

Plant Taxonomy

How Plants Are Named (And the Story of Ollie)

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Modified by Georgia Agricultural Education Curriculum Office
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Once upon a time...

- ★ There was a landscaper name Ollie...
- ★ He was a very curious young man, and had many questions about Life.



Ollie had a dilemma...

- ★ Ollie loved plants, but sometimes he had trouble remembering their names.
- ★ To be a successful landscaper, he would have to know *hundreds* of plant names!



He was the most talented gardener around...

- ★ He just planted *what* he liked *where* he liked.
- ★ Ollie *loved* his work.
- ★ When his business was small, it was no problem.



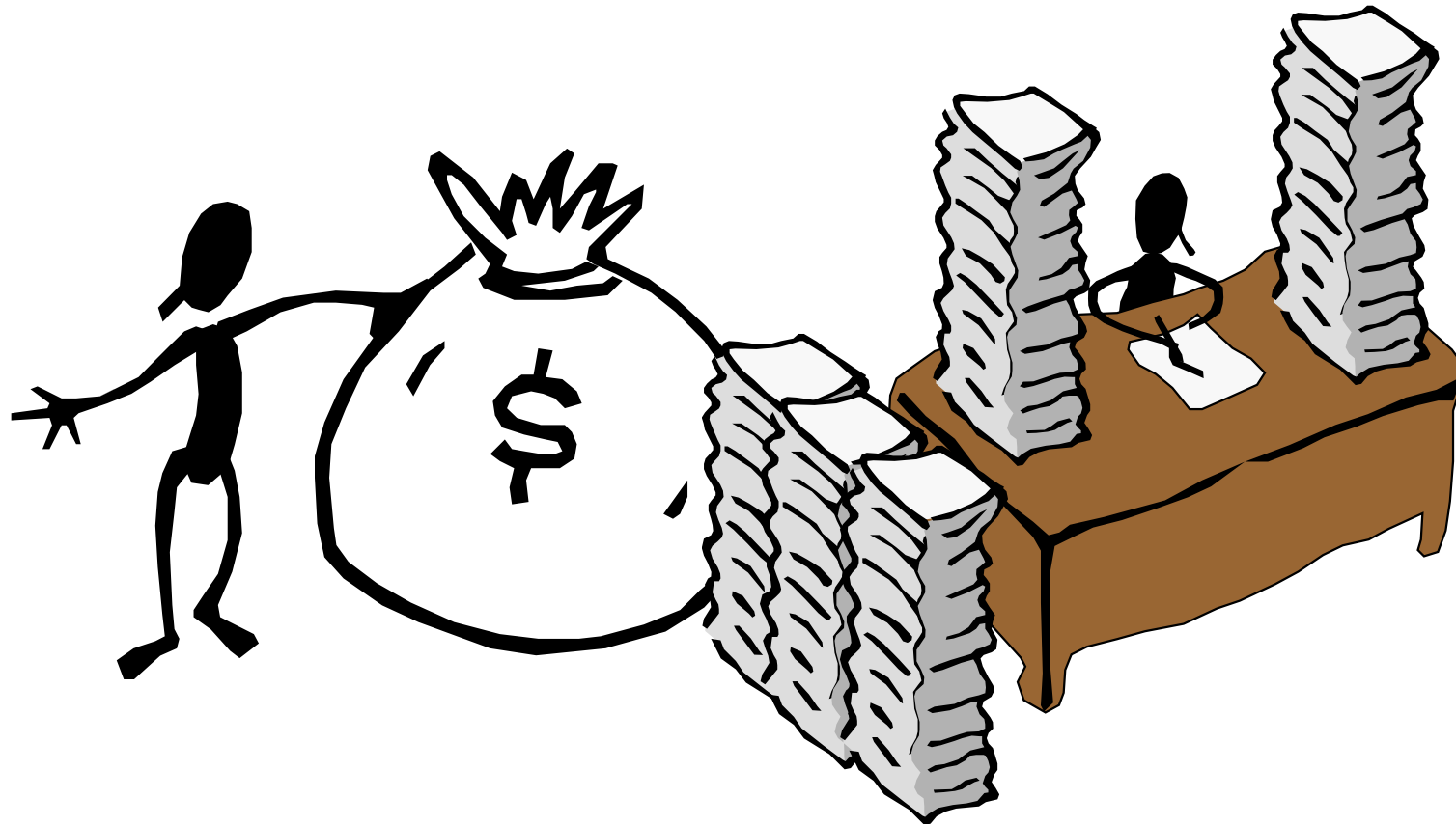
Ollie's Landscaping business grew!



- * Suddenly everyone wanted Ollie to be their gardener.
- * Suddenly he was needing *thousands* of plants.
- * The new customers wanted new and unusual plants.



Ollie was making lots of money, but working many long hours...



He often longed for the days when his business was small...

- * In those days he had time to relax...



- * But nowadays it was all work, work, work... Ollie grew tired...



**Suddenly the once
happy Ollie was pulling
his hair out...**



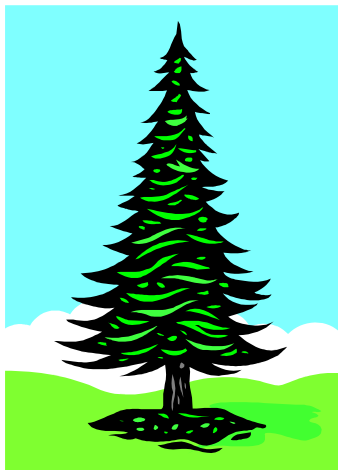
But then something **GOOD** happened for **Ollie!**

* A letter arrived!



Ollie landed a HUGE landscape job in Florida!

- ★ The job called for 10,000 pine trees to be planted at a construction site!
- ★ Ollie flew to Miami to visit the construction site!



When he arrived in Miami he noticed there was something different....

- ★ He did not recognize a lot of the plants that were growing there....

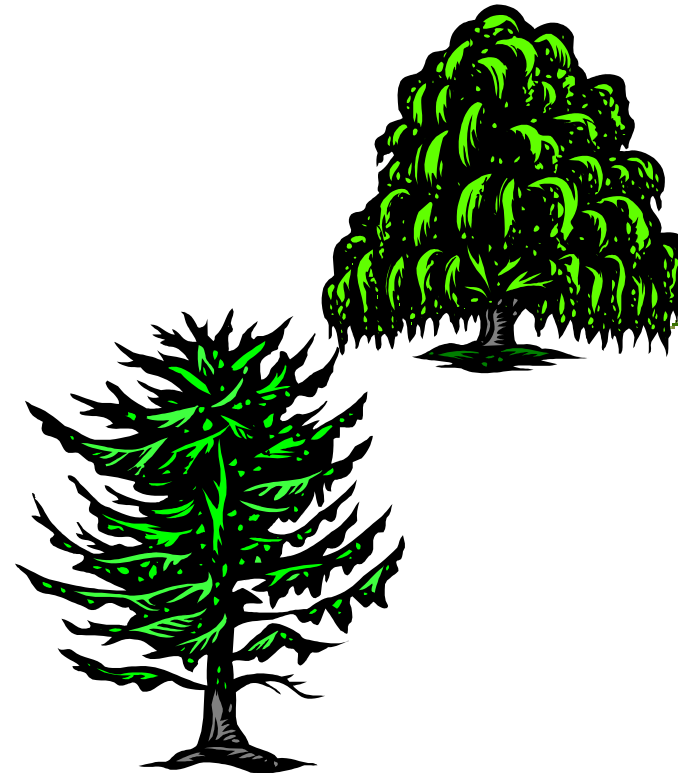


- ★ Still, he did not worry.



The contract called for 10,000 Short Leaf Pine trees called *Pinus echinata*

- * Ollie could not locate the 10,000 *Pinus echinata* for the job.
- * Instead he substituted *Pinus strobus*, commonly known as White Pine.
- * **After all, all pine trees were the same, right?**



Ollie spent thousands of dollars planting the White Pines.

- ★ He would make a FORTUNE on this job!
- ★ He hired many extra workers to complete the task.



... but something went wrong...

- ★ Ollie received a horrible phone call 3 months later....



**... ALL of the White
Pines had died!**



It turns out that White Pine, *Pinus strobus*:

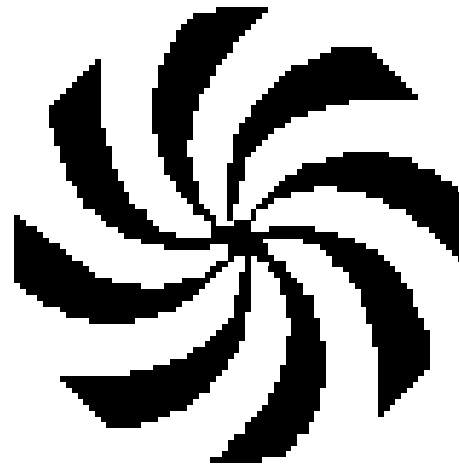
- ★ Is not a pine that will survive in hot environments.
- ★ It is a pine that loves cooler environments such as the mountains or the shade.
- ★ Common names can be misleading.
- ★ It is always best to specify the exact specie of a plant type.



Ollie was forced to file bankruptcy and sell his business.



- * He still wondered what went wrong...



... and the moral of the story is...

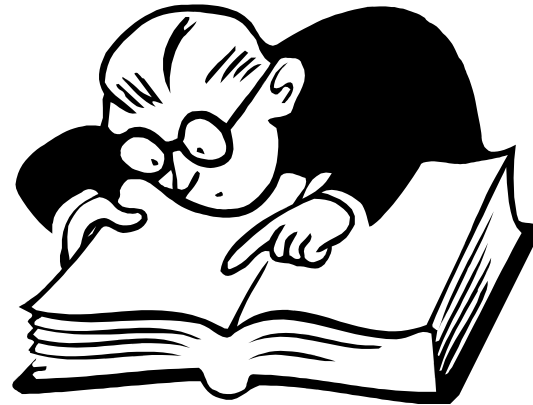
- ★ *The white pine may not be the right pine,
Unless the plan calls for the white pine.*

*If the right kind is the white pine,
Plant the white pine and be right fine!*



There is a reason for scientific plant names.

- ★ Common plant names can be confusing in the commercial landscape business.
- ★ It is always best to specify the exact plant type you want by the scientific name.
- ★ A smart gardener will learn both common and scientific plant names.



All scientific plant names are expressed in LATIN because:

- ★ It is a universal language.
- ★ It insures exact identification for a specific plant type.
- ★ It avoids confusion of common names which can be regional to an area of the world.
I.E. Trout lily = Tiger Lily
- ★ A plant named *Prunus persica* will translate into Peach Tree all over the world.



All plants have a scientific name composed of TWO Latin names known as a genus and a specie.

- ★ The generic name known as the GENUS.
- ★ This is the plant's group name.
- ★ All plants having the same generic name are said to belong to the same GENUS.
- ★ They all have similar characteristics and are more closely related to each other than any other genus.
- ★ The plural of genus is GENERA.



The Binomial System of Naming Plants

- ★ Bi = 2
- ★ Nomial = name
- ★ Two names for each plant: Genus and specie
- ★ Called Binomial Nomenclature
- ★ The Swedish Botanist, Linnaeus, developed the plant naming system still used today.



Linnaeus

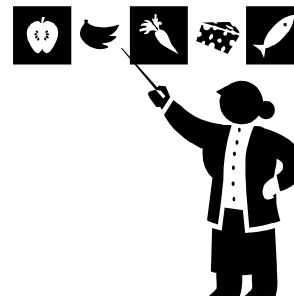
- ★ 1750, Swedish Botanist.
- ★ He developed the Binomial naming system of plants.
- ★ His system is still used today.



Examples of a plant GENUS

- * Acer – all maples
- * Pinus – all pines
- * Ilex – all hollies
- * Quercus – all oaks
- * Begonia – all begonias
- * Rhododendron – all azaleas
- * Juniperus – all junipers
- * Viola – all violet types

- * Think of the plant GENUS name as a NOUN.
- * It's specie name will be the ADJECTIVE that describes it!



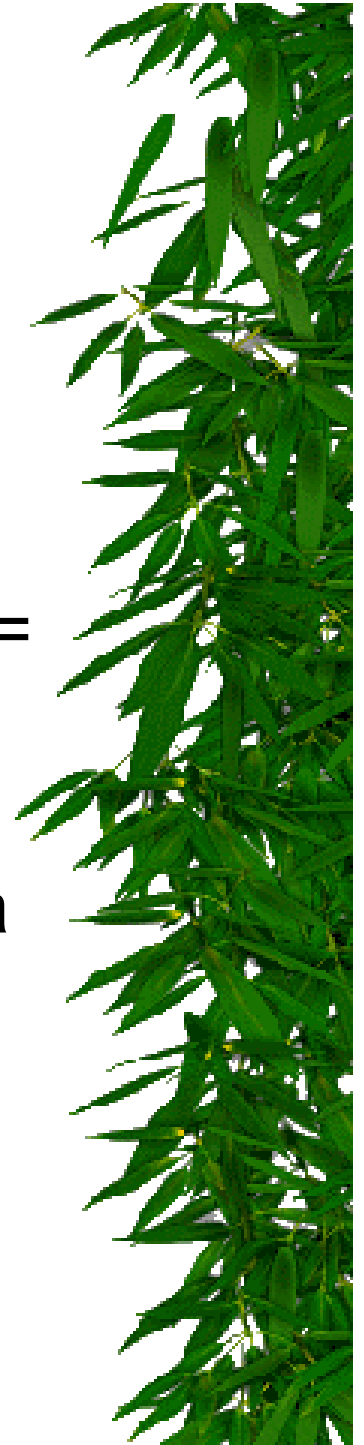
The 2nd part of a plant name is the SPECIE name.

- ★ The specie name is an ADJECTIVE that describes the genus.
- ★ It often gives important descriptive information about the plant.
- ★ *alba* means white.
- ★ *Quercus alba* = white oak
- ★ *Rubrum* means red.
- ★ *Acer rubrum* = red maple



There can be **MANY** different species in a particular genus:

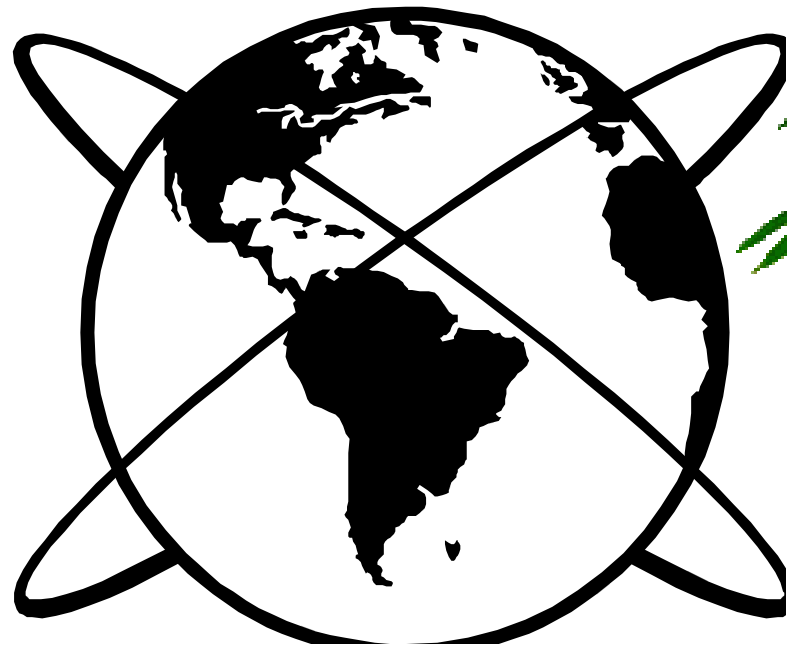
- ★ *Acer rubrum* = red maple
- ★ *Acer saccharum* = sugar maple
- ★ *Acer palmatum* = Japanese maple
- ★ *Quercus palustris* = Pin Oak
- ★ *Quercus virginiana* = Live Oak
- ★ *Quercus nigra* = Water Oak



Sometimes a specie name gives geographical info:

★ Examples:

- ★ *Pinus virginiana* = Virginia Pine
- ★ *Taxus canadensis* = Canadian Yew
- ★ *Tsuga caroliniana* = Carolina Hemlock.



From Genus to “cultivated variety”

- ★ Family Name : Aceraceae
- ★ Genus : Acer
- ★ Genus & specie: Acer rubrum
- ★ Genus, specie,
and cultivar name Acer rubrum,
“Red Sunset”



Plant Family Names

- ★ Related genera with similar *flower parts* are grouped together in Plant Families.



The Rose Family, Rosaceae, consists of plums, apples, strawberries because they all have similar *flower structure*.



Plant Family Names often end in “aceae”.

- ★ Aceraceae – Maple Family
- ★ Liliaceae – Lily Family
- ★ Pinaceae – Pine Family

- ★ Plant Hierarchy
KINGDOM – plant
PHYLUM – seed pts
CLASS – Angiosperm
ORDER – Acerales
FAMILY - Aceraceae
GENUS - Acer
SPECIES - rubrum
VARIETY – “Oct. Glory”



Expressing Scientific Names

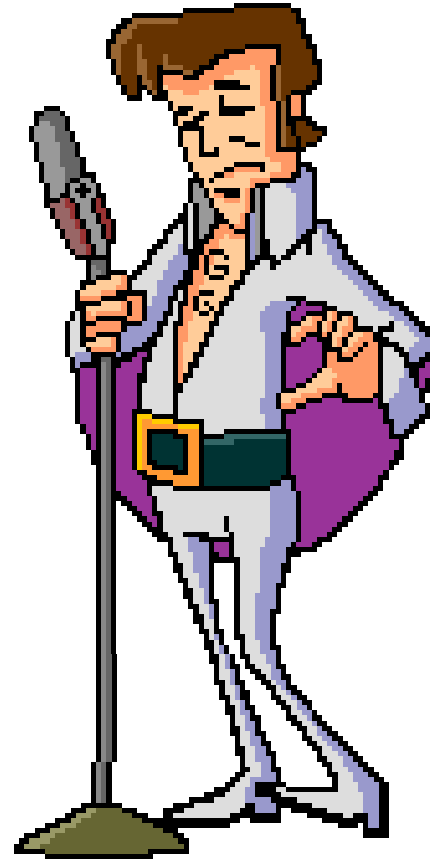


- * Genus – always UPPER CASE for first letter: Acer
- * specie – ALWAYS lower case 1st letter: Acer rubrum
- * Always underline both names or put in *ITALICS*!



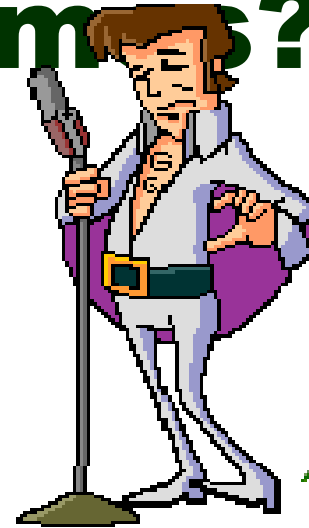
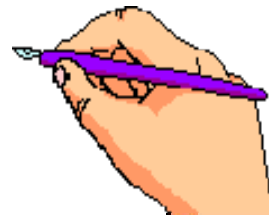
What is the best way to learn plant names?!

- ★ Speak them out loud!
- ★ Every time you plant something, SAY the plant name over and over!
- ★ Sing it!



What is the best way to remember plant names?

- ★ Write them out!
- ★ Repeat them!
- ★ Say them out loud!



In case you were wondering about our friend, Ollie...

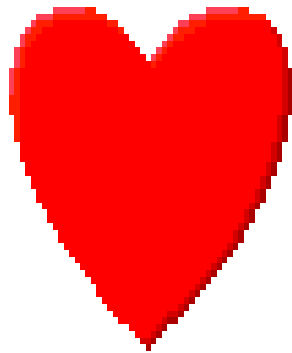


- * Remember Ollie?
... the landscaper
who had no time
to learn plant
names?

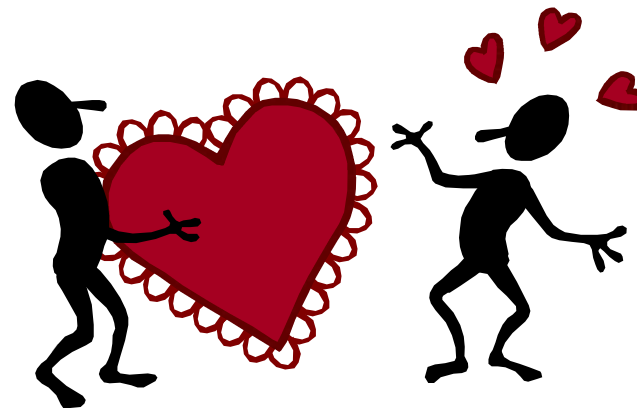


Ollie is doing quite well.

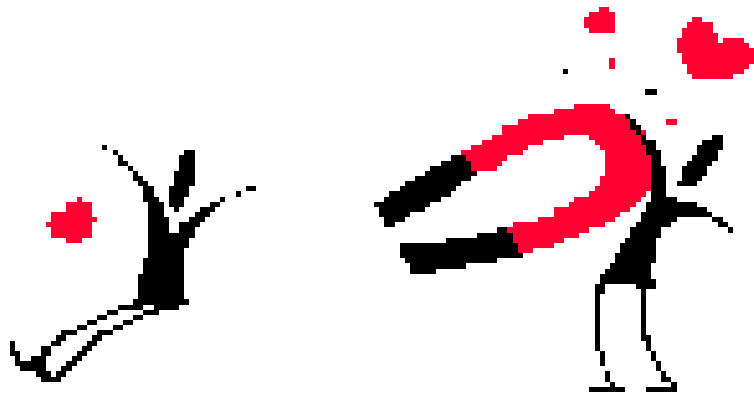
- * He fell in love with the cutest little Plant Taxonomist, named Lynn.



- * **Taxonomist:** a scientist who identifies and classifies plants.



There was something *magnetic* about her.

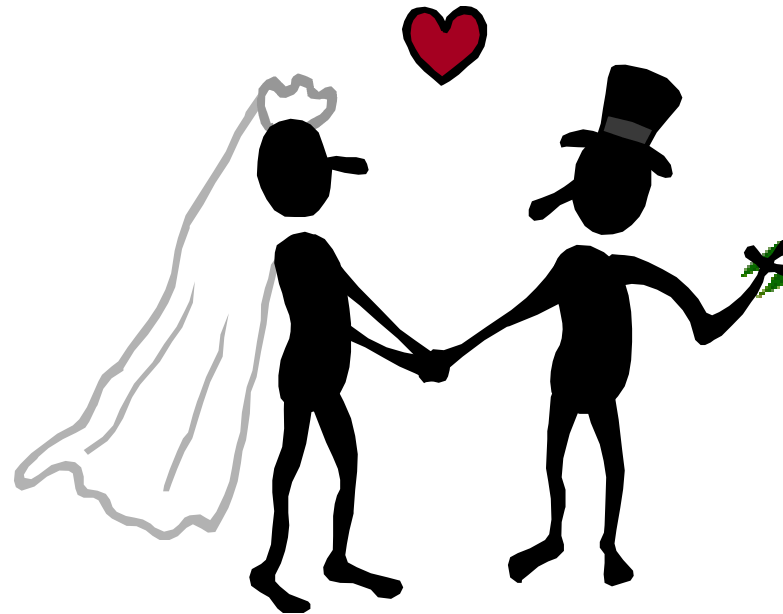


- * Now they spend all their time writing and singing songs about how plants get their names....
- * ...how romantic!



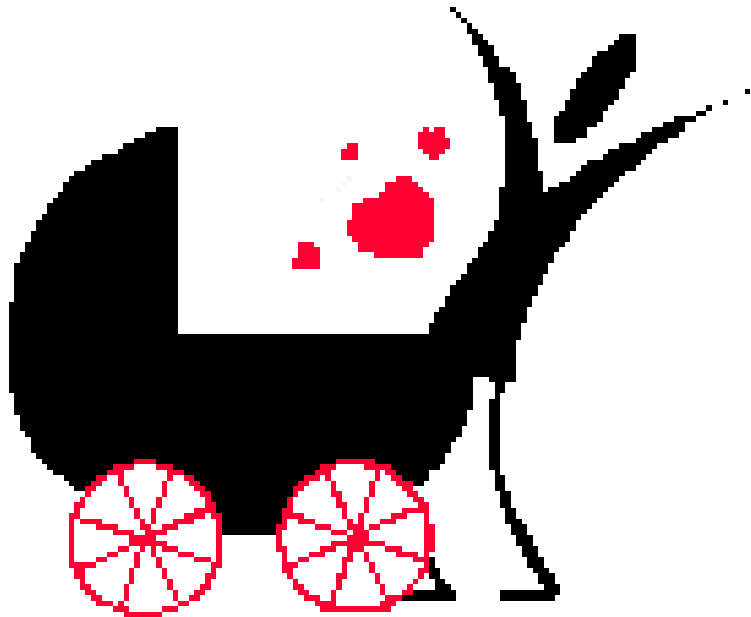
Ollie and Lynn got married last June!

- * Ollie's landscape business is small again, but very successful, thanks to Lynn.



They plan to have a child one day...

- * And can you guess what they plan to name their first born child?



Lynnaeus, of course!



The End



**Created by Joe Green, Pope High School
2002**

