

**In brief:** Choose a Canadian or US Provincial/State plant (flower or tree) and provide its correct Latin name and classification, and a synopsis of the history/controversy of its name, synonyms, and classification (250-300 words). Due Tues Oct 7. Value: 5%

In biology, we use Latin names to refer to organisms because of their precision and lack of ambiguity: each organism in the world has just one correct Latin name. Common names are often ambiguous or lack precision: the same common name may be applied to more than one species, or the same species may have several different “common” names used by different people. However, the same species (or what SOME people think is the same species) may have been described more than once, so it may effectively have two or more Latin names. In most cases, the oldest name is the correct name, if everyone agrees that the names apply to a single taxon (e.g., species). Placement of a species into a genus, a family, or higher taxonomic category, is subjective to some degree and not always agreed upon by scientists around the world. Many species were first described at a time when the characters to discriminate between genera were few, and therefore the genera were much more inclusive than they are today. This results in name changes over time, as one species epithet (the second part of a Latin binomial) is transferred from one genus to another. Likewise different experts disagree on how inclusive or restrictive a genus, family, etc., should be. Sugar Maple (*Acer saccharum*) is treated as a member of the family Aceraceae (maple family) by many taxonomists, but the Aceraceae (and thus also *A. saccharum*) are now treated by other taxonomists as a synonym of (and included in) the family Sapindaceae based on DNA data.

Choose a Canadian or US Provincial/State plant (flower or tree) and provide its correct Latin name and classification, and a synopsis of the history/controversy of its name, synonyms, and classification, from its first description (by whom?) to the present day. To do this, you will need to look at the names that follow the Latin binomial, called the “authors” or “authorities”. For Sugar Maple, the full Latin name is *Acer saccharum* Marshall (sometimes incorrectly written “Marsh.”, short for Humphry Marshall, 1722-1801). That one is really easy - Marshall described the species as new in the same genus as it is currently treated in. However, is Black Maple (*Acer nigrum*) the same or a separate species? Is it in Aceraceae or Sapindaceae, on what evidence? For Jack Pine, the Latin name is *Pinus divaricata* (Aiton) Gordon & Sudw., originally described (when?) by William Aiton as *Pinus sylvestris* var. *divaricata*, and then transferred (raised) to its own species by George Gordon & George Bishop Sudworth; it is often called *Pinus banksiana* Lamb. (short for Aylmer Bourke Lambert, 1761-1842), which is regarded by some as a synonym. Which is the right name, says who, for what reason? Why does it matter? (not a question to answer in your paper, but think about it for the exam ...)

Some useful references for all of this are “The International Plant Names Index” (<http://www.ipni.org/ipni/plantnamesearchpage.do>) and the USDA Plants pages, at <http://plants.usda.gov/java/nameSearch>, plus any good flora (e.g., Gleason & Cronquist’s Manual of Vascular Plants, QK117.G49 1991, TayRef), and the Angiosperm Phylogeny Group site (<http://www.mobot.org/MOBOT/research/APweb/>). The latter, in particular, has much more complete discussion of the sorts of issues described in my two paragraphs, above.

The format of your paper should be exactly:

Title

Your name, SN

Body of text (several paragraphs, with logical organization including a beginning, middle, and a concluding statement at the end), of 250-300 words

References (use the format of American Journal of Botany – e.g., Keeling 2004 or Palmer et al. 2004)

Save your file as a Word file (.doc, **not .docx**) or pdf, and email it to me as an attachment, to [rgthorn@uwo.ca](mailto:rgthorn@uwo.ca) by 5 pm **Tues Oct. 7**.

**Grading:**

1. Suitable plant chosen, referred to by Latin name, illustrated with an image from the web (with proper citation of the source): **(+1)**
2. Suitable scientific references used (and cited) in determining its name and classification: **(+1)**
3. Clear, concise summary of the history of the name, any synonyms (or important ones, if you find a lot of them), and the classification up to phylum: **(+3)**
4. Incorrect grammar or spelling: **(-1)**
5. Incorrect reference citation or reference formatting: **(-1)**
6. Plagiarism (copying any part of your paper from a classmate or from the web, etc.): **(-5, and will be reported to the Dean for possible academic sanction)**