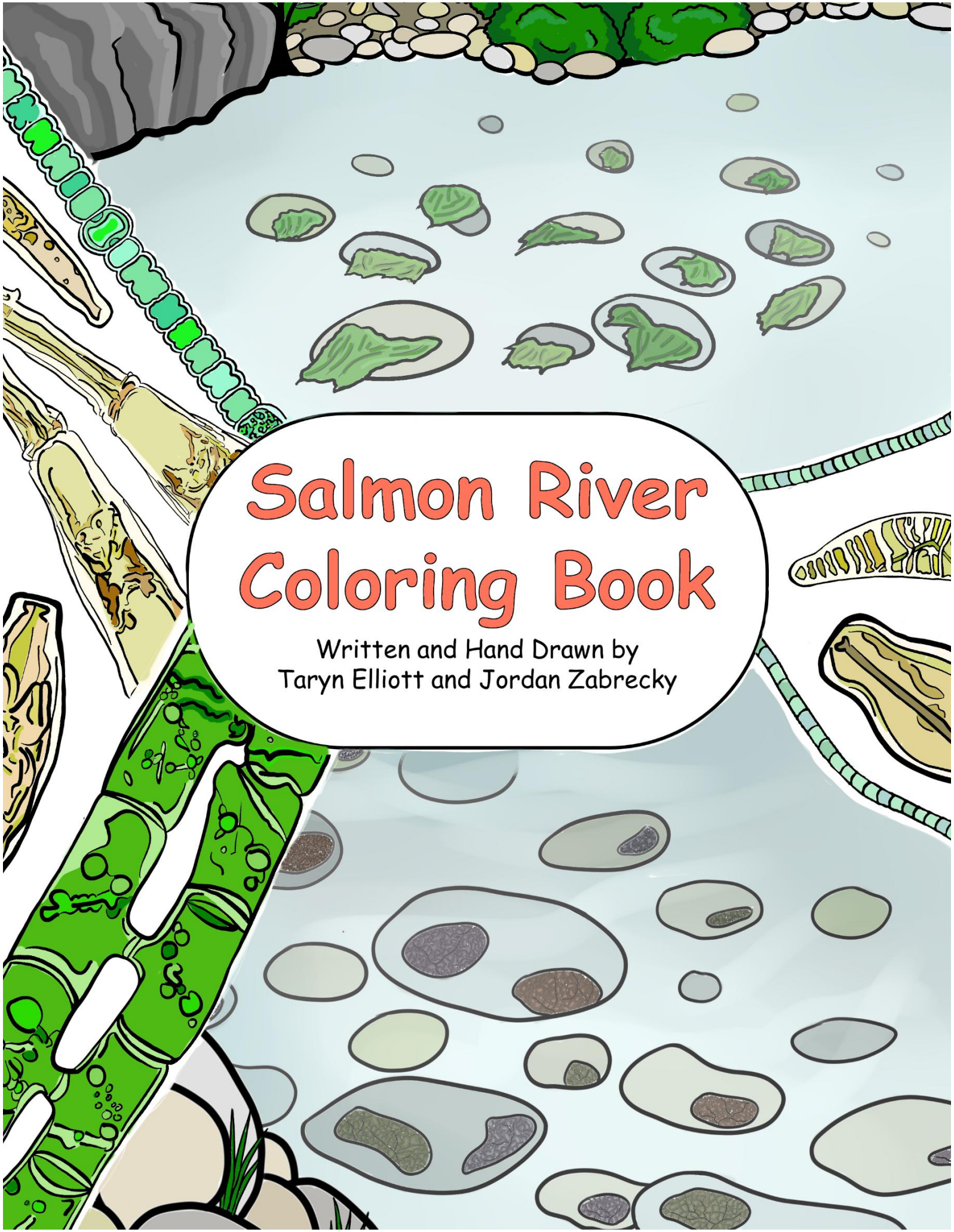
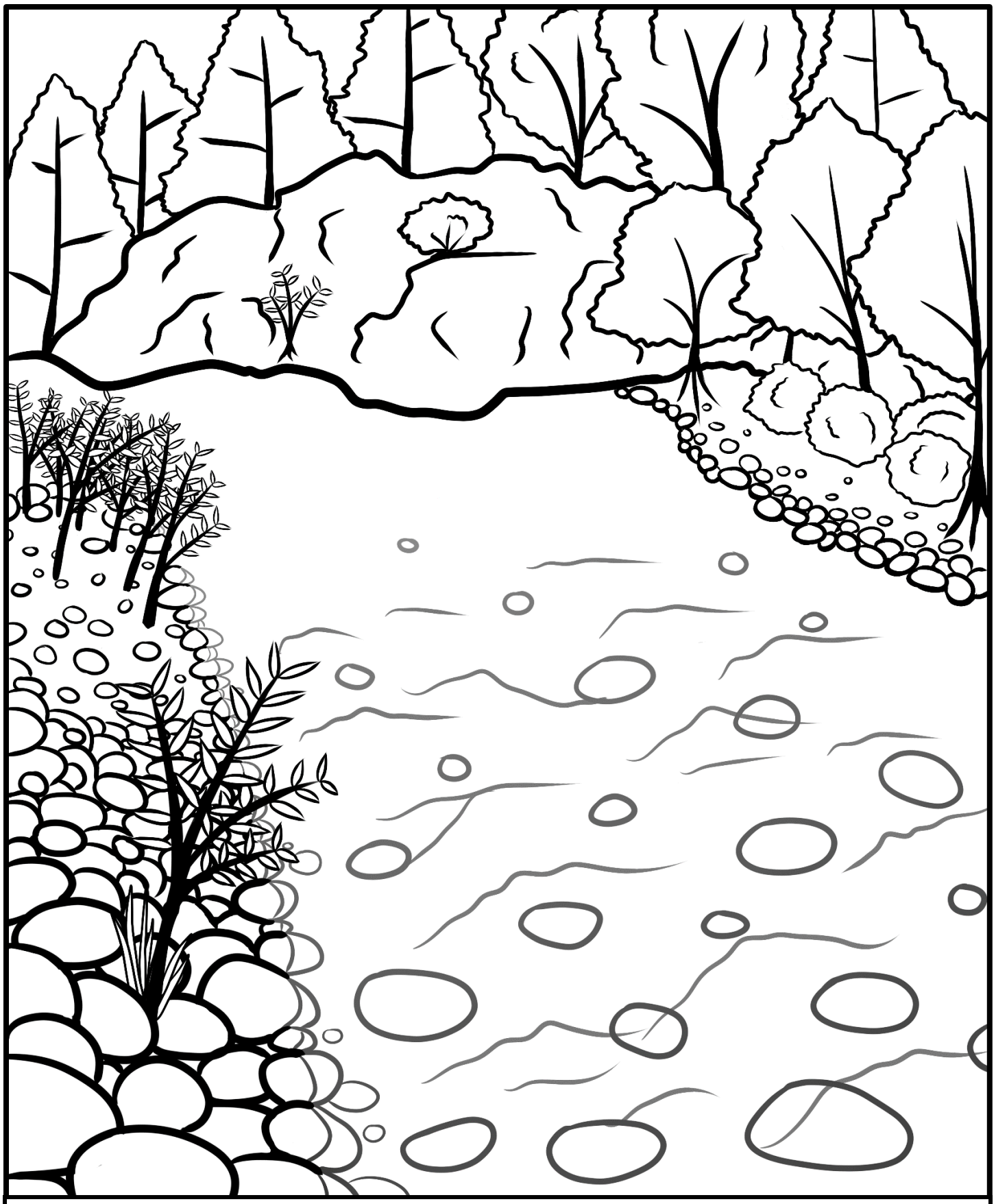
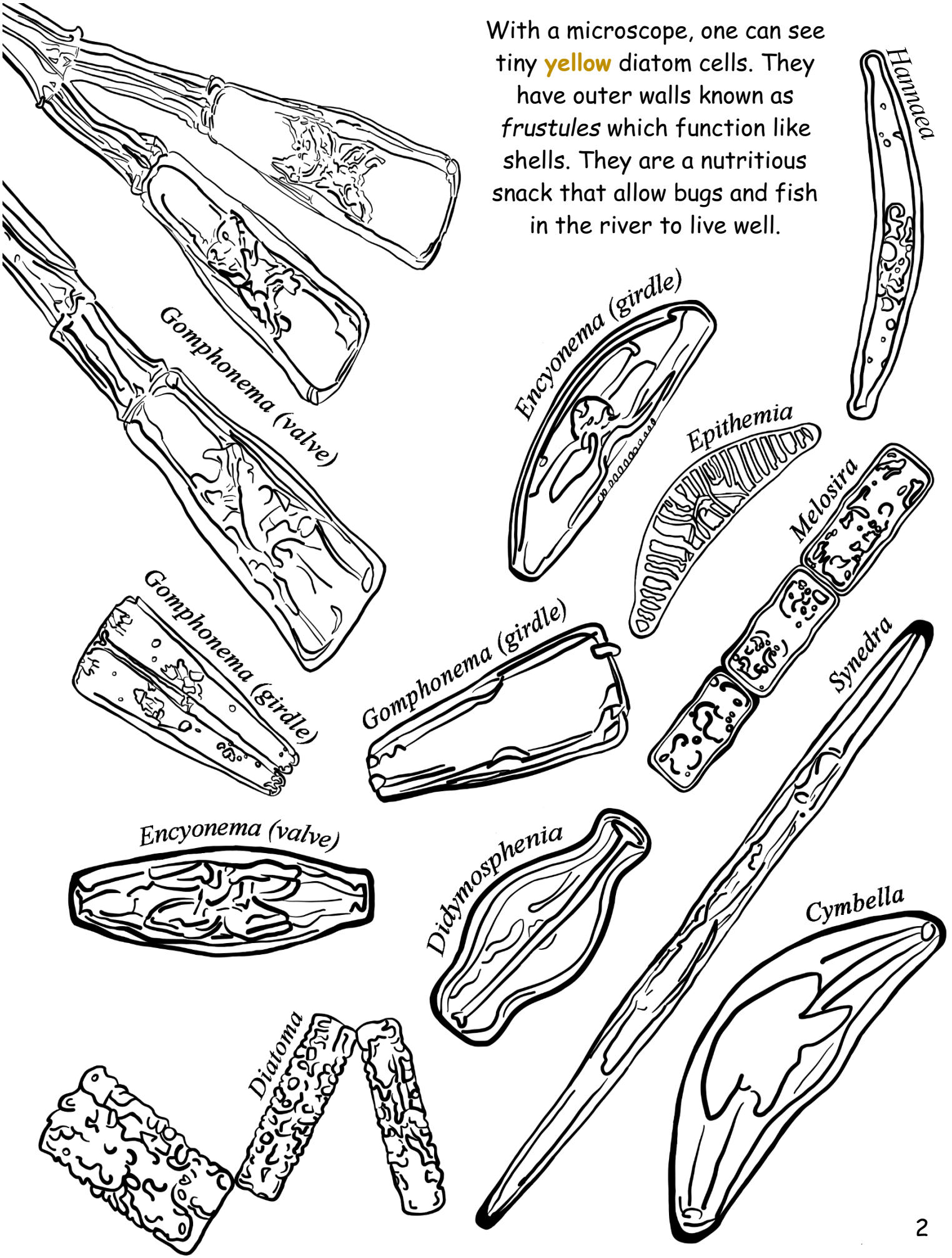
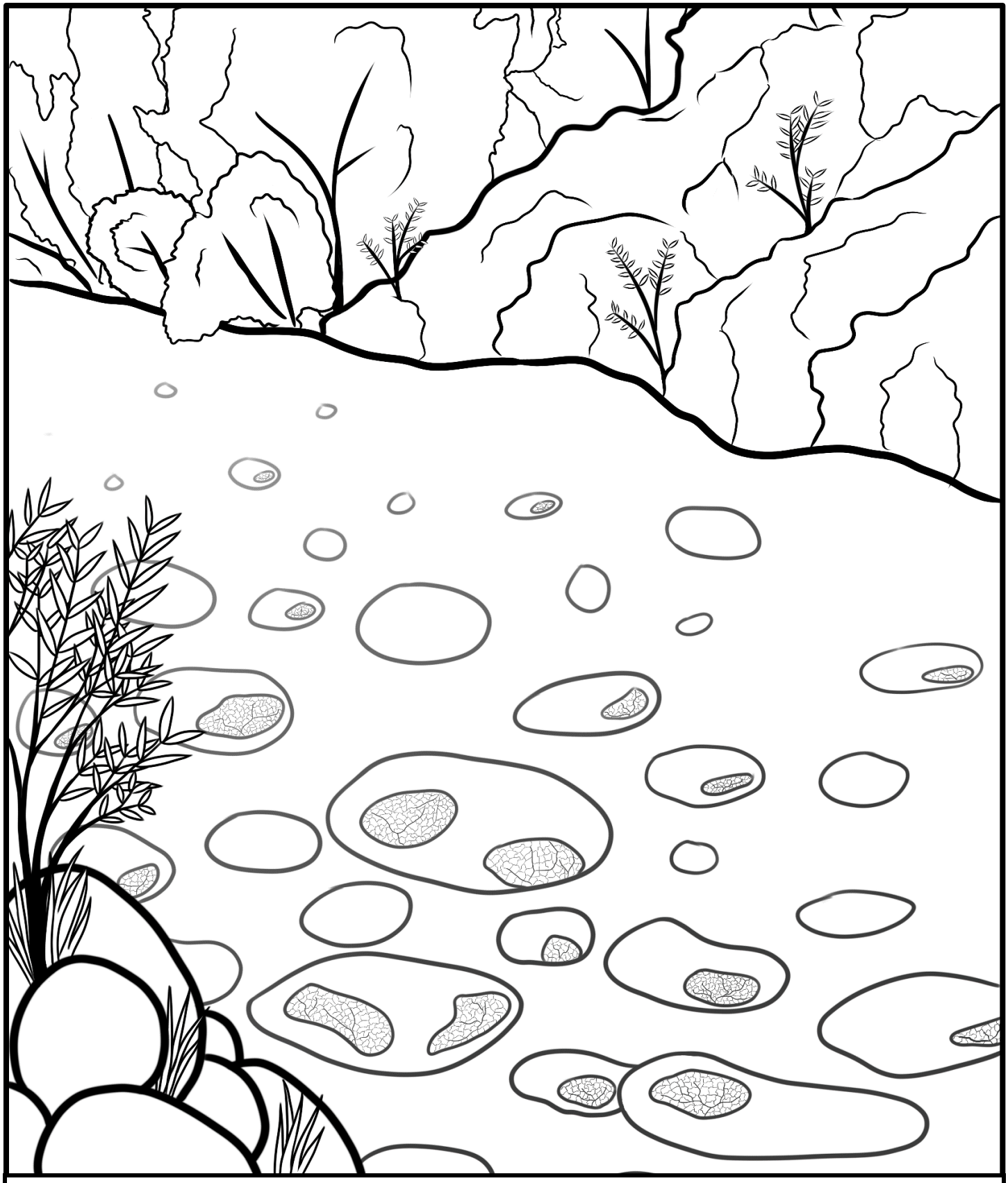

Salmon River
Coloring Book
Written and Hand Drawn by
Taryn Elliott and Jordan Zabrecky



In the early summer, after the rainy season, the river flows are still high. The rocks in the river do not appear to host much life, but that is only to the human eye…

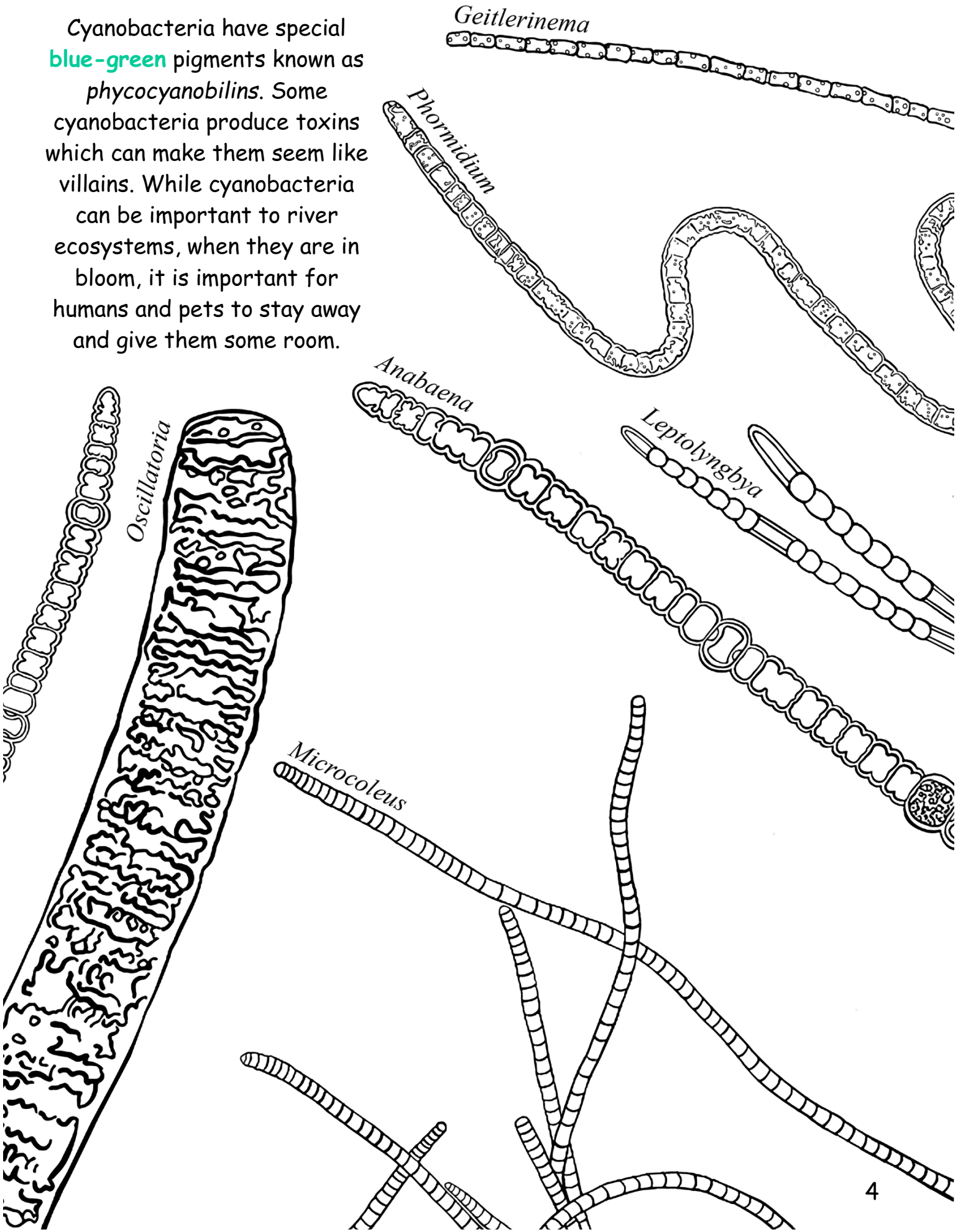
With a microscope, one can see tiny **yellow** diatom cells. They have outer walls known as *frustules* which function like shells. They are a nutritious snack that allow bugs and fish in the river to live well.

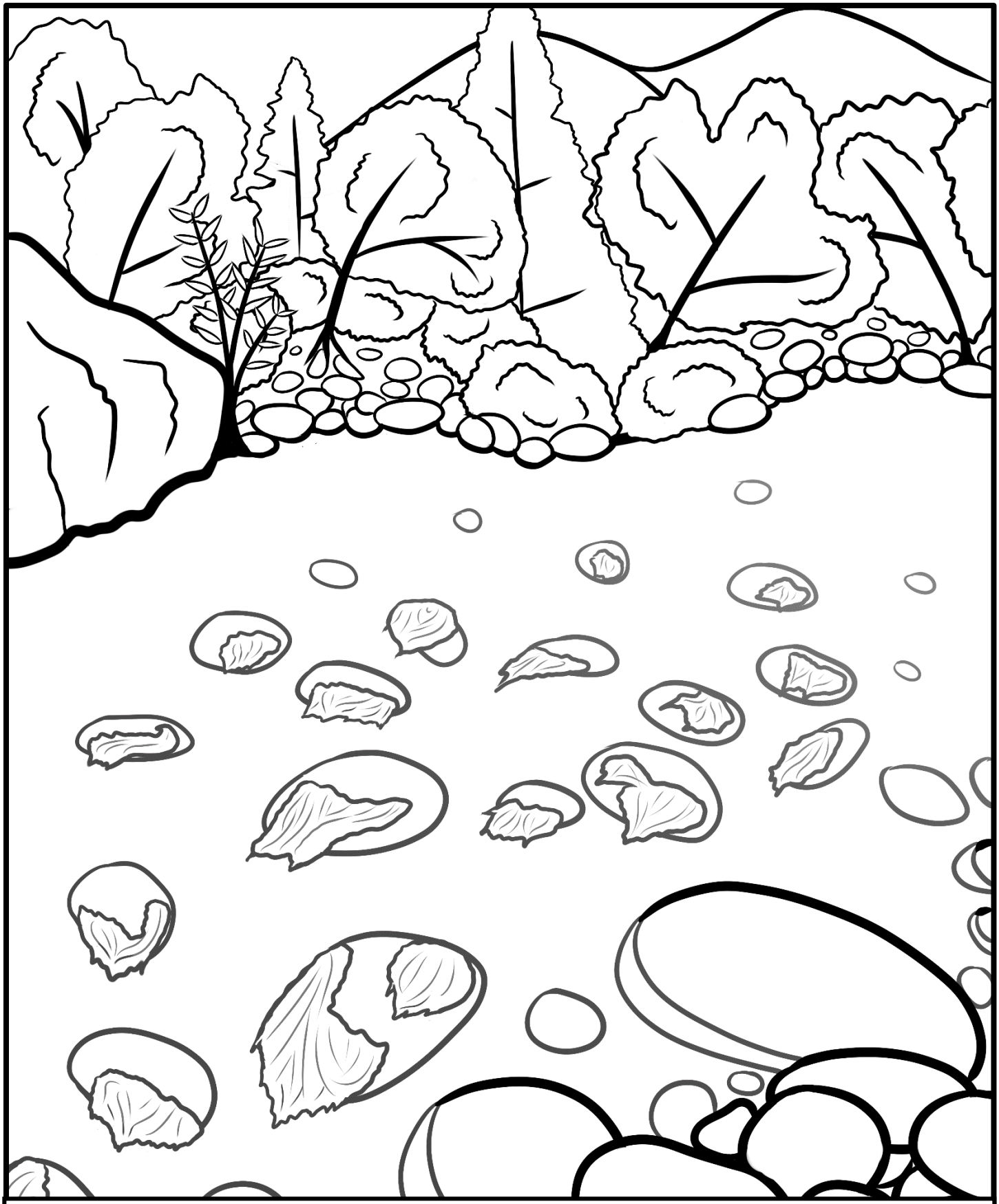




As summer progresses, on the river rocks, one can see dark mats. These are formed by cyanobacteria, organisms that gave our Earth oxygen 2.5 billion years ago. While cyanobacteria can occupy a variety of river habitats, these dark mats of *Microcoleus* tend to prefer areas with faster flow.

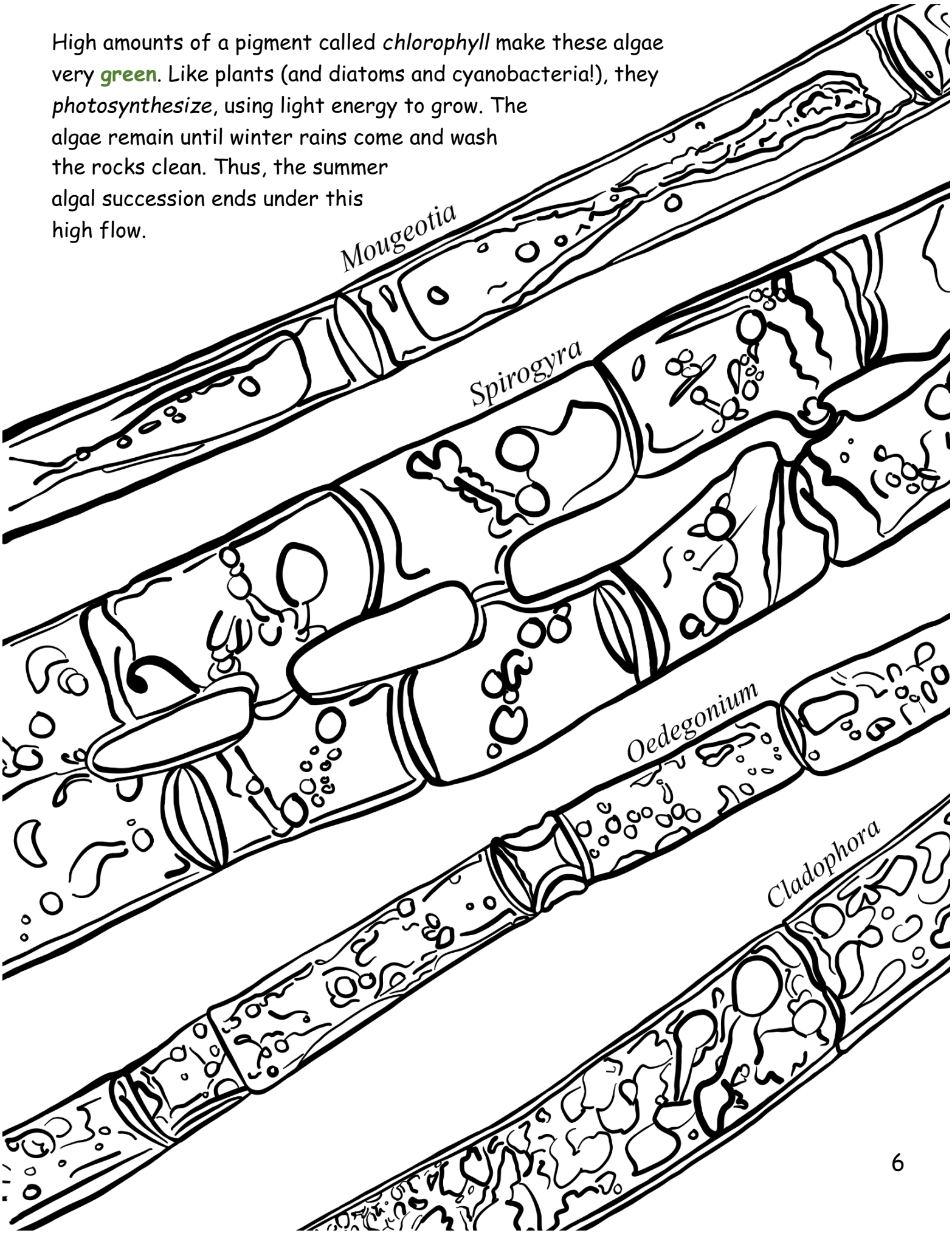
Cyanobacteria have special **blue-green** pigments known as *phycocyanobilins*. Some cyanobacteria produce toxins which can make them seem like villains. While cyanobacteria can be important to river ecosystems, when they are in bloom, it is important for humans and pets to stay away and give them some room.





Towards the end of the summer, the rocks get covered with stringy and fuzzy green as river flows are slow. These mats of green algae can provide great spaces for river bugs to live and grow.

High amounts of a pigment called *chlorophyll* make these algae very **green**. Like plants (and diatoms and cyanobacteria!), they *photosynthesize*, using light energy to grow. The algae remain until winter rains come and wash the rocks clean. Thus, the summer algal succession ends under this high flow.



This work was supported by National Science Foundation Division of Biology Grant Award #2042915.