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*BioLine: The Biodegradable Fishing Line*

The composition of a fishing line affects its biodegradability and ultimately impacts the riparian environment. The design of the BioLine should be clear to blend with the environment. The BioLine must cast like a regular tippet. In order to meet these criteria, I braided white horse-tail hairs together to create three 30.5 centimeter sections and covered the strands with Knox gelatin. I then tied the sections together with blood knots to create a tippet of BioLine. To discover if the BioLine cast the same as a regular tippet and as a silk tippet, I used my design on a regular fly rod. I placed the three tippets in a small aquarium with pond water and added a filter and a lamp to simulate a natural environment. After one week, I took photographs of the tippets under a microscope. I used a scale to weigh the tippets and a caliper to measure their thickness. I continued this for eight weeks. Mid-testing, I placed each of the tippets in a rock tumbler to simulate them being thrown around in a river. In conclusion, I confirmed the silk tippet remained intact initially before degrading, while BioLine was destroyed more quickly. All lines cast the same, revealing sufficient performance. The regular tippet which is made out of monofilament showed no degradation, which negatively affects the riparian environment. BioLine maintains adequate performance while degrading completely in the natural environment.