

Creation Matters

— A publication of the Creation Research Society www.creationresearch.org —

Reprinted from Volume 13, Number 2, March / April 2008

The Paradox of *Urtica dioica* L., “Stinging Nettle”: A Blessing and a Curse

by Stephen B. Austin

Stinging Nettle, *Urtica dioica* L., is a paradox, providing an abundance of benefits, both for humanity and wildlife, while at the same time being a purveyor of pain and suffering. One may ask, “How does this plant show evidence of a loving Creator, and why is there the curse of the stinging hairs?”

Biological classification

To address these questions we will first discuss how the plant is classified within the botanical nomenclature of today. The most common species of stinging nettle is *Urtica gracilis* Aiton. It is included in the family of plants known as the Urticaceae, or nettle family. There are about 45 genera and 800 species worldwide in the nettle family, according to the *Flora of North America* (Boufford, 2007).

Other sources broaden the number of genera and species. For example, the *Flora of China* (Chen et al., 2007) lists the Urticaceae as being composed of 47 genera and 1,300 species worldwide. According to Baumgardt (1982), European authorities include the genus *Humulus* in the Urticaceae, while American botanists have created a new family, Cannabinaceae. The latter includes the infamous *Cannabis sativa* L., otherwise known as marijuana!

The genus *Urtica*, according to the *Flora of North America* (Boufford, 2007), contains 45 species, of which four are found in the United States: *Urtica chamaedryoides* Pursh, *U. dioica* Linnaeus, *U. gracilentata* Greene, and *U. urens* Linnaeus (see sidebar, page 3).

For the sake of this paper, we will focus on the more common species, *Urtica dioica* (Figure 1), but at times we will mention some things about the other three species in America, as well as selected members of the genus from other parts of the world.

The plants of the genus *Urtica* include both annual and perennial herbs. *U. dioica* is a perennial, reproducing not only by seed,



The stinging nettle plant, Urtica dioica L., in flower. Image No. 1558013 by John Cardina, The Ohio State University, Bugwood.org.

but also through rhizomes. The other three species in the United States are annuals, having only a taproot.

Urtica dioica has three subspecies in this country. Subspecies *dioica* is unisexual, with the male and female flowers occurring on different plants. Subspecies *gracilis* (Aiton) Selander and subspecies *holosericea* (Nuttall) Thorne are also unisexual, but the male and female flowers appear on the same plant. The differences between the last two subspecies have to do with the presence or absence of pubescence (hairs) on the stems and leaves. All, however, have the stinging hairs. This fits well within the creationist concept of variation within the Genesis kind, not only among the subspecies, but the species as well.

Physical description

The species *U. dioica* is 5 to 30 dm (roughly 2-10 feet) in height. The leaves are opposite

each other on the stem, are elliptic, lanceolate, or narrowly to broadly ovate in shape, and have margins that are coarsely toothed. These leaves superficially resemble elm leaves, but we shall soon see they have a feature that no elm leaf possesses. The stems are square, and because of the square stems and opposite leaves, one might mistake this plant for a mint. However, the flowers are quite inconspicuous, being greenish in color and appearing in tassel-like clusters. The staminate, or male, flowers are ascending, and the pistillate, or female flowers are lax; that is, they are spreading or even hang down, especially as the seeds approach maturity.

One unique feature which immediately distinguishes these plants from the mint family is the presence of tiny inconspicuous stinging hairs (Figure 2). These hairs are also hollow, and the bulbous or cylindrical base of each of these hollow hairs contains a tiny droplet of formic acid. This is the curse with which this amazingly useful plant is plagued. When human skin makes contact with these hairs, the stiff translucent tip breaks off, leaving a sharp point that readily pierces the skin and allows the acidic fluid to enter. Thus, each hair is somewhat like a tiny hypodermic needle!

Amazing properties

And yet, nettles have amazing properties, provided by our Creator God for our use. Angier (1974, p. 152) writes, regarding the genus in general:

In some parts of the world you can sleep between nettle sheets, eat off a nettle tablecloth, dine on nettle-enriched steaks and eggs ordered from a nettle-paper menu, in an emergency fish with a nettle line, and in the springtime especially revel with delectable nettle dishes washed down with nettle beer.

Coon (1979) writes about its many uses in the recent past, such as various people



Figure 2. Urticating hairs on the foliage of *Urtica dioica* L., the stinging nettle. Urticating means “producing a stinging or itching sensation” (*The American Heritage Dictionary*, 2008). Image No. 1558012 by Theodore Webster, USDA Agricultural Research Service, Bugwood.org.

The Four Species of the Genus <i>Urtica</i> in the United States	
<i>Urtica chamaedryoides</i>	Found primarily in the South, although it does extend west into parts of Oklahoma, and north into parts of Kansas, Missouri, Illinois, and Ohio. It is also found in northern Mexico.
<i>Urtica dioica</i>	Perhaps the most widespread species, occurring in all of the lower 48 states, as well as Alaska, Canada, and Greenland. It is said to be found worldwide (Boufford, 2007).
<i>Urtica gracilentia</i>	Is only found in southeastern Arizona, New Mexico, the southwestern corner of Texas, and northern Mexico.
<i>Urtica urens</i>	Is found in scattered locations throughout the United States, but it is most abundant in California and eastern Canada.

groups using the plants to weave a cloth similar to linen, but even stronger. During World War I the Germans were cut off from their normal supply of cotton, so in their resourcefulness they utilized the plant for this purpose. Harrington (1967) quotes Thomas Campbell, the British poet, who once said, “In Scotland I have eaten nettle, I have slept on nettle sheets, I have dined off a nettle tablecloth.” Kershaw (1998) reports that nettle fibers were used for many years to make cording, rope, and cloth. The fibers are considered superior to cotton and were said to be more durable than linen.

The plant is also quite edible in many ways. The young greens can be cooked in the manner of spinach and served with salt, pepper, a little vinegar, or lemon juice. It can be added to soups or made into a tea or even a beer or wine. Seebeck (1998) proclaims that nettle can be added to omelets, casseroles, stuffing, egg rolls, quiche, crepes, and a nettle-onion soup. Willard (1992) touts the plant as having Vitamins A, C, and D, and that they contain iron, sodium, potassium, phosphorous, calcium, and other beneficial ingredients.

The plant also has numerous medicinal qualities. According to Coon (1979), the seeds have been given as an infusion for coughs and shortness of breath, and for many years were used to treat consumption, which we now call tuberculosis. Moore (1979) suggests that the seeds make a good scalp conditioner and growth stimulant to the hair. He also writes that a tea made from its leaves can be used to stem excessive bleeding, but he also warns that excessive use can be somewhat irritating for the kidneys.

As if this were not enough, Kirk (1975) reports that the roots may be boiled to produce a yellow dye.

Up close and personal

Stinging Nettle is a plant with which the author is quite familiar, not because of personally experiencing its painful injections, but because we have heard of the suffering of innocent children. Each summer, usually during the July 4th week, Alpha Omega Institute, a small but effective creation ministry headquartered in Grand Junction, Colorado, conducts a week-long family camp on Grand Mesa. The 40-acre site of the facility where this is held contains an aspen forest, among other habitats, where the melting snow has left a damp, moist area, a habitat where the nettle plant can flourish. Children tend to explore and play, being children, and their summer garb seldom provides much protection to the pesky stinging hairs. Before too long, a few of them inevitably experience the plant’s ravages first hand, despite any warnings.

When we arrive at the camp for a wildflower walk or two, tales of some painful encounters reach our ears, and there are many, both children and adults, who are eager to learn what exactly this plant looks like up close and why it inflicts the pain it does. When they finally see the tiny but sharp hairs that line its stems and leaves, they are amazed to learn that one can actually eat this plant. The thought is immediately repulsive to them, but then they are told how the poison is neutralized by cooking for human consumption, or by drying for hay for domestic livestock.

The plant is said to have very little forage value for wildlife, no doubt due to the presence of the stinging hairs. Even so, the dried leaves make an excellent hay, for the drying neutralizes the acid of the stinging hairs over time. Basset (1977), according to a federal database, reports that

stinging nettle hay contains 21–23% crude protein, 3–5% crude fat, 35–39% non-nitrogen extract, 9–21% crude fiber, and 19–29% ash. It goes on to report that the amino acids in dehydrated stinging nettle meal are nutritionally superior to those of dehydrated alfalfa (*Medicago sativa*) meal.

This is a paradox. A plant which has so many uses has a notable and seeming curse upon it. Why is that?

The paradox

Our loving Creator God, the Lord Jesus Christ, created this plant to be a benefit for His creation — the people He loves and the animals of His creation. The stinging hairs obviously are a result of Adam’s sin (Genesis 3). To us they are a reminder of the sin in our lives that needs to be covered by the blood of His Son, Jesus Christ. Meanwhile, the Creation groans as it awaits its eventual deliverance: “We know that the whole creation has been groaning as in the pains of childbirth right up to the present time.” (Romans 8:22 NIV). We look forward to the time when nature will be delivered from its bondage, and when such things as thorns and poisonous plants and stinging nettle will be a thing of the past.

Our loving Creator has provided a remedy, in the meantime, for the poison found in those stinging hairs. The poison is an acid, and it can be neutralized by applying a paste of baking soda, or by rubbing the leaves of dock (*Rumex* species). Even human spit is said to be enough to counteract the effects of the acid, although we haven’t tried that remedy. At the very least, calamine lotion can bring relief for the blisters that stinging nettle leaves in the skin.

So, despite the disobedience and sin of Adam, as recorded in the Book of Genesis, our loving Creator has provided a suitable

remedy for the ravages of this plant, just as He has provided a remedy for sin through the sacrifice of His Son, the Lord Jesus Christ.

References

- Angier, B. 1974. *Field Guide to Edible Wild Plants*. Harrisburg: Stackpole Books.
- Bassett, I. J.; C.W. Crompton, and D.W. Woodland. 1977. The biology of Canadian weeds. 21. *Urtica dioica* L. *Canadian Journal of Plant Science* 57:491-498.
- Baumgardt, J.P. 1982. *How to Identify Flowering Plant Families*. Portland: Timber Press.
- Boufford, D.E. 2007. Urticaceae Jussieu, Nettle Family. *In* *Flora of North America @ efloras.org*. www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=10931
- Chen, J., Q. Lin, I. Friis, C.M. Wilmot-Dear, and A.K. Monro. 2007. Urticaceae Jussieu. *In* *Flora of China @ efloras.org*. www.efloras.org/florataxon.aspx?flora_id=2&taxon_id=10931
- Coon, N. 1979. *An American Herbal: Using Plants for Healing (Second Edition)*. Emmaus: Rodale Press.
- Harrington, H.D. 1967. *Edible Native Plants of the Rocky Mountains*. Albuquerque: University of New Mexico Press.
- Kershaw, L., A. MacKinnon, and J. Pojar. 1998. *Plants of the Rocky Mountains*. Renton: Lone Pine Publishing.
- Kirk, D.R. 1975. *Wild Edible Plants of Western North America*. Happy Camp: Naturegraph Publishers.
- Moore, M. 1979. *Medicinal Plants of the Mountain West*. Santa Fe: Museum of New Mexico Press.
- Seebeck, C.B. 1998. *Best-Tasting Wild Plants of Colorado and the Rockies*. Englewood: Westcliffe Publishers.
- The American Heritage® Dictionary of the English Language, Fourth Edition*. Retrieved April 01, 2008, from Dictionary.com website: <http://dictionary.reference.com/browse/urticating>
- Willard, T. 1992. *Edible and Medicinal Plants of the Rocky Mountain and Neighboring Territories*. Calgary: Wild Rose College of Natural Healing, Ltd.

Having studied plants for 29 years, Mr. Austin has led wildflower walks, taught beginning plant identification, and participated in plant counts for various agencies. He has collected and prepared specimens for herbaria, including the herbarium at the CRS Van Andel Creation Research Center.