

This is a metadata sheet with extra info on taxonomy of the classes and labeling rules of the FlowCAM dataset						
Class name	AphiaID ¹	Full name	Synonym	Class type	Plankton type	Taxonomy notes
Aggregate				non-living/organic		This class contains images that have multiple recognizable specimen, which have separate classes in the dataset, sticking together. Since we cannot give an image two labels and because picking one of the specimens in the image would introduce a bias, we label the images as an additional class. Ideally each image should only contain 1 subject/cell, but occasionally cells or colonies stick together by processes or setae.
Bubbles				non-living/organic		This class contains air bubbles.
Detritus				non-living/organic		
Eggs/Cysts				non-living/organic		This class contains eggs and cysts that are not recognizable dinoflagellate cysts, which have a separate class.
Faecal pellet				non-living/organic		
Fibers				non-living/organic		
Pollen				non-living/organic		This class contains pollen from terrestrial plants.
Remnant				non-living/organic		This class contains fragments of cells that cannot be placed under a more detailed class because they are too damaged to be recognized. Empty cells, that are still recognizable are placed under their respective classes to retain as much taxonomic info as possible.
Replicate				non-living/organic		This class contains replicate images of the same subject. The first image in a stretch of replicates is always labelled under the appropriate class, the other images in the stretch are placed under this replicate class. Replicates are often the product of a cell being stuck to the flowcell wall.
<i>Cosmarium</i>	478557	<i>Cosmarium</i> Corda ex Ralfs, 1848		phytoplankton	Charophyte	This class only contains a few images of <i>Cosmarium</i> . Freshwater species can occasionally end up in marine environments due to flushing out of rivers/estuaries.
<i>(Pseudo-)pediastrum</i>	603098/160561	<i>Pseudopediastrum</i> Hegewald, 2005/ <i>Pediastrum</i> Meyen, 1829		phytoplankton	Chlorophyte	This class only contains a few images of <i>Pseudopediastrum</i> or <i>Pediastrum</i> cells. Freshwater species can occasionally end up

¹ WoRMS Editorial Board (2021). World Register of Marine Species. Available from <http://www.marinespecies.org> at VLIZ. Accessed 2021-09-27. doi:10.14284/170

					in marine environments due to flushing out of rivers/estuaries.	
<i>Actinoptychus</i>	148947	<i>Actinoptychus</i> Ehrenberg, 1843		phytoplankton	Diatom	This class contains centric cells in valve view that show a clear sectorial pattern but where the pattern is not fully visible, too dark or obscured so the cell cannot be placed with certainty under classes <i>Actinoptychus senarius</i> or <i>Actinoptychus splendens</i> .
<i>Actinoptychus senarius</i>	148948	<i>Actinoptychus senarius</i> (Ehrenberg) Ehrenberg, 1843		phytoplankton	Diatom	This class contains <i>Actinoptychus senarius</i> -type like cells. However, due to the inaccessibility of descriptive literature on the majority of species in the genus, they could be confused with similar looking <i>Actinoptychus</i> species.
<i>Actinoptychus splendens</i>	148949	<i>Actinoptychus splendens</i> (Shadbolt) Ralfs, 1861		phytoplankton	Diatom	This class contains <i>Actinoptychus splendens</i> -type like cells. However, due to the inaccessibility of descriptive literature on the majority of species in the genus, they could be confused with similar looking <i>Actinoptychus</i> species.
<i>Asterionella</i>	148953	<i>Asterionella</i> Hassall, 1850		phytoplankton	Diatom	
<i>Aulacodiscus argus</i>	149280	<i>Aulacodiscus argus</i> (Ehrenberg) Schmidt, 1886	<i>Tripodiscus argus</i>	phytoplankton	Diatom	
<i>Auliscus</i>	149281	<i>Auliscus</i> Ehrenberg, 1843		phytoplankton	Diatom	Uncertain class. <i>Auliscus</i> size range falls on the border of the current mesh size of the Apstein net. There are only a few images in this class of cells that are empty because then characteristic patterns on valve face are visible.
<i>Bacillaria paxillifer</i>	149149	<i>Bacillaria paxillifer</i> (Müller) Marsson, 1901	<i>Vibrio paxillifer</i> , <i>Bacillaria paxillifera</i>	phytoplankton	Diatom	This class only contains <i>Bacillaria paxillifer</i> colonies, single cells are not recognized and put under the class Pennate Diatom.
Bacillariophyceae	148899	Bacillariophyceae Haeckel, 1878		phytoplankton	Diatom	This class contain single cells of diatoms that don't fit in the Centric Diatom or Pennate Diatom classes or where the validator is not sure whether the diatom is centric or pennate. This class often contains unclear or vague images. Centric diatoms that are rectangular or square from griddle view are also included here to create more homogenous classes for the CNN (see 'Centric Diatom'). Chains of diatoms that cannot be placed to a more detailed taxonomic level are placed under the class Long (chained) diatom.
<i>Bacteriastrum</i>	149118	<i>Bacteriastrum</i> G. Shadbolt, 1854		phytoplankton	Diatom	

<i>Bellerochea horologicalis</i>	447730	<i>Bellerochea horologicales</i> Stosh, 1977	phytoplankton	Diatom	
<i>Biddulphia alternans</i>	149655	<i>Biddulphia alternans</i> (Bailey) Van Heurck, 1885	phytoplankton	Diatom	
<i>Biddulphianae</i>	591192		phytoplankton	Diatom	This class contains cells of the orders Eupodiscales, Triceratales, Biddulphiales. Generally, for cells that match the description; "Valves elliptical or lanceolate in valve view, with a conspicuous, stout horn on each of the two valve poles. Adjacent cells in chains are joined by these elevations. Each valve with two or more labiate processes usually with long external tubes." This class contains all cells that cannot be placed under <i>Odontella type 1</i> , <i>Trieres regia/mobiliensis</i> , <i>Trieres sinensis</i> , <i>Zygoceros</i> , <i>Hobaniella longicruris</i> , <i>Odontella aurita/Ralfsiella minima</i> with certainty because the image resolution is too low and/or the cells are too dark.
<i>Biddulphianae:process</i>	591192		phytoplankton	Diatom	Separate class for broken off corners of <i>Biddulphianae</i> valves that have an elevations on each of the valve poles and a spine. Majority of the images contain parts of <i>Trieres sinensis</i> corners, together with a few <i>Odontella mobiliensis/O. regia</i> parts. This group has the same taxonomic info as the class <i>Biddulphianae</i> , however this distinction in two classes creates more homogeneous classes for the CNN to label. Intact <i>Biddulphianae</i> cells have 4 of these 'corners' per cell.
<i>Brockmanniella brockmannii</i>	149137	<i>Brockmanniella brockmannii</i> (Hustedt) Hasle, Stosch & Syvertsen, 1983	phytoplankton	Diatom	This class only contains long chains of <i>Brockmanniella brockmannii</i> , as smaller chains or singular cells <i>B. brockmannii</i> are too small for the Apstein net. The chains are obscure and are probably overlooked often in validations.
Centric Diatom	148899	Bacillariophyceae Haeckel, 1878	phytoplankton	Diatom	This class contain single cells of centric diatoms, mostly from valve view. Often patterns of areolae and processes are obscured by chloroplasts and more detailed identification is not possible.
<i>Cerataulina pelagica</i>	149619	<i>Cerataulina pelagica</i> (Cleve) Hende, 1937	phytoplankton	Diatom	Only for very clear images of <i>C. pelagica</i> where two wing-like extensions are visible at the ends of the valves. More uncertain images are placed under the class <i>Dactyliosolen/Cerataulina/Guinardia</i> .

<i>Chaetoceros</i>	148985	<i>Chaetoceros</i> C.G. Ehrenberg, 1844	phytoplankton	Diatom	This class is for both <i>Chaetoceros</i> chains as well as single cells, that cannot be placed under species level classes of <i>Chaetoceros</i> , currently <i>Chaetoceros danicus</i> , <i>Chaetoceros socialis</i> , <i>Chaetoceros socialis</i> and <i>Chaetoceros affinis</i> .
<i>Chaetoceros affinis</i>	149241	<i>Chaetoceros affinis</i> Lauder, 1864	phytoplankton	Diatom	This class is for <i>Chaetoceros</i> chains with straight cells with thin inner setae that have the typical angle and terminal setae are divergent and thicker.
<i>Chaetoceros curvisetus</i> / <i>C. pseudocurvisetus</i>	149221/178229	<i>Chaetoceros curvisetus</i> Cleve, 1889/ <i>Chaetoceros pseudocurvisetus</i> Mangin, 1910	phytoplankton	Diatom	This class contains curved <i>Chaetoceros</i> chains that could be either <i>C. curvisetus</i> or <i>C. pseudocurvisetus</i> . Because of the semicryptic nature of these two species, certainly in FlowCAM images, they are placed together in a class.
<i>Chaetoceros danicus</i>	149120	<i>Chaetoceros danicus</i> Cleve, 1889	phytoplankton	Diatom	This class only contains single <i>Chaetoceros</i> cells that have long setae perpendicular to the peralvar axis. Setae form a cross in valve view
<i>Chaetoceros socialis</i>	149123	<i>Chaetoceros socialis</i> Lauder, 1864	phytoplankton	Diatom	This class is for spherical colonies of curved <i>Chaetoceros</i> chains. Sister cells in the chains have 1 visible elongated and straight setae that points to the middle of the colony.
<i>Corethron</i>	149109	<i>Corethron</i> Castracane, 1886	phytoplankton	Diatom	
<i>Dactyliosolen</i> / <i>Cerataulina</i> / <i>Guinardia</i>	149309/149236/ 149111	<i>Dactyliosolen</i> Castracane, 1886/ <i>Cerataulina</i> Peragallo ex Schütt, 1896/ <i>Guinardia</i> Peragallo, 1892	phytoplankton	Diatom	This class contains mostly single cells that could either be <i>Dactyliosolen</i> , <i>Cerataulina</i> or <i>Guinardia</i> . The three can be confused easily at the current image resolution. Griddle bands are invisible, wing-like extensions of elevations in <i>Cerataulina</i> can be hard to see or overlap from certain angles and resemble external process tubes from <i>Dactyliosolen</i> or <i>Guinardia</i> .
<i>Diploneis</i>	149018	<i>Diploneis</i> (Ehrenberg) Cleve, 1894	phytoplankton	Diatom	
<i>Ditylum brightwellii</i>	149023	<i>Ditylum brightwellii</i> (West) Grunow, 1885	phytoplankton	Diatom	
<i>Ditylum brightwellii</i> :process	149023	<i>Ditylum brightwellii</i> (West) Grunow, 1885	phytoplankton	Diatom	Separate class for broken off processes and ends of <i>Ditylum brightwellii</i> valves. This group has the same taxonomic info as the <i>Ditylum brightwellii</i> class, however this distinction in two classes creates more homogeneous classes for the CNN to label. Intact <i>Ditylum brightwellii</i> cells have two of these 'ends' per cel.
<i>Eucampia</i>	149130	<i>Eucampia</i> Ehrenberg, 1839	phytoplankton	Diatom	
<i>Guinardia delicatula</i>	149112	<i>Guinardia delicatula</i> (Cleve) Hasle & Syvertesen, 1997	phytoplankton	Diatom	
<i>Guinardia flaccida</i>	149132	<i>Guinardia flaccida</i> (Castracane) Peragallo, 1892	phytoplankton	Diatom	

<i>Guinardia striata/Dactyliosolen phuketensis</i>	149113/248064	<i>Guinardia striata</i> (Stolterfoth) Hasle, 1996/ <i>Dactyliosolen phuketensis</i> (Sundström) Hasle, 1996		phytoplankton	Diatom	Class containing mainly <i>Guinardia striata</i> probably, however since <i>Dactyliosolen phuketensis</i> also appears in the North Sea according to some authors, we also include this species in the class name to be complete. Most images in this class don't have enough resolution to see the difference between the two species.
<i>Helicotheca tamesis</i>	157440	<i>Helicotheca tamesis</i> (Shrubsole) Ricard, 1987		phytoplankton	Diatom	
<i>Hemidiscus</i>	180366	<i>Hemidiscus</i> Wallich, 1860		phytoplankton	Diatom	This class contains only one image, possibly <i>Hemidiscus</i> has been overlooked.
<i>Hobaniella longicuris</i>	1322468	<i>Hobaniella longicuris</i> (Greville) Sims & Williams, 2018	<i>Odontella longicuris</i> , <i>Biddulphia longicuris</i>	phytoplankton	Diatom	
<i>Lauderia/Melosira/Deionula</i>	149134/149042/ 149285	<i>Lauderia</i> Cleve, 1873/ <i>Melosira</i> Agardh, 1824/ <i>Deionula</i> Schütt ex De Toni, 1894		phytoplankton	Diatom	This class contains species of the genera of <i>Lauderia</i> , <i>Melosira</i> and <i>Deionula</i> . Often image resolution is not sufficient to see connections by central connection thread and processes or distance between sister cells in chains.
Leptocylindraceae	149037	Leptocylindraceae Lebour, 1930		phytoplankton	Diatom	This class includes all <i>Leptocylindrus</i> species as well as <i>Tenuicylindrus belgicus</i> . The current image resolution is too limited to go to genus or species level identification, and is even often not enough to recognize Leptocylindraceae as a group. If not recognized they end up in the class Long (chained) diatom. Possibly they are not so often seen in FlowCAM because colonies can be longer than the 300µm upper limit, because smaller chains are not recognized as Leptocylindraceae because of image resolution limitations or because colonies break and single cells miss the detection limit.
<i>Licmophora</i>	149342	<i>Licmophora</i> Agardh, 1827		phytoplankton	Diatom	
<i>Lithodesmium undulatum</i>	149322	<i>Lithodesmium undulatum</i> Ehrenberg, 1839		phytoplankton	Diatom	
Long (chained) diatom	148899	Bacillariophyceae Haeckel, 1878		phytoplankton	Diatom	This class contains various elongated diatoms or chains of diatoms. Large part of this class appears during the <i>Rhizosolenia</i> bloom and are probably broken <i>Rhizosolenia</i> cells, but the class also contains other various long or chained diatoms that cannot be placed under more detailed classes.
<i>Meuniera membranacea</i>	149145	<i>Meuniera membranacea</i> (Cleve), Silva, 1996		phytoplankton	Diatom	

<i>Neocalyptrella robusta</i>	345491	<i>Neocalyptrella robusta</i> (Norman ex Ralfs) Hernández-Becerril & del Castillo, 1997	<i>Rhizosolenia robusta</i> var. <i>robusta</i>	phytoplankton	Diatom	This class contains mostly parts of <i>N. Robusta</i> since cells mostly break in FlowCAM.
<i>Odontella aurita/Ralfsiella minima</i>	149050/1322474	<i>Odontella aurita</i> (Lyngbye) Agardh, 1832/ <i>Ralfsiella minima</i> (Grunow in Van Heurck) Sims & Williams in Sims et al., 2018	<i>Odontella aurita</i> var. <i>minima</i>	phytoplankton	Diatom	Class contains single cells and chains of <i>O. aurita</i> , smaller chains could be both <i>O. aurita</i> or <i>Ralfsiella minima</i> (prev. called <i>Odontella aurita</i> var. <i>minima</i>).
<i>Odontella rhombus</i> var. <i>trigona</i>	163292	<i>Odontella rhombus</i> f. <i>trigona</i> (Cleve ex Van Heurck) Ross, 1986		phytoplankton	Diatom	Currently, it is not entirely clear if this species is a form of <i>Zygoceros rhombus</i> (prev. <i>Odontella rhomboides</i>) or <i>Zygoceros ehrenbergii</i> (prev. <i>Odontella rhombus</i>). Sims et al. (2018) describes <i>Zygoceros rhombus</i> to have lanceolate to rhomboid valve outline, Ashworth & Theriot (2013) phylogenetic tree places <i>Odontella</i> var. <i>trigona</i> and <i>Odontella rhomboides</i> (= <i>Zygoceros rhombus</i>) together in a clade but Lavigne et al. (2016) mentions the specimen used as <i>Odontella rhomboides</i> by Ashworth & Theriot (2013) does not match the lectotype, results here are thus to be interpreted with caution.
<i>Odontella</i> type 1	148963	<i>Odontella</i> Agardh, 1832		phytoplankton	Diatom	This class contains 1 specific type of <i>Odontella</i> cells that are (currently) not identified to species level, likely these are <i>Odontella granulata</i> .
<i>Paralia</i>	149054	<i>Paralia</i> Heiberg, 1863		phytoplankton	Diatom	
Pennate Diatom	148899	Bacillariophyceae Haeckel, 1878		phytoplankton	Diatom	This class contains single cells of pennate diatoms that show the typical bilateral symmetry from valve of griddle view. Examples of genera included here are single <i>Pseudo-nitzschia</i> cells, single <i>Bacillaria paxillifer</i> cells, <i>Pleurosigma</i> , ...
<i>Plagiogramma vanheurckii</i>	149352	<i>Plagiogramma vanheurckii</i> Grunow, 1881		phytoplankton	Diatom	This class contains only 1 image, possibly because <i>Plagiogramma vanheurckii</i> is generally too small for the Apstein net.
<i>Plagiogrammopsis/Bellerochea malleus</i>	149056/149056	<i>Plagiogrammopsis</i> Hasle, von Stosch & Syvertsem, 1983/ <i>Bellerochea malleus</i> (Brightwell) Van Heurck, 1885		phytoplankton	Diatom	This class is for <i>Bellerochea malleus</i> -type like colonies. However, sometimes these colonies can be confused with <i>Plagiogrammopsis</i> .
<i>Proboscia</i>	149167	<i>Proboscia</i> Sundström, 1986.		phytoplankton	Diatom	This class contains cells that can't be placed with certainty under <i>P. alata</i> or <i>P. indica</i> .
<i>Proboscia alata</i>	149168	<i>Proboscia alata</i> (Brightwell) Sundström, 1986		phytoplankton	Diatom	
<i>Proboscia indica</i>	345513	<i>Proboscia indica</i> (Peragallo) Hernández-Becerril, 1995		phytoplankton	Diatom	

<i>Pseudo-nitzschia</i>	149151	<i>Pseudo-nitzschia</i> H. Peragallo, 1900	phytoplankton	Diatom	This class contains chains of pennate diatoms that show the typical 'stair'-like pattern of <i>Pseudo-nitzschia</i> colonies.	
<i>Rhizosolenia</i>	149069	<i>Rhizosolenia</i> Brightwell, 1858	phytoplankton	Diatom	This class contains all <i>Rhizosolenia</i> cells (with visible ends tapering off into processes), that cannot be placed under the class <i>Rhizosolenia setigera</i> / <i>R. hebetata f. semispina</i> .	
<i>Rhizosolenia setigera</i> / <i>R. hebetata f. semispina</i>	149115/967945	<i>Rhizosolenia setigera</i> Brightwell, 1858/ <i>Rhizosolenia hebetata f. semispina</i> (Hensen) Gran, 1908	phytoplankton	Diatom	This class contains <i>Rhizosolenia</i> with long processes. The otaria, claspers, griddle segments (bands) are invisible with the current image resolution.	
<i>Rhizosolenia:process</i>	149069	<i>Rhizosolenia</i> Brightwell, 1858	phytoplankton	Diatom	Separate class for broken off processes and ends of <i>Rhizosolenia</i> valves. This group has the same taxonomic info as the <i>Rhizosolenia</i> class, however this distinction in two classes creates more homogeneous classes for the CNN to label. Intact <i>Rhizosolenia</i> cells have two of these 'ends' per cell.	
<i>Skeletonema</i>	149073	<i>Skeletonema</i> Greville, 1865	phytoplankton	Diatom		
<i>Stellarima stellaris</i> / <i>Eupodiscus</i> / <i>Hyalodiscus</i>	149653/149665/ 149061	<i>Stellarima stellaris</i> (Roper) Hasle & Sims, 1986/ <i>Eupodiscus</i> Bailey, 1851/ <i>Hyalodiscus</i> Ehrenberg, 1845	phytoplankton	Diatom	Centric diatoms with hyaline area in the middle of the valve. Both smaller and larger cells in this class. Larger cells are <i>Stellarima stellaris</i> as <i>S. microsterias</i> does not occur in the BPNS, smaller cells could be <i>Podosira</i> . Since the relationship between <i>Podosira</i> and <i>Hyalodiscus</i> is poorly resolved at the moment, both are included in the class name for completeness.	
<i>Stephanopyxis</i>	149630	<i>Stephanopyxis</i> Ehrenberg, 1845	phytoplankton	Diatom		
<i>Synedra</i> / <i>Thalassionema</i>	149186 /149092	<i>Synedra</i> Ehrenberg, 1830/ <i>Thalassionema</i> Grunow ex Mereschkowsky, 1902	phytoplankton	Diatom	This class is for star-like or zigzag colonies formed by pennate diatoms, like <i>Thalassionema</i> or <i>Synedra</i> do.	
<i>Thalassiosira</i> / <i>Porosira</i>	148912/148980	<i>Thalassiosira</i> Cleve, 1873 emend. Hasle, 1973/ <i>Porosira</i> Jorgensen, 1905	phytoplankton	Diatom	Class solely for chains of <i>Thalassiosira</i> / <i>Porosira</i> . Single cells are placed under the class Centric Diatom.	
<i>Triceratium favus</i>	149170	<i>Triceratium favus</i> Ehrenberg, 1839	phytoplankton	Diatom		
<i>Trieres mobiliensis</i> / <i>T. regia</i>	839991/839996	<i>Trieres mobiliensis</i> (Bailey) Ashworth & Theriot, 2013/ <i>Trieres regia</i> (Schultze) Ashworth & Theriot, 2013	<i>Odontella mobiliensis</i> , <i>Odontella regia</i>	phytoplankton	Diatom	Class for both <i>Trieres mobiliensis</i> and <i>Trieres regia</i> . Cells almost always appear in griddle view, while distinctive morphological characteristics between species are mainly visible from valve view, so they are put together in a class.
<i>Trieres sinensis</i>		<i>Trieres sinensis</i> (Greville) Ashworth and E.C. Theriot, 2013	<i>Odontella sinensis</i> , <i>Biddulphia sinensis</i>	phytoplankton	Diatom	

<i>Zygoceros</i>	162969	<i>Zygoceros</i> C.G. Ehrenberg, 1839		phytoplankton	Diatom	This class contains <i>Zygoceros rhomboid</i> -type like cells. According to the recent work of Sims et al. (2018), we call this class <i>Zygoceros</i> for type like cells that were previously called <i>Odontella rhombus</i> (after <i>Denticella rhombus</i> type specimen) and <i>Zygoceros rhombus</i> (= <i>Odontella rhomboides</i> , <i>Biddulphia rhombus</i>) after type specimen used to describe <i>Zygoceros</i> . Image resolution is generally too low to see areolation patterns, spines of rimoportulae, ... to make distinction between the <i>Zygoceros</i> species.
<i>Akashiwo sanguinea</i>	232546	<i>Akashiwo sanguinea</i> (Hirasaka) Hansen & Moestrup, 2000	<i>Gymnodinium akashiwo</i>	phytoplankton	Dinoflagellate	Only a few images, possibly <i>Akashiwo sanguinea</i> is overlooked because the cells become pitch black after lugol fixation and are rather small at the current 4x magnifications.
<i>Ceratium horridum</i> / <i>C. longipes</i>	109956/109964	<i>Ceratium horridum</i> (Cleve) Gran, 1902/ <i>Ceratium longipes</i> (Bailey) Gran, 1902		phytoplankton	Dinoflagellate	Class contains both <i>C. horridum</i> and <i>C. longipes</i> as the difference between both species is hard to see in FlowCAM. Curves of horns or angles between horns and cell body can appear different as cells are floating at all angles in the flow cell.
<i>Ceratium tripos</i>	109982	<i>Ceratium tripos</i> (Müller) Nitzsch, 1817		phytoplankton	Dinoflagellate	
<i>Dinoflagellata</i>	146203	<i>Dinoflagellata</i> Bütschli 1885		phytoplankton	Dinoflagellate	This class contains various dinoflagellate cells that are hard to identify to more detailed taxonomic level. Cells are often stained very dark because of lugol fixation and only the two grooves are visible. Current 4x magnification is also often not sufficient for in detail dinoflagellate identification.
<i>Dinoflagellate cyst</i>	146203	<i>Dinoflagellata</i> Bütschli 1885		phytoplankton	Dinoflagellate	This class contains dinoflagellate type cysts with spines and protrusion. Smooth cysts are placed under the class Egg/Cyst.
<i>Dinophysis</i>	109462	<i>Dinophysis</i> Ehrenberg, 1839		phytoplankton	Dinoflagellate	Only few images of <i>Dinophysis</i> , they might have been overlooked.
<i>Dissodinium pseudolunula</i>	110325	<i>Dissodinium pseudolunula</i> Swift ex Elbrächter & Drebes, 1978		phytoplankton	Dinoflagellate	Possible species complex according to literature.
Gymnodiniales	109392	Gymnodiniales Lemmermann, 1910		phytoplankton	Dinoflagellate	Cells in this class have the silhouette of <i>Gyrodinium</i> / <i>Gymnodinium</i> / <i>Karlodinium</i> /... - like cells, however cells appear pitch black due to lugol fixation and current 4x magnifications makes more detailed identification difficult.

<i>Noctiluca scintillans</i>	109921	<i>Noctiluca scintillans</i> (Macartney) Kofoid & Swezy, 1921		phytoplankton	Dinoflagellate	This class only contains intact cells of <i>N. scintillans</i> , broken cells are put under the class Noctilucales.
Noctilucales	109393	<i>Noctilucales</i> Haeckel, 1894		phytoplankton	Dinoflagellate	This class contains parts of Noctilucales, like broken parts of the body or flagella. Since there are observations of other Noctilucales than <i>Noctiluca scintillans</i> in the English Channel (e.g. <i>Spatulodinium pseudonociluca</i>), we cannot be certain these parts are <i>N. scintillans</i> . Noctilucales typically don't preserve well in lugol and are often broken in FlowCAM.
<i>Protoperidinium</i>	109553	<i>Protoperidinium</i> Bergh, 1881		phytoplankton	Dinoflagellate	
<i>Protoperidinium depressum</i>	110217	<i>Protoperidinium depressum</i> (Bailey, 1854) Balech, 1974		phytoplankton	Dinoflagellate	
<i>Protoperidinium pentagonum</i>	110247	<i>Protoperidinium pentagonum</i> (Gran, 1902) Balech, 1974		phytoplankton	Dinoflagellate	
<i>Tripos</i>	494057	<i>Tripos</i> Bory de Saint-Vincent, 1823		phytoplankton	Dinoflagellate	This class is for <i>Tripos</i> cells with upward curved antapical horns <u>only</u> .
<i>Tripos furca</i>	840627	<i>Tripos furca</i> (Ehrenberg) Gómez, 2013	<i>Ceratium furca</i> , <i>Neocertium furca</i>	phytoplankton	Dinoflagellate	
<i>Tripos fusus</i>	840626	<i>Tripos fusus</i> (Ehrenberg) Gómez, 2013	<i>Ceratium fusus</i> , <i>Neocertium fusus</i>	phytoplankton	Dinoflagellate	
<i>Tripos lineatus</i>	837459	<i>Tripos lineatus</i> (Ehrenberg) Gómez, 2013	<i>Ceratium lineatum</i> , <i>Neoceratium lineatum</i>	phytoplankton	Dinoflagellate	
Tripos:part	494057	<i>Tripos</i> Bory de Saint-Vincent, 1823		phytoplankton	Dinoflagellate	This class is for partial images of <i>Tripos</i> where only one horn is visible.
Coccolithophyceae	592906	Coccolithophyceae Rothmaler, 1951		phytoplankton	Haptophyte	Coccolithophores generally dissolve in lugol, only 1 image in this class.
<i>Dictyocha/Octactis</i>	157258/369960	<i>Dictyocha</i> Ehrenberg, 1837/ <i>Octactis</i> Schiller, 1925		phytoplankton	Silicoflagellate	Generally <i>Dictyocha</i> or <i>Octactis</i> species are in the size range that borders the mesh of the current Apstein net. Very rarely some cells are seen in FlowCAM.
Phytoplankton Colony				phytoplankton		This class contains full or parts of phytoplankton colony, more or less round appearing cells sometimes in a visible transparent matrix. Probable that these are <i>Phaeocystis</i> (given seasonal occurrence).
<i>Amphorellopsis</i>	136791	<i>Amphorellopsis</i> Golemansky, 1970		protozoa	Ciliate	
Ciliophora	11	Ciliophora Doflein 1901		protozoa	Ciliate	This class contains ciliates without a lorica and that are not Suctoria. Ciliates with a lorica and Suctoria have more specific classes (see further).
Ciliophora:part	11	Ciliophora Doflein 1901		protozoa	Ciliate	This class contains parts of stalked ciliates.
<i>Codonellopsis</i>	204197	<i>Codonellopsis</i> Jörgensen, 1924		protozoa	Ciliate	
<i>Eutintinnus</i>	183543	<i>Eutintinnus</i> Kofoid & Campbell, 1939		protozoa	Ciliate	Recognized by shape of lorica. Empty lorica can be overlooked and placed under remnant.

<i>Favella</i>	172431	<i>Favella</i> Jörgensen, 1924	protozoa	Ciliate	
<i>Helicostomella</i>	172434	<i>Helicostomella</i> Jörgensen, 1924	protozoa	Ciliate	
<i>Strombidium</i>	101195	<i>Strombidium</i> Claparède & Lachmann, 1859	protozoa	Ciliate	
Tintinnid cyst	732976	Tintinnina Kofoid & Campbell, 1929	protozoa	Ciliate	
Tintinnina	732976	Tintinnina Kofoid & Campbell, 1929	protozoa	Ciliate	This class is for tintinnid ciliates (ciliates with a lorica), that cannot be placed under the classes <i>Tintinnopsis</i> , <i>Eutintinnus</i> , <i>Favella</i> , <i>Xystonella</i> , <i>Amphorellopsis</i> , <i>Helicostomella</i> , ...
<i>Tintinnopsis</i>	163780	<i>Tintinnopsis</i> Stein, 1867	protozoa	Ciliate	
<i>Xystonella</i>	183574	<i>Xystonella</i> Brandt, 1906	protozoa	Ciliate	
Foraminifera	1410	Foraminifera d'Orbigny, 1826	protozoa	Foraminifera	
Peritrichia	163067	Peritrichia Stein, 1859	protozoa	Protozoa	This class contains mainly stalked round appearing ciliate cells. Often grouped together in an image or appearing in several images in the same sample, giving the idea that they form colonies that usually break up in FlowCAM. As not all cells have a visible stalk we chose Peritrichia as the classname over the order of sessile Peritrichia, Sessilida.
Suctoria	162681	Suctoria, Claparède & Lachmann, 1858	protozoa	Protozoa	
Nassellaria	235741	Nassellaria Ehrenberg, 1875	protozoa	Radiolaria	
Radiozoa incertae	582421	Radiolaria Cavalier-Smith, 1987	protozoa	Radiolaria	Uncertain class.
Porifera spicule	558	Porifera Grant, R.E. 1836	zooplankton	/	
Mollusca	51	Mollusca, Linnaeus 1758	zooplankton	Mollusc	
Mollusca incertae	51	Mollusca, Linnaeus 1758	zooplankton	Mollusc	This class contains larval stages of Mollusca with similar morphology.
Nematoda	799	Nematoda Rudolphi, 1808	zooplankton	Nematode	
Appendicularia	103357	Appendicularia Fol, 1874	zooplankton	Tunicate	
Veliger larvae D-shaped	105		zooplankton	Bivalvia	This class contains D-shaped veliger larvae of Bivalves (Mussels).
Copepoda adult	1080	Copepoda Milne Edwards, 1840	zooplankton	Crustacean	
Crustaceae	1066	Crustacea Brünnich, 1772	zooplankton	Crustacean	This class contains Crustaceae that cannot be placed under classes Nauplii, Copepoda adult, Decapoda.
Crustaceae:part	1066	Crustacea Brünnich, 1772	zooplankton	Crustacean	This class contains various broken off parts of crustaceans like legs, antennae, pieces of carapax, heads, ...
Decapoda	1130	Decapoda Latreille, 1802	zooplankton	Crustacean	
Nauplii			zooplankton	Crustacean	
Ophiuroidea/Echinoidea larvae	123084/123082	Ophiuroidea Gray, 1840/ Echinoidea Leske, 1778	zooplankton	Echinodermata	
Cnidaria	1267	Cnidaria Hatschek, 1888	zooplankton	Gelatinous	This class contains ephyra, scyphistoma and polyp stages of Cnidarians.
Polychaeta	883	Polychaeta Grube, 1850	zooplankton	Polychaete	This class contains polychaete larvae.

Polychaeta:setae	883	Polycheata Grube, 1850		zooplankton	Polychaete	This class contains partial images of polychaete larvae where mainly the setae are visible.
Rotifera	14260	Rotifera Cuvier, 1817		zooplankton	Rotifer	
Zooplankton				zooplankton		This class contains unidentified zooplankton.
Unknown						General unknown class, many different morphological types.
Unknown_3						This class contains unknown images of a certain kind, grouped on similar morphology.
Unknown_5						This class contains unknown images of a certain kind, grouped on similar morphology.