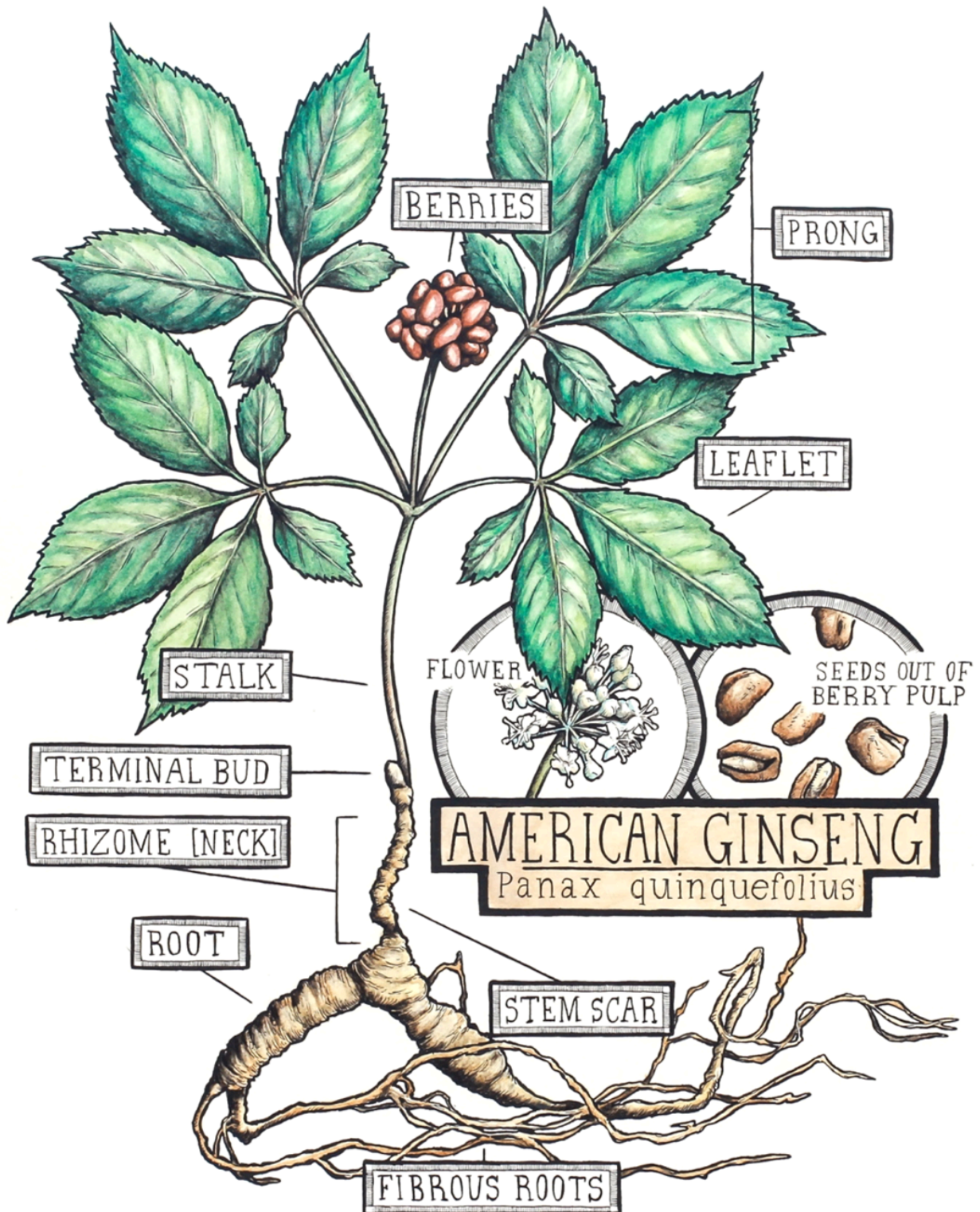
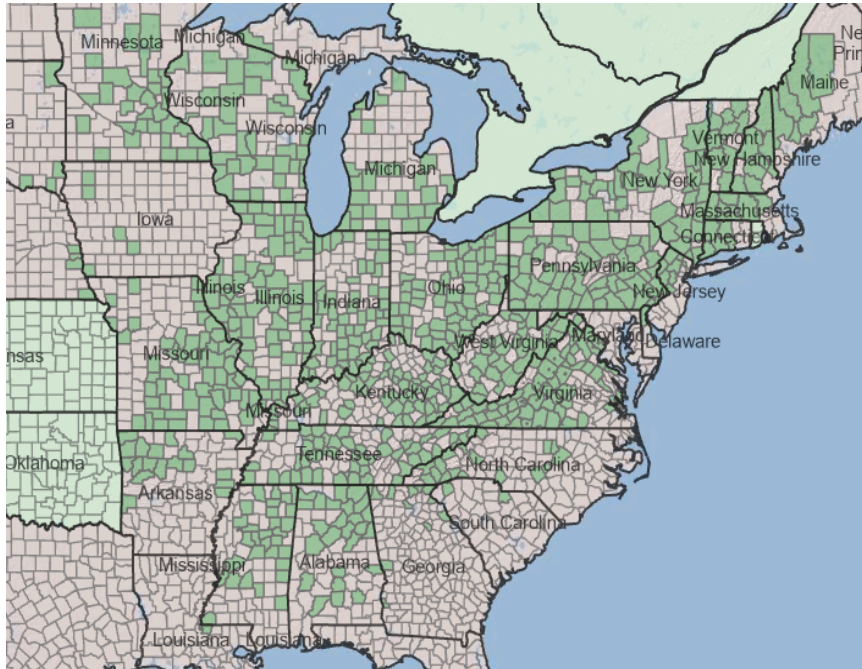


Panax Quinquefolius L.



Panax quinquefolius, or American ginseng is a perennial dicotyledonous understory plant native to North America. It grows in Appalachia as well as parts of the midwest as can be seen in the range map below from the U.S. Dept of Agriculture. It



belongs to the Magnoliopsida class and Araliaceae family. Two other members of this family would be English ivy and the umbrella tree. The two most common types of ginseng are American and Chinese/Korean ginseng. While the word *quinquefolius* means five leafed, both plants in fact grow their leaves in clusters of 5. A notable difference is that the psychoactive effects of American ginseng are

considered to be less stimulating and more soothing than Asian ginseng also known as *Panax ginseng*. In addition to its other effects, ginseng has also been shown to have positive effects on the immune system as well as modulating blood pressure and metabolism.

Ginseng can be recognized in the wild easily when it is fruiting as the cluster of red berries (as seen in the picture to the right) sticking up from the brush is the most recognizable part of the plant. It grows in colder climates at high altitudes in forested regions with high mineral/nutrient content soil. The berries are edible, though tart and may contain some of the beneficial effects of the root. Another interesting part of the plant is that the stem or rhizome neck has rings that can tell you how old the plant is and you don't even have to kill it to see the rings. In fact if



it is old enough there are sometimes smaller roots growing from the rings which actually give you the opportunity to replant the ginseng after harvesting the larger root at the bottom. This is a very helpful thing to do seeing as ginseng is an endangered species in certain places and is threatened in many others.

The major reason for it being endangered is the high demand for ginseng particularly in Asian countries in combination with the incredibly long time it takes for them to reach maturity. It usually takes 4 years to reach reproductive maturity and it can take 6 years or more for the root to reach full potency. The seeds take two years to sprout after they have been planted and the plant does not grow very quickly. However wild ginseng can be sold for around \$800 per lb. For this reason hunting wild ginseng is a decent way to make money for someone with limited options. This is not a new idea. The first recorded instance of American ginseng being sold to China, where it is prized for its chi enhancing properties was in 1784 and harvesting wild ginseng was a crucial source of income for post Civil War Appalachians.

Some of the major active compounds in ginseng are ginsenosides. Ginsenosides are triterpene saponins and their effects comes from interaction with steroidal receptors. Ginsenosides were first isolated in 1963.

Deforestation and climate change have had a large impact on the populations of ginseng in the United States. The forest floor of North Eastern America makes for a great home for the wild ginseng plant but as the forest is cut back to make way for new development, the area for ginseng to grow decreases.

The seeds of the ginseng plant are consumed by songbirds, squirrels and wild turkeys while the plant itself is often eaten by white tailed deer especially when they are overpopulated. In addition the roots can be eaten from below by mice and voles.

Ginseng is usually pollinated by wild bees but they are capable of self pollination if isolated.

Fun fact: The root sometimes resembles a human because it has smaller shoots coming off it that can look a bit like limbs as seen in the photo to the right.



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