Llano Estacado Texas Master Naturalists Curriculum Guide

Unit 10: The Nature of Naming

*"What's in a name? That which we call a rose by any other name would smell as sweet."*

-William Shakespeare

Unit Goals: After completing this unit, volunteers should be able to:

* discuss the uses and importance of the classification system
* identify the main parts of a scientific name
* understand why the binomial classification system is important
* discuss the pitfalls of using common names
* demonstrate their ability to classify local plants (or insects)

1. Define ***species*** and explain why classifying things into species is important.
2. Species are named in a system of binomial nomenclature or "two-name naming" using Latin. A scientific species name is made up of a **generic name** and **specific epithet.** Animal species names, when written in full, contain the generic name, specific epithet, author's last name and year of publication (when the name was bestowed or species discovered/described). Some names contain the subspecies name for more detail. Look at the following names of plants or animals.

Binomial species name Common name(s)

*Centaurea solstitalis* Yellow Star-thistle, golden starthistle,

yellow cockspur, Barnaby thistle

*Cybister fimbriolatus* Predaceous diving beetle

*Pantala flavescens* Wandering Glider (dragonfly)

*Lepus californicus* Black-tailed jackrabbit, American desert hare

When looking at the Latin names, the specific epithet often has descriptive meanings that relates to the appearance of the species such as *flavescens* which means "becoming yellow" and describes the abdomen color of the Wandering Glider; *californicus* refers to California where the species was most likely first described.

1. Looking at the above binomial species names and common names and information, explain why using the common names might create problems or confusion.