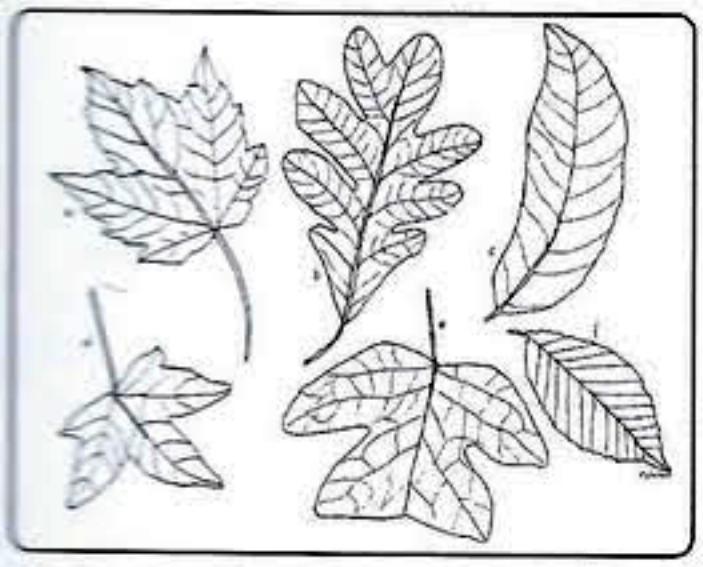
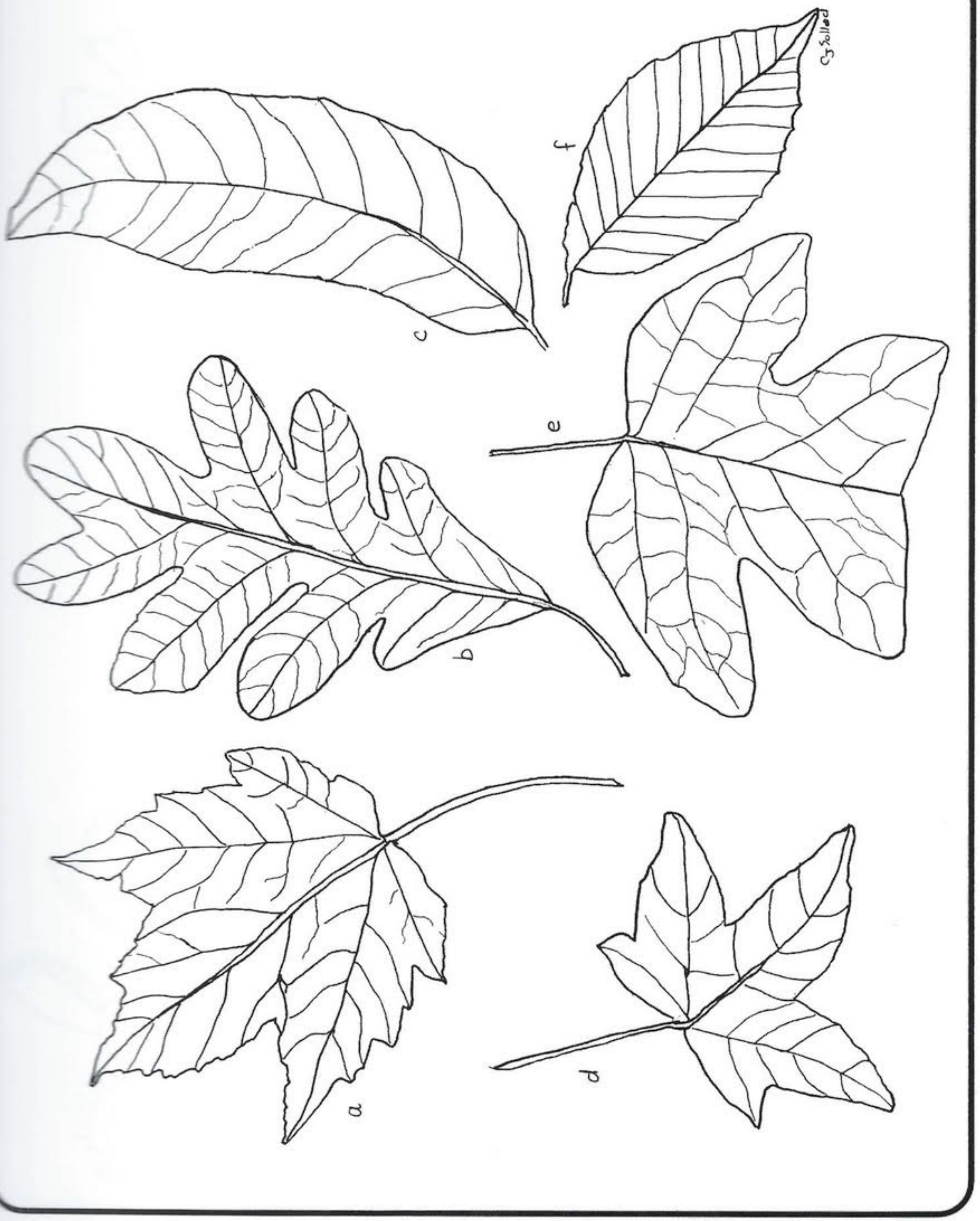
Garden Surprises



Tree Leaves of North Carolina Forests. A typical North Carolina hardwood forest has many different types of trees including maple, oak, sourwood, sweetgum, tulip poplar, and beech, among many others. The leaves of these trees are deciduous, meaning they fall off the tree in autumn and new leaves grow in the spring. The spring leaves of these trees are green in color, but in the fall, they change to shades of red, orange, purple, yellow, and brown. Leaves are the tree's factory – they use the energy from sunlight to turn carbon dioxide and water into food (starch and sugars) for the tree through a process called photosynthesis. A special green pigment called chlorophyll is needed for this process. Leaves also contain other pigments (carotenoids and xanthophyll, which are orange and yellow), but the green often masks them. In the fall, the change in the amount of light as well as cooler temperatures leads to the breakdown of chlorophyll revealing these other pigments. Other chemical reactions give rise to red pigments (anthocyanins). All these changes give us beautiful fall foliage. See if you can identify the different leaves. (Answers: a. red maple, b. white oak, c. sourwood, d. sweet gum, e. tulip poplar, f. beech).

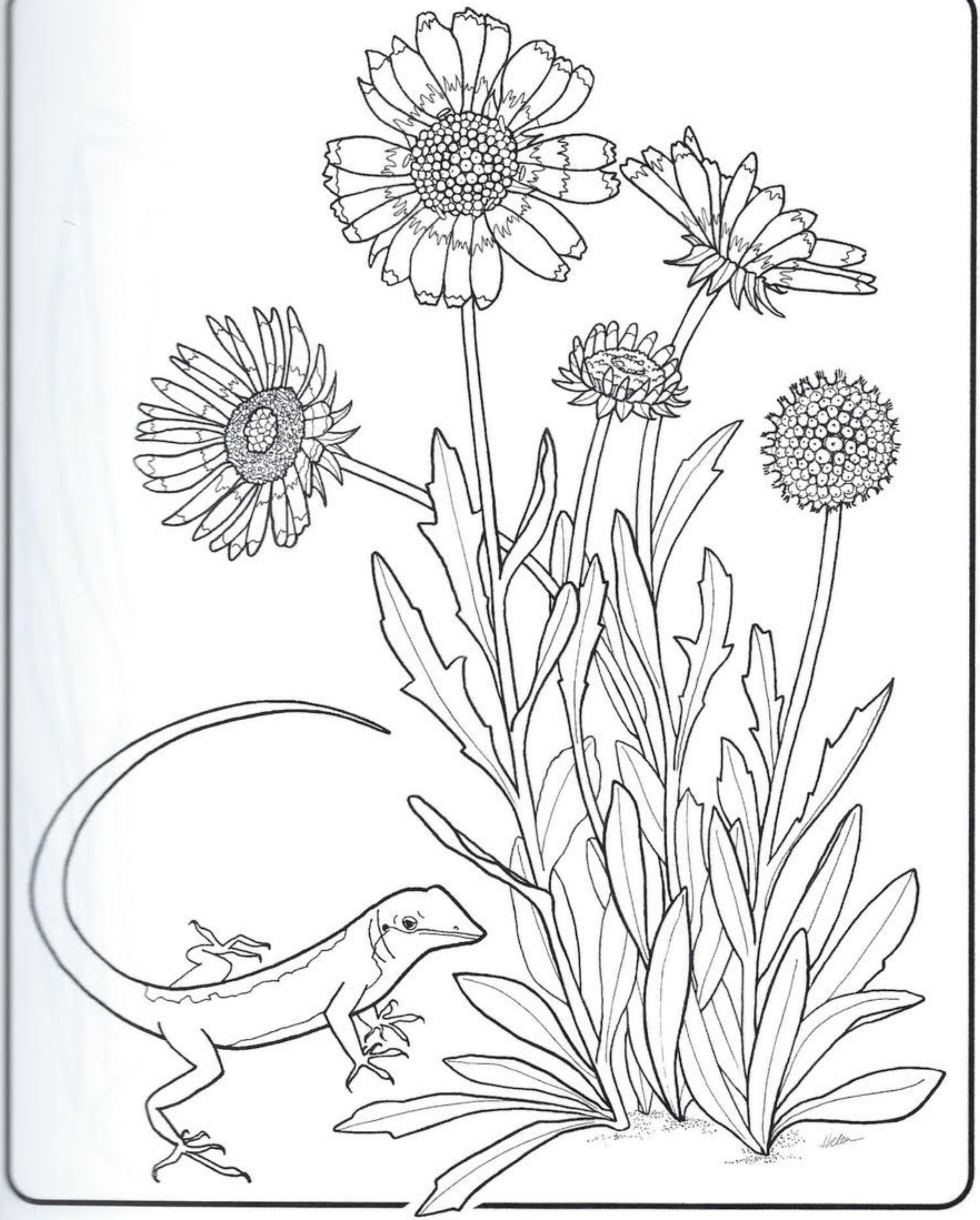
Venus Flytrap with Notch-Tipped Longhorn Beetle and Pitcher Plants. Venus flytraps *(Dionaea muscipula)* and pitcher plants *(Sarracenia spp.)* are carnivorous plants. Insects fall into the tube of a pitcher plant, drown in the water, and are slowly digested. Venus flytraps have small trigger hairs inside their modified leaves. When an insect touches these hairs, the trap closes most of the way, allowing only small insects to escape through the cilia (spiny projections) on the edges of the leaves. If the insect is the right size, the trap will close entirely and slowly digest it. Insects provide the nutrients that are lacking from the poor, wet soil where these carnivorous plants live. Venus flytraps are native to North Carolina and only found in boggy areas near Wilmington. Because they are so rare, venus flytraps are on the endangered species list of plants. Bees and beetles, like the notch-tipped longhorn beetle *(Typocerus sinuatus)* are attracted to the white blooms on the venus flytrap's tall flower stalks that emerge in the spring. These are the primary pollinators and do not get trapped in its leaves. Instead, ants and spiders tend to be meals favored by the flytrap.

Gaillardia with Green Anole. The green anole and blanket flower together are reminiscent of warm Thanksgiving walks on Outer Banks beaches. If you spend time in late summer or fall on North Carolina's barrier islands, you'll find plenty of *Gaillardia pulchella* blooming in the soft sandy soil near beach walkways. Gaillardia thrives in full sun and has naturalized here for it is highly drought and salt tolerant. The flower has bright red-orange petals tipped with yellow, and is commonly known as blanket flower because its bold colors resemble blankets once woven by Native Americans. The green anole *Anolis carolinensis* is the only anole species native to the U.S. It can change from bright green to dark brown in just a few seconds, but is not a true chameleon. It has pads on its feet that help it climb and cling to many surfaces, even upside down. Its eyes can move independently of one another to keep watch for predators - primarily birds and snakes. The green anole is active in all except the coldest months of the year, living mostly in trees.



Tree Leaves from our North Carolina Forests

Venus Flytrap with Notch-Tipped Longhorn Beetle and Pitcher Plants



Gaillardia with Green Anole