

Project Cordage

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Introduction

There are many ways people used cordage a long time ago, and we decided to see which method was best, and how much weight it could handle. There are 4 different types of cordage we tested: thin braided, thick braided, thin twisted, and thick twisted. Our hypothesis is that the thick braided will hold up the longest and hold more weight.



Background information

Thousands of years ago, cordage was used by the Native Americans for many things such as bowstrings, fishing lines, nets, trap triggers, snares, and lashings. They made the cordage from the fibers of plants, trees, and other materials like animal sinew and rawhide. They would braid and twist the cordage to make sure it was strong. We wanted to know what kind of cordage is the strongest.



Method and Materials

Materials:

- Cordage material (24 strands+extra just in case it breaks)
- Buckets
- Heavy weights (10-30 lbs)

**We have 4 types, thin braided, thick braided, thin twisted, thick twisted.*

Steps:

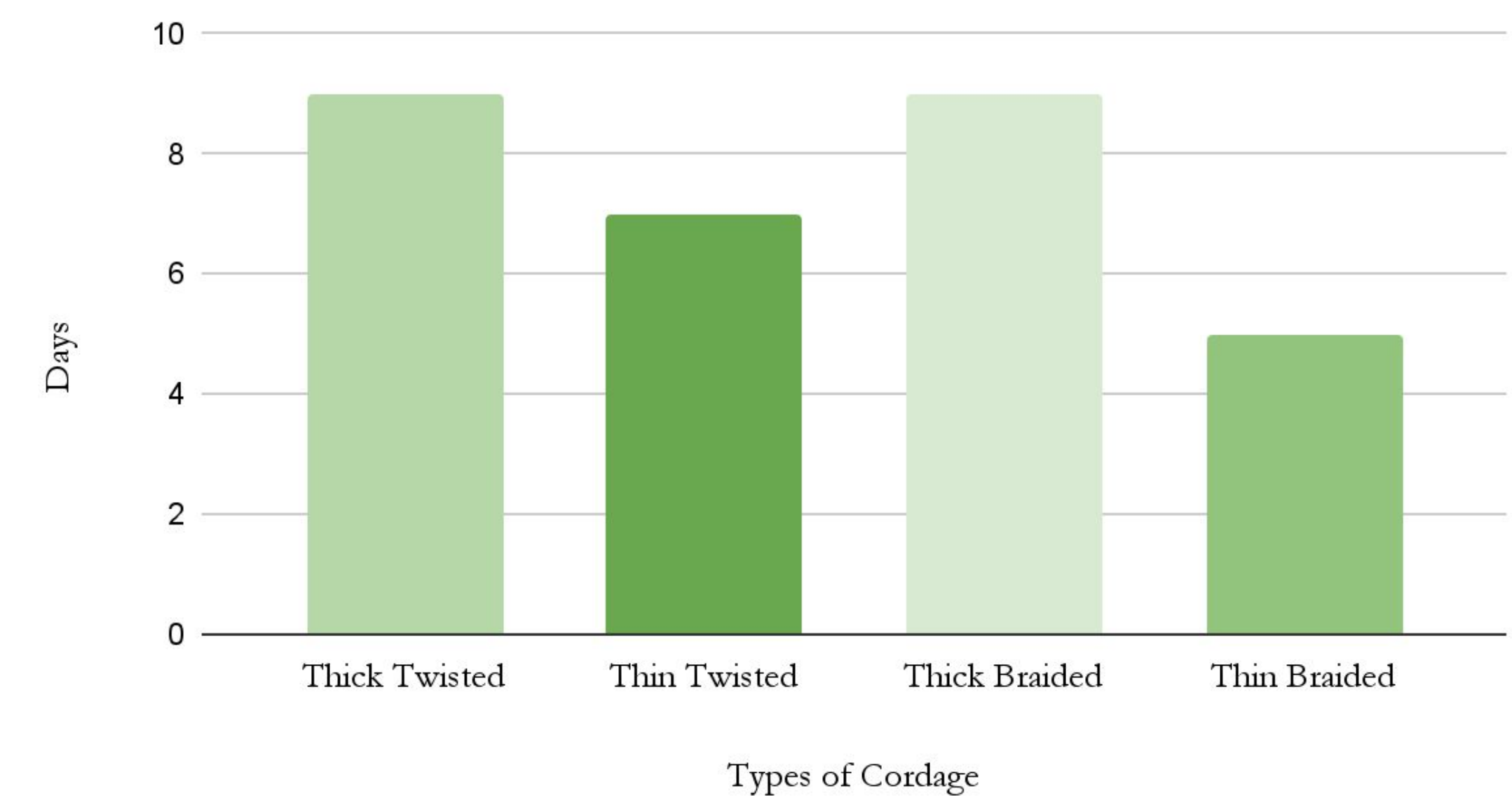
1. Make cordage, one of each kind. (3 for thin braided, 9 for thick braided, 4 for thin twisted, 8 for thick twisted)
2. Tie the cordage around the bucket handle, and tie a knot to keep it steady.
3. Add in the same amount of weights into the buckets, spreaded out evenly. (We added 20 lbs in each bucket to start)
4. Record data.

Results

We started our project on April 22, 2021, and ended May 4th, 2021. We had to end early, due to the weights in our buckets going missing. We realized that the more strands the cordage has and the tighter it is, the longer it can stay up. The events will be listed down below:

- Day 1: All buckets hanging (April 22nd)
- Day 2: All buckets intact (April 23rd)
- Day 3: All buckets still hanging. (April 24th)
- Day 4: All buckets hanging. (thin braided is struggling, April 25th)
- Day 5: Thin Braided fell (other buckets are still intact, April 26th)
- Day 6: 3 buckets hanging (April 27th)
- Day 7: All buckets hanging (April 28th)
- Day 8: All buckets hanging (April 29th)
- ****Over one of the 4 days (Friday-Monday), the thin twisted fell****
- ***Day 9: The thick twisted and thick braided remain. Our experiment was sabotaged; weights were randomly removed from the remaining buckets so the experiment ended. (May 4th)***

Length of Time Cordage Lasted



Conclusions

Although our experiment unexpectedly ended, from the results that we gathered, the thicker pieces of cordage lasted the longest. In order to get complete results these tests would have to be repeated and not tampered with. One thing that we figured out was that all of the pieces of cordage can hold at least 20 pounds for short amounts of time. A few more things that could be experimented with is figuring out how much more weight the cordage can hold short term, and figuring out how much longer the thicker pieces of cordage could last with that same amount of weight.