GEORGESON BOTANICAL GARDEN

UNIVERSITY OF ALASKA FAIRBANKS

University of Alaska Fairbanks
School of Natural Resources and Extension

SNRE
SCHOOL OF NATURAL RESOURCES AND EXTENSION

Georgeson Botanical Notes No. 102 (2004) - Revised 2014

Amazing Mazes

by
Jan Hanscom

For the last two months Georgeson Botanical Garden staff members and volunteers Barbara Rhondine and Susan Lightbody have been a common sight in schools around the district. They have been recruiting classes of children and their teachers to raise the tens of thousands of Siberian Pea shrubs needed to plant the hedge maze in the Babula Children's Garden. The maze will be planted next fall when all those children who helped grow the plants come to help us plant the seedlings.

You may have some experience with mazes yourself. In fact, we discovered that we all have experiences with mazes every day. Whether children visit the ice park or play video games, they have all enjoyed mazes. The student who insisted he had never been in a maze finally had to concede that even driving to the store is to be in a maze. There are many ways to get from here to there, and choosing the fastest or shortest path is the trick to solving the maze.

Mazes have been around for over 3,000 years that we know of. At first they were a game, a doodle that was played as a brain teaser perhaps. The first person might say- "Hey, I have this pattern, can you make a maze out of it?" and the second person would try to get a maze you could actually solve drawn from the pattern. These simple patterns have been found in designs on pottery, ancient stones tablets and petroglyphs around the world.

The Minotaur of Crete is probably the most famous of the old myths about mazes but there are other examples like the Greek maze in the temple at Epidaurus. If you do a little research on the internet, you will find more information than you wanted to know. There does seem to be some confusion about the words 'Labyrinth' and 'Maze'. They have the same meaning- a contrived path. The accepted difference is that a labyrinth has only one way in and out, while the maze has dead ends and is a puzzle to be solved. Labyrinth is an ancient word with roots from earlier than 3,400 years ago when it appeared in a Cretan inscription "honey-pot for all the gods, a honey-pot for the lady of the labyrinth".

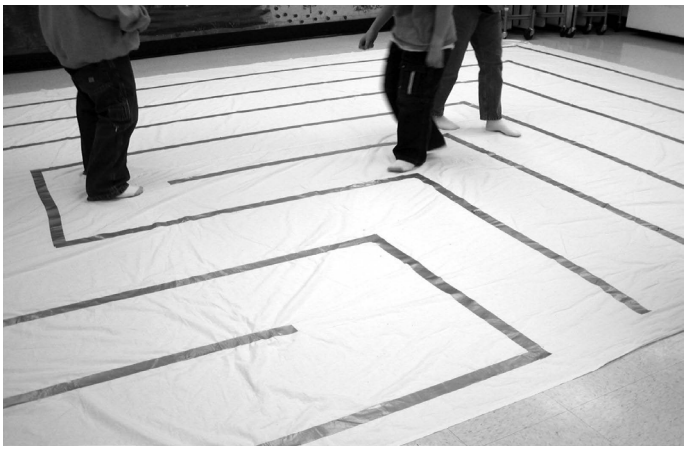
Students planted Caragana seeds and will grow them in their classrooms. Photos by Doreen Fitsgerald.

There are indications of labyrinth–mystery traditions in many religions. Generally the labyrinth seems to be a symbol of the path you choose through life. That path was a mystery and was symbolized by the many patterns that could be used to create a labyrinth. As the monks of the Christian religion became involved, a new maze that always had the same path became common. It symbolized the new belief that there is one true path in life. This replaced the pattern-making puzzle tradition.

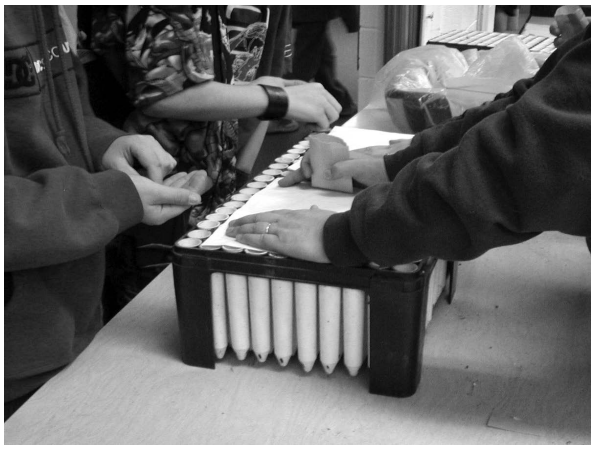
The modern puzzle maze built with the idea of getting you lost has only been around for about 200 years. This type of maze has now spread around the world. It has no religious meaning at all any more. However, ancient mazes traditions are being revived for use in meditation and healing rituals.

As we have discovered, finding your way from here to there on the highways is a very important type of maze. This has created a whole branch of mathematics called critical-path analysis. The question of how to route the snow plows or school buses the most efficiently is an important economic question for city planners. Critical path analysis is also used by autorouters to allow the smallest chip possible for our computers.

Students in local elementary school learned a little about the history of mazes and then 5th and 6th graders were given a lesson in math. Since we even had trouble understanding the math involved in critical path analysis, the lesson was just the very tip of the iceberg in that area of math. Students seemed to enjoy the challenge and even though they didn't understand exactly what they were creating, sometimes it is a worthwhile exercise to do math calculations just to do math calculations and see how to manipulate numbers to create patterns and graphs. A teacher told me that.



The walkable maze we brought to the school was a big hit with teachers and students.



There are thousands of seedlings being grown for the maze.

Originally published in Georgeson Botanical Garden Review Vol. 13, No. 1, 2004

For more information from the Georgeson Botanical Garden and the School of Natural Resources and Extension visit:

www.uaf.edu/snras/gbg
www.uaf.edu/snras
www.snras.blogspot.com