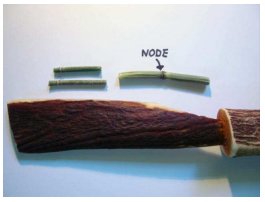
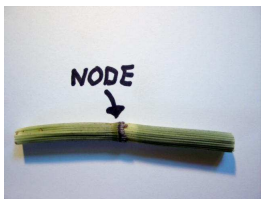
A Horsetail Pan Flute
by storm

Strolling by a patch of horsetail (*Equisetum hyemale*), it is hard to resist cutting a length of this slender, abrasive plant and blowing across an open end for its sharp whistle effect. Upon witnessing a friend play his pan flute one day, I realized that I could fashion one out of horsetail.

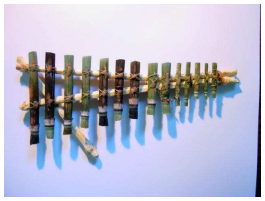
This horsetail pan flute is easy to make, but takes patience and dexterity, especially when securing each piece of horsetail to the frame. I initially made the mistake of using fresh horsetail when assembling my first pan flute. This resulted in whistles that shrank away from the frame and the yucca bindings, as well as buckled into unattractive, tone-less hanks of horsetail. It seems very important to thoroughly and slowly dry whole horsetail stems in a cool place devoid of direct sunlight. For my material in my locale, this process took three weeks.



The next step is to cut the horsetail into suitable lengths to produce whistles of different pitches. I find that using a swift chopping motion with an antler cleaver works well, giving a clean cut without crushing *all* of the horsetail. [afternote--I have found that using a sharp obsidian shard works better and doesn't crush the horsetail]. When cutting horsetail into whistles, you don't want pieces that are totally hollow. One must leave an intact node, or cross-wall, inside the length of each piece. Some species of *Equisetum* branch at these nodes. I have not had success making whistles out of these species. Experiment, experiment, experiment! Knowing nothing about music, I cut a couple hundred pieces and blew away, setting aside those that "sounded right." Generally, the longer and/or wider the piece, the lower it will sound. Coincidentally (I whimsically prefer *instinctively*), when I finished selecting those whistles I deemed good enough to affix to a frame, a musician friend informed me that my arrangement decently coincided with a nearly two octave scale, starting with a *C* (438 Hz).



For the triangular frame, I chose clematis, which was light and handy. Here was the most difficult part of this endeavor—attaching the horsetail to the frame, which proved to be intricate and taxing to my dexterous capabilities. In the photos you can see the grand fir pitch and yucca fibers I used to attach the whistles to the frame. After I tied the frame together with yucca, I glued each whistle to the frame using the heated pitch. Upon drying, I then tied the horsetail to the frame with a yucca fiber, with the thicker fibers being more reliable (but be careful not to crush the horsetail when cinching down your knots!). Occasionally a whistle would dislodge from the frame with handling, so re-application of pitch was necessary. When each whistle was finally tied to the frame, I re-enforced the bindings with a drop of heated pitch. On the finished product I rubbed ochre rock dust on all pitched surfaces to eliminate stickiness.



This is a great activity to do with kids: it gives them a real connection with their environment; utilizes a widespread resource (here in the Pacific Northwest); and produces a final product that their parents don't mind them having (as opposed to, say, a stone blade). Enjoy!