleve et Grunow
<i>Caloneis</i> sp.	<i>Nitzschia dissipata</i> (Kützing) Grunow
<i>Caloneis</i> sp. cf. <i>bacillum</i> (Grunow) Cleve	<i>Nitzschia fonticola</i> Grunow in Cleve et Möller
<i>Caloneis fontinalis</i> (Grunow in Van Heurck) Cleve-Euler	<i>Nitzschia frustulum</i> (Kützing) Grunow
<i>Caloneis schumanniana</i> (Grunow) Cleve	<i>Nitzschia hantzschiana</i> Rabenhorst
<i>Cavinula jaernefeltii</i> (Hustedt) Mann & Stickle in Round Crawford & Mann	<i>Nitzschia inconspicua</i> Grunow
<i>Chamaepinnularia salina</i> Beauger, C.E. Wetzel, Allain & Ector	<i>Nitzschia linearis</i> (Agardh) W.M. Smith
<i>Chamaepinnularia evanida</i> (Hustedt) Lange-Bertalot	<i>Nitzschia microcephala</i> Grunow in Cleve & Moller
<i>Chamaepinnularia muscicola</i> (Petersen) Kulikovskiy, Lange-Bertalot & Witowski	<i>Nitzschia ovalis</i> Arnott ex Grunow in Cl. & Grun.
<i>Cocconeis lineata</i> Ehrenberg	<i>Nitzschia palea</i> (Kützing) W. Smith
<i>Cocconeis euglypta</i> Ehrenberg	<i>Nitzschia pusilla</i> (Kützing) Grunow
<i>Cocconeis pseudolineata</i> (Geitler) Lange-Bertalot	<i>Nitzschia soratensis</i> Morales & Vis
<i>Craticula buderi</i> (Hustedt) Lange-Bertalot	<i>Nitzschia supralitoria</i> Lange-Bertalot
<i>Craticula halophila</i> (Grunow ex Van Heurck) D.G. Mann in Round et al.	<i>Nitzschia valdecostata</i> Lange-Bertalot et Simonsen
<i>Craticula lecohui</i> Beauger et al.	<i>Nitzschia valdestriata</i> Aleem & Hustedt
<i>Cyclotella meneghiniana</i> Kützing	<i>Nitzschia vitrea</i> Norman
<i>Cymbella cymbiformis</i> Agardh	<i>Nitzschia wuellerstorffii</i> Lange-Bertalot
<i>Cymbella hantzschiana</i> Krammer	<i>Nupela silvahercynia</i> (Lange-Bertalot) Lange-Bertalot
<i>Cymbella vulgata</i> Krammer	<i>Pinnularia</i> sp.
<i>Denticula</i> sp.	<i>Pinnularia appendiculata</i> (Agardh) Cleve
<i>Denticula subtilis</i> Grunow	<i>Pinnularia bertrandii</i> Krammer var. <i>angustefasciata</i> Krammer
<i>Denticula tenuis</i> Kützing	<i>Pinnularia brebissonii</i> (Kützing) Rabenhorst
<i>Denticula valida</i> (Pedicino) Grunow in Van Heurck	<i>Pinnularia brebissonii</i> (Kütz.) Rabh. var. <i>bicuneata</i> Grunow in Van Heurck
<i>Diadesmis biceps</i> Arnott	<i>Pinnularia</i> cf. <i>notabiliformis</i> Krammer

<i>Diploneis</i> sp.	<i>Pinnularia</i> cf. <i>oriunda</i> Krammer
<i>Diploneis</i> sp.2	<i>Pinnularia halophila</i> Krammer
<i>Diploneis krammeri</i> Lange-Bertalot & Reichardt	<i>Pinnularia isselana</i> Krammer
<i>Diploneis fontanella</i> Lange-Bertalot	<i>Pinnularia kuetzingii</i> Krammer
<i>Diploneis fontium</i> Reichardt & Lange-Bertalot in Reichardt	<i>Pinnularia persudetica</i> Krammer
<i>Diploneis oblongella</i> (Naegeli) Cleve-Euler	<i>Pinnularia subcommutata</i> Krammer var. <i>nonfasciata</i> Krammer
<i>Diploneis petersenii</i> Hustedt	<i>Planothidium delicatulum</i> (Kützing) Round & Bukhtiyarova
<i>Diploneis oculata</i> (Brebisson in Desmazières) Cleve	<i>Planothidium frequentissimum</i> (Lange-Bertalot) Lange-Bertalot
<i>Encyonema minutum</i> (Hilse in Rabh.) D.G. Mann in Round Crawford & Mann	<i>Planothidium lanceolatum</i> (Brebisson ex Kützing) Lange-Bertalot
<i>Encyonema silesiacum</i> (Bleisch in Rabh.) D.G. Mann	<i>Planothidium straubianum</i> C.E.Wetzel, Van de Vijver & Ector
<i>Encyonema ventricosum</i> (Agardh) Grunow in Schmidt & al.	<i>Planothidium victorii</i> Novis, Braidwood & Kilroy
<i>Epithemia adnata</i> (Kützing) Brebisson	<i>Psammodictyon constrictum</i> (Gregory) D.G. Mann in Round & al.
<i>Epithemia turgida</i> (Ehrenberg) Kützing	<i>Psammothidium bioretii</i> (Germain) Bukhtiyarova et Round
<i>Fallacia</i> sp.	<i>Psammothidium subatomoides</i> (Hustedt) Bukhtiyarova et Round
<i>Fallacia frustulum</i> (Hustedt) D.G. Mann	<i>Pseudofallacia</i> sp.
<i>Fallacia lange-bertalotii</i> (Reichardt) Reichardt	<i>Pseudofallacia</i> aff. <i>losevae</i> (Lange-Bertalot Genkal & Vekhov) Liu Kociolek & Wang
<i>Fallacia pygmaea</i> (Kützing) Stickle et D.G. Mann	<i>Pseudofallacia monoculata</i> (Hustedt) Liu Kociolek & Wang
<i>Fontina arverna</i> Beauger, C.E. Wetzel & Ector	<i>Pseudostaurosira</i> sp.
<i>Fragilaria capucina</i> Desmazieres	<i>Pseudostaurosira</i> aff. <i>brevistriata</i> (Grunow in Van Heurck) Williams & Round
<i>Fragilaria famelica</i> (Kützing) Lange-Bertalot	<i>Pseudostaurosira alvareziae</i> Cejudo-Figueras Morales & Ector
<i>Fragilaria pararumpens</i> Lange-Bertalot, Hofmann & Werum in Hofmann & al.	<i>Pseudostaurosira bardii</i> Beauger, C.E. Wetzel and Ector
<i>Fragilaria rumpens</i> (Kützing) G.W.F.Carlson	<i>Pseudostaurosira cataractarum</i> (Hustedt) C.E. Wetzel, E. Morales & Ector
<i>Fragilaria sandellii</i> Van de Vijver & Jarlman	<i>Pseudostaurosira cubonii</i> D.M.Williams & C.E.Wetzel
<i>Fragilaria vaucheriae</i> (Kützing) Petersen	<i>Punctastriata ovalis</i> Williams & Round
<i>Frustulia vulgaris</i> (Thwaites) De Toni	<i>Pulchella</i> sp.
<i>Gedaniella</i> sp.	<i>Orthoseira</i> sp.
<i>Gomphonema clavatum</i> Ehrenberg	<i>Sellaphora atomoides</i> Wetzel & Van de Vijver
<i>Gomphonema exilissimum</i> (Grunow) Lange-Bertalot & Reichardt	<i>Sellaphora crassulexigua</i> (E.Reichardt) C.E. Wetzel & Ector
<i>Gomphonema lippertii</i> Reichardt & Lange-Bertalot	<i>Sellaphora labernardierei</i> Beauger, C.E.Wetzel et Ector
<i>Gomphonema minutum</i> (Agardh) Agardh	<i>Sellaphora nigri</i> (De Not.) C.E. Wetzel et Ector
<i>Gomphonema parvulum</i> (Kützing) Kützing	<i>Sellaphora pupula</i> (Kützing) Mereschkowsky
<i>Gomphonema saprophilum</i> (Lange-Bertalot & Reichardt) Abarca Jahn Zimmermann & Enke	<i>Sellaphora saugerresii</i> (Desm.) C.E. Wetzel & D.G. Mann
<i>Halamphora</i> sp.	<i>Sellaphora seminulum</i> (Grunow) D.G. Mann
<i>Halamphora</i> aff. <i>acutiuscula</i> (Kützing) Levkov	<i>Staurosira robusta</i> (Fusey) Lange-Bertalot
<i>Halamphora</i> aff. <i>subturgida</i> (Hustedt) Levkov	<i>Staurosira venter</i> (Ehrenberg) Cleve & Moeller
<i>Halamphora coffeaeformis</i> (Agardh) Levkov	<i>Stauroneis</i> sp.
<i>Halamphora normanii</i> (Rabenhorst) Levkov	<i>Stauroneis</i> sp.2
<i>Hantzschia amphioxys</i> (Ehr.) Grunow in Cleve et Grunow	<i>Stauroneis</i> aff. <i>reichardtii</i> Lange-Bertalot, Cavacini, Tagliaventi & Alfinito
<i>Hannaea arcus</i> (Ehr.) R.M. Patrick in Patrick et Reimer	<i>Stauroneis</i> aff. <i>muriella</i> Lund
<i>Hippodonta subtilissima</i> Lange-Bertalot Metzeltin & Witkowski	<i>Stauroneis leguminopsis</i> Lange-Bertalot & Krammer
<i>Humidophila brekkaensis</i> (Petersen) Lowe, Kociolek, Johansen, Van de Vijver, Lange-Bertalot & Kopalová	<i>Stauroneis parathermicola</i> Lange-Bertalot in Hofman Werum & Lange-Bertalot

*Humidophila contenta* (Grunow) Lowe, Kociolek, Johansen, Van de Vijver, Lange-Bertalot & Kopalová  
*Humidophila gallica* (W.Smith) Lowe, Kociolek, Q.You, Q.Wang & Stepanek  
*Humidophila perpusilla* (Grunow) Lowe, Kociolek, Johansen, Van deVijver, Lange-Bertalot & Kopalová  
*Hygropetra elongata* Krammer & Lange-Bertalot  
  
*Kolbesia gessneri* (Hustedt) Aboal  
  
*Luticola mutica* (Kützing) D.G. Mann in Round Crawford & Mann  
*Luticola goeppertiana* (Bleisch in Rabenhorst) D.G.Mann in Round Crawford & Mann  
  
*Mastogloia elliptica* (C.A. Agardh) Cleve  
*Mastogloia smithii* Thwaites  
  
*Mayamaea* sp.  
*Mayamaea atomus* (Kützing) Lange-Bertalot  
*Microcostatus* sp.  
*Melosira varians* Agardh  
*Meridion circulare* (Greville) C.A.Agardh  
*Meridion constrictum* Ralfs  
*Nitzschia amphibia* Grunow  
*Navicula* sp.  
*Navicula* aff. *antonii* Lange-Bertalot  
*Navicula sanctamargaritae* Beauger in Beauger & al.  
*Navicula cincta* (Ehr.) Ralfs in Pritchard  
*Navicula gregaria* Donkin  
*Navicula lanceolata* (Agardh) Ehrenberg  
*Navicula rostellata* Kützing

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*Rhoicosphenia abbreviata* (C.Agardh) Lange-Bertalot  
  
*Rhoicosphenia lacustris* Levkov  
  
*Rhopalodia acuminata* Krammer  
*Rhopalodia brebissonii* Krammer  
*Rhopalodia gibba* (Ehrenberg) O.Muller  
*Rhopalodia gibberula* (Ehrenberg) O.Müller  
  
*Rhopalodia operculata* (Agardh) Håkansson  
*Reimeria sinuata* (Gregory) Kociolek & Stoermer  
*Seminavis pusilla* (Grunow) E.J. Cox & G. Reid  
*Simonsenia* sp.  
*Simonsenia delognei* Lange-Bertalot  
*Surirella* sp.  
*Surirella brebissonii* Krammer & Lange- Bertalot  
*Surirella brebissonii* var. *kuetzingii* Krammer & Lange- Bertalot  
*Surirella brightwellii* W.Smith  
*Surirella* sp. cf. *brightwellii*  
*Surirella ovalis* Brébisson  
*Surirella patella* Kützing  
*Tryblionella* sp.  
*Tryblionella kuetsingii* Alvarez-Blanco & S.Blanco  
*Tryblionella hungarica* (Grunow) D.G. Mann in Round & al.  
*Tryblionella debilis* Arnott ex O'Meara