Every Plant Has a Story

by Allan Foster

At the COEO conference last fall, Allan Foster presented a workshop on the use of plants in the classroom to celebrate significant holidays. In keeping with the theme of the conference, Allan's workshop honoured the diversity of human cultures, as well as the diversity of plants.

Now that I'm retired, one of my pet projects is to demonstrate to teachers how easy it is to grow plants in the classroom. As excited as I am about botany, I recognize that very few people share my enthusiasm. However, I have finally found a hook: in order to create equitable schools in Ontario, teachers are mandated to honour diversity in their classrooms by celebrating a diversity of special significant days such as Ramadan, Kwansaa, Diwali and Chinese New Year. Not only does this provide students with an opportunity to learn about other cultures while sharing and celebrating their own, it is also a great way for students to learn about plants, because every significant day seems to have its own celebratory plant. Many of these plants carry a rich heritage of stories, and some are easy for students to grow on the classroom windowsill.

By finding a group of plants that celebrate significant days, I designed a curriculum model to demonstrate their propagation and care in the classroom. The model even provides a schedule and gift-wrap ideas so that students of all backgrounds can take the plant home as a gift to celebrate those special days. Of course as a Canadian, I hope this will lead to a sharing of information about cultures other than my own. As a botanist and outdoor educator, I hope the engagement begun in the classroom will lead to an interest in plants growing outside as well.

Stories of the African Violet

As an example of where this might lead, I have chosen one of the easiest plants in the world to procure and grow — the African violet. At less than five dollars for two plants, the plant is affordable, and two plants are more than enough to supply sufficient growing material so that all of your students have something to take home.

Because the African Violet comes from Africa, it could be a gift to take home during Kwansaa. Or, it could be used as a present for students to take home on Mother's Day. Finally, because the name "violet" is tied to Greek mythology, the flower might be used to celebrate a special Greek day such as Easter.

Three stories with three different cultural roots can be used in order to make the violet a more engaging teaching tool:

Plucked from the plains of Africa

The first story is about the plant's discovery and how it was named. It's an outdoor story about tents, trekking and observations made in the wild. No European had ever seen the plant before the end of the 19th century. It grew undetected and undeveloped in the mountains of Tanzania in Africa (Tanzania was a German colony known then as Tanganika). Although the Africans certainly knew the plant, they had no known use for it.

No use for it, that is, until Europeans developed an unquenchable thirst for new and exciting plants to grow as ornaments in and around their homes. The theory is that a German horticultural society, hungry for new plant material for their nurseries, funded a small expedition to Tanzania to see if there were any plants to exploit.

Leading the expedition was a landed aristocrat by the name of Walter von Saintpaul. Walter's father, Baron Walter von Saint Paul, was a botanist and had studied and worked in horticulture. Excited about his delivery, Walter sent his father living samples of the plants in special glass boxes called Wardian cases.[1]

Unfortunately, many plants never survived the trip, with many Wardian cases being smashed by raging seas and shipwrecks. Other plants simply never survived the shock of being dug up and transported thousands of miles. However, a few precious plants did make it back to Germany. Under the baron's loving care, they thrived as a houseplant. Very soon, African Violets became a common commodity at the plant markets in Germany. There are now African Violet Societies all over the world, with sales in African Violets numbering millions of dollars. Sadly, Tanzania itself has not profited one cent from the success of its native son.

To honour the man who found the plant in Africa, African violets still carry the scientific name of *Saintpaulia* to this day.

In the name of love

The second story comes from Greek legend, and refers to the other violet, Viola. As it turns out, Zeus, the most powerful of the Greek gods, was in love with a beautiful nymph by the name of Io. Legend has it that Zeus and Io spent many happy hours together lying in the flower-covered meadows by the sea.

Hera, Zeus' wife of many years, knew about his frequent dalliance. One bright day, seeing Hera coming across the meadow, Zeus transformed Io into a large white cow in order to protect his girlfriend from the wrath of his wife (another version maintains that it was Hera who turned Io into the cow).

But the two lovers were not quick enough to fool Hera. She created nasty biting flies to pester Io — the same flies that pester cattle to this day. Unable to withstand the biting, Io jumped into the sea to escape. That part of the sea is still called "Cow Sea" or "The Bosphorus" ("Bos" is another word for "cow" and the Bosphorus is also known as the Istanbul Strait).

While running through the meadow toward the sea, the stinging of the flies caused Io's eyes to well up, and huge cow tears fell to the ground. Wherever tears fell, violets sprang up and grew. Her name became the root of the word "violet", for which the plants are still called today.

Mothering Sunday

The third story about violets comes from England. During the Middle Age, young girls from small villages often worked for the landlord as scullery maids in the kitchen or chambermaids in the bedrooms. They worked very hard and only had one day off each year.

Their one holiday was called Mothering Sunday. On that day, the girls could quickly run home to their village and spend the rest of the day with their family. Because there was no time and no money to buy a gift for mother, the girls would pick a small bouquet of violets that grew at the side of the road that time of year. The special day later became Mother's Day and, for a long time, the traditional gift was a bouquet of violets.

The Biology of the African Violet

Once you have engaged the learner by telling a story, this is the time to introduce its biology.

There are many books and Web pages about the African violet, but I will simply share the easiest way to propagate *Saintpaulia* on the windowsill.

[1] A Wardian case is simply a fancy glass terrarium that protected living plants and animals on their difficult journey back to Europe. These cases had been used by Victorian naturalists for almost 50 years.

This is a long-term project. It will take three or four months to achieve the results you want. However, once you set the activity up, you have nothing to do but wait. You don't even need to water the plants — foil wrap will prevent evaporation.

To keep costs down, buy 36 clear plastic shot glasses at the dollar store. Cover each glass with a square of aluminum foil, folding it down so that the foil is tight across the top of the glass. Then with a pencil, poke a hole in the middle of the foil. Fill each glass with water through the hole in the foil. (I do this by holding the glass under a running tap. The foil will balloon up when the glass is full.)

Hold your breath while you do this next part, because now you are going to destroy an African violet plant. Cut all the leaves from the middle of the stock. These will be just the right age — not too young and not too old. Cut each petiole (leaf stem) to about 3 centimetres in length. Then trim the cut end on an angle of 45 degrees to maximize the area that will eventually produce the roots. Next, stick the leaf stem through the hole in the aluminum but keep the leaf itself dry.

Place all the shot glass leaves on a tray in a window, where they will get lots of indirect sunlight. It will take up to two months but you can watch the roots develop at the base of the cut stem. Eventually you will begin to see some tiny leaves developing with the roots under the surface of the water. This is the time to remove the plantlets from the water and aluminum foil and pot them in some good potting soil. Pot them so that the new leaves are above the surface of the soil and the roots are below. Do not remove the original parent leaf until the new plantlets have begun to grow.

The magic of seeing the roots and the tiny new plants developing at the base of the cut leaf are the ultimate reward. Good luck and happy gardening.

References

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Allan Foster is President of the Ontario Society for Environmental Education and a long-time educator at the Kortright Centre for Conservation. If you would like to read more of Allan's stories you can access them at the following link: www.trca.on.ca/parks_and_culture/locations/kortright_centre/about/default.asp?load=allanfoster.