

## APPENDIX 1

This Appendix (.xls format) is downloadable at the following links:

<http://inra.academia.edu/FredericRimet/Papers>

or

<https://docs.google.com/spreadsheet/ccc?key=0AjTfD0ygmUAsdFm9PdFAtb3gwT1ozMUE>

Column label	Explanation
Code Omnidia	Omnidia code used in the Omnidia software <a href="http://omnidia.free.fr/omnidia_english.htm">http://omnidia.free.fr/omnidia_english.htm</a>
Code freshwater.info	Freshwater project code used in <a href="http://www.freshwaterecology.info/">http://www.freshwaterecology.info/</a>
Code INRA	INRA code, used by the authors of the paper
Division	taxonomical information
Subdivision	taxonomical information
Classe	taxonomical information
Order	taxonomical information
Family	taxonomical information
Genus	taxonomical information
Species	taxonomical information
infra sp1	taxonomical information
infra sp2	taxonomical information
genus + species + var	concatenation of genus, species and infraspecific names
name + authorities	name of authorities
length ( $\mu\text{m}$ )	average length (minimal+maximal values found in the reference listed in "Reference size" column)
width ( $\mu\text{m}$ )	average width (minimal+maximal values found in the reference listed in "Reference size" column)
thickness ( $\mu\text{m}$ )	average thickness (most of the time this value was not present in the reference, values from expert judgment were taken)
Biovolume ( $\mu\text{m}^3$ )	biovolume is calculated with length, width and thickness values and the geometric formula of the shape (given in the column "shape")
Size class	One of these 5 values can be given to the taxon: 1: biovolume between 0–99 $\mu\text{m}^3$ , 2: 100–299 $\mu\text{m}^3$ , 3: 300–599 $\mu\text{m}^3$ , 4: 600–1499 $\mu\text{m}^3$ , 5: over 1500 $\mu\text{m}^3$
Shape	Shape membership of the taxa. The following shape are possible : elliptic cylinder (noted ellcyl), rhomboid prism (noted rhp), box (noted box), sphere (noted sphe), tube (tub). We used also third of sphere for the case of Amphora species (noted sphe/3).
Reference for sizes	Reference for the sizes
Reference biblio life forms - 1	Reference for life-forms
Reference biblio life forms - 2	Reference for life-forms
Reference biblio life forms - 3	Reference for life-forms
Reference biblio life forms - 4	Reference for life-forms
Reference biblio life forms - 5	Reference for life-forms

<b>Column label</b>	<b>Explanation</b>
Mobile	One of these 2 values can be given to the taxon: 0: immobile taxon, 1: mobile taxon
Teratology	One of these 2 values can be given to the taxon: 0: non teratologic, 1: teratologic
Pioneer	One of these 2 values can be given to the taxon: 0: non-pioneer taxon, 1: taxon considered as pioneer
Adnate	One of these 2 values can be given to the taxon: 0: non adnate taxon, 1: adnate taxon
Pedunculate (stalk or pad attached to substrate)	One of these 2 values can be given to the taxon: 0: non pedunculate, 1: pedunculate
Pad (attached to substrate)	One of these 2 values can be given to the taxon: 0: not producing a pad, 1: producing a pad
Stalk (attached to substrate)	One of these 2 values can be given to the taxon: 0: not producing a stalk, 1: producing a stalk
Colonial	One of these 2 values can be given to the taxon: 0: not forming colonies, 1: can form colonies
Non-colonial	One of these 2 values can be given to the taxon: 0: can form colonies, 1: not forming colonies,
Mucous tubule colony	One of these 2 values can be given to the taxon: 0: never forming tubule colony, 1: can form tubule colony
Filament colony	One of these 2 values can be given to the taxon: 0: never forming filament, 1: can form filament
Zig-zag colony	One of these 2 values can be given to the taxon: 0: never forming zig-zag colony, 1: can form zig-zag colony
Rosette colony	One of these 2 values can be given to the taxon: 0: never forming rosette colony, 1: can form rosette colony
Ribbon colony	One of these 2 values can be given to the taxon: 0: never forming ribbon colony, 1: can form ribbon colony
Stellate colony	One of these 2 values can be given to the taxon: 0: never forming stellate colony, 1: can form stellate colony
Arbuscular colony	One of these 2 values can be given to the taxon: 0: never forming arbuscular colony, 1: can form arbuscular colony
High profile guild	One of these 2 values can be given to the taxon: 0: do not belong to this guild, 1: belong to this guild
Low profile guild	One of these 2 values can be given to the taxon: 0: do not belong to this guild, 1: belong to this guild.
Motile guild	One of these 2 values can be given to the taxon: 0: do not belong to this guild, 1: belong to this guild
Planktonic	One of these 2 values can be given to the taxon: 0: do not belong to this guild, 1: belong to this guild.