Testing the Tensile Strength of Cordage Made of Fibers From Plants Found on St. Croix

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Cord-making is a simple skill that has been used for thousands of years, yet very few people in the modern world know anything about the process. The purpose of this project was to determine what plant on St. Croix can be used to make the strongest cordage. The experiment involved three common plant species on St. Croix: Dracaena trifasciata (snake plant), Cocos nucifera (coconut palm), and Megathyrsus maximus (guinea grass). By extracting the fibers and making cordage I was able to test their tensile strength. Using a five-gallon bucket, and a measured amount of water in liters, I determined the maximum strength of the cords. The D. trisfasciata cordage had the greatest tensile strength, followed by the C. nucifera, and then M. maximus. In conclusion, the high cellulose content of the D. trisfasciata fibers made it the strongest cord, and the one with the most possible applications in the modern world. A future study should be conducted on the effect that water has on natural cordage and the longevity of the natural fibers.

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