Acorns in Autumn

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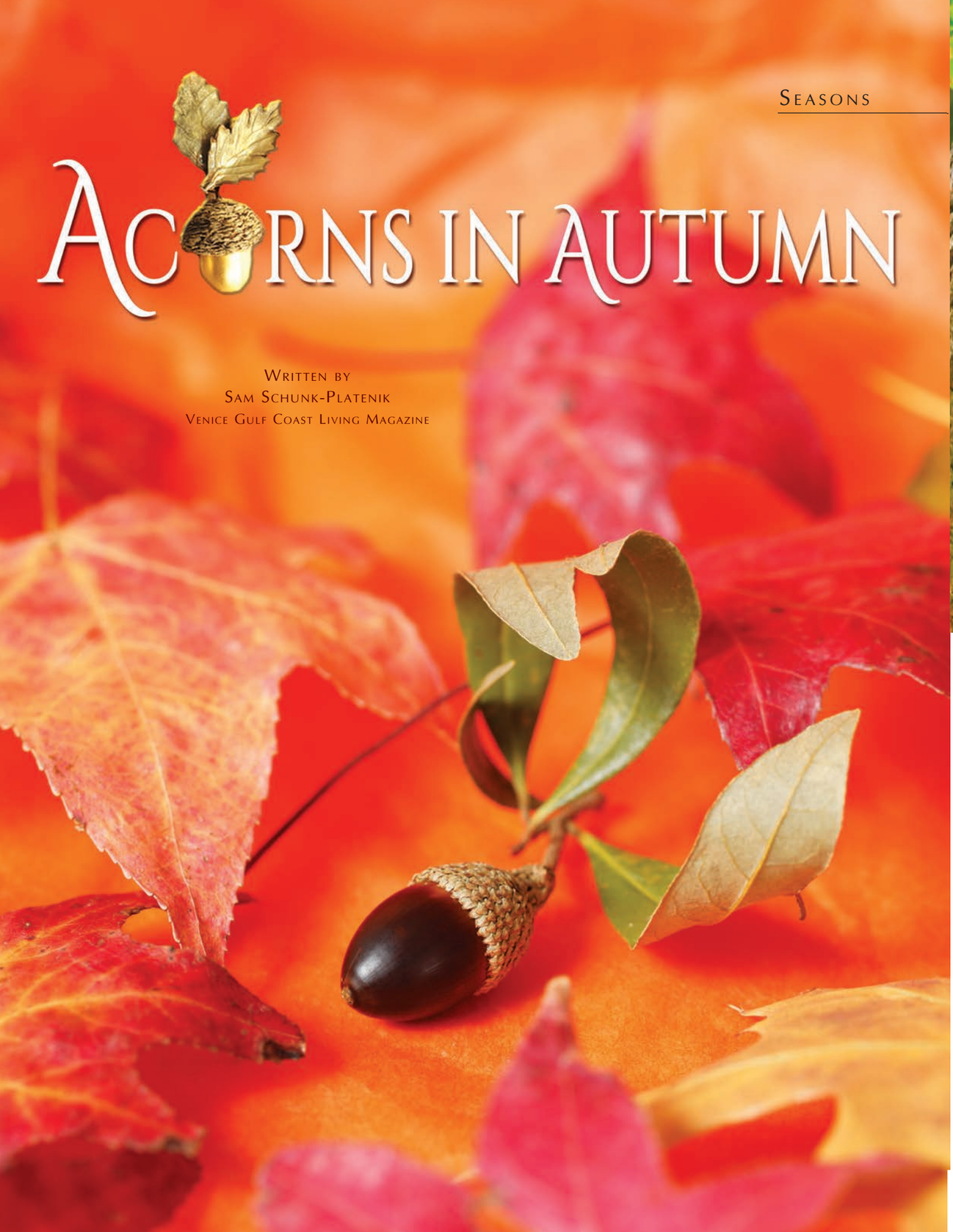

The lovely, cool weather of fall inspires many of us to wander outdoors and explore all the beauty of the natural world around us. During these relaxing strolls, we may come across a veritable bounty of acorns, which are the fruit produced by an oak tree that consist of a single-seeded, thick-walled nut set in a woody, cuplike base.

Around the world, approximately 400 species of oak trees flourish, with nearly all being found in the northern hemisphere; of that number, 24 types grow in Florida, according to the University of Florida IFAS Extension (page 10), including 10 white oak and 14 red (or black) oak varieties. Depending upon its species, an oak will either be deciduous, meaning that it sheds its leaves during the winter, or evergreen, indicating that its leaves remain on the tree, year-round. Although the appearance of bark, leaves and other traits may differ among oaks, one characteristic is universal: all of these trees grow nuts that are called acorns.

In what's known as a mast year—called such because the botanical term, 'mast,' means both the "fruit of forest trees like acorns and other nuts,' as well as "a heap of nuts"— oaks produce a huge crop of acorns, carpeting the ground with these tiny little gems. While more than 10,000 acorns can drop from a single large oak during these years, scientists say that it would require too much energy for a tree to release that amount annually. As a rule of thumb, white oaks tend to produce acorns in 2- to 2-1/2 year cycles, while with red (or black) oaks, it can take 3-1/2 to 5-1/2 years. Variation between the different species and environmental factors such as light, rainfall and other weather conditions may also impact the length of time between bumper-crop seasons.

When looking at what seems to be an infinite number of these seeds lining a forest floor, it's astounding to realize, however, that only 1 out of every 10,000 acorns will survive to become an oak tree. Although the majority of acorns serve a different purpose, they are still a valuable resource. The University of Florida IFAS Extension reports that more than 100 species of vertebrate wildlife in the United States are known to consume acorns. The animals that eat them range from mammals such as foxes, rabbits, raccoons, squirrels, and white-tailed deer, to birds including bobwhite quail, crows, jays, mallards, and wood ducks. An indispensable element in their diets, some animals change their movement patterns through their habitats in response to the amount of acorns available. For example, wild turkeys generally have smaller home ranges, subject to fewer seasonal shifts, when large quantities of these small seeds are present.

Since types of acorns have significant differences in texture, shape and color, taking a closer look at one can often provide

EXPLORE FLORIDA'S NATIVE OAKS

In the Sunshine State, you'll find approximately 24 species of native oaks, which are categorized into two classes: the red oak (sometimes referred to as the black oak) and white oak groups.

RED OAK SPECIES:

Black oak *(Quercus velutina)* (also called yellow-barked oak)

Blackjack oak *(Quercus marilandica)*

Bluejack oak *(Quercus incana)* (also called sand oak or upland willow oak)

Diamond-leaf oak *(Quercus laurifolia)* (also called swamp laurel oak)

Laurel oak *(Quercus hemisphaerica)* (also mistakenly called diamond-leaf oak)

Myrtle oak *(Quercus myrtifolia)*

Runner oak *(Quercus pumila)* (also called running oak)

Scrub oak *(Quercus inopina)* (also called sandhill oak or Florida scrub oak)

Shumard oak *(Quercus shumardii)* (also called swamp oak)

Southern red oak *(Quercus falcata)* (also called Spanish oak or swamp red oak)

Swamp red oak *(Quercus pagoda)* (also called cherrybark oak)

Turkey oak *(Quercus laevis)*

Water oak *(Quercus nigra)* (also called spotted oak)

Willow oak *(Quercus phellos)*

WHITE OAK SPECIES:

Bluff oak *(Quercus austrina)* (also called bastard white oak)

Chapman oak *(Quercus chapmanii)* (also called scrub oak)

Chinkapin oak *(Quercus muehlenbergii)* (also called yellow chestnut oak)

Live oak *(Quercus virginiana)* (also called Virginia live oak)

Overcup oak *(Quercus lyrata)* (also called swamp post oak)

Post oak *(Quercus stellata)* (also called iron oak)

Sand live oak *(Quercus geminata)*

Sand post oak *(Quercus margarettae)* (also called dwarf post oak)

Swamp chestnut oak *(Quercus michauxii)* (also called cow oak or basket oak)

White oak *(Quercus alba)*

Information from University of Florida IFAS Extension

enough information to pinpoint the species of tree from which it originated. To aid in this, it's best to know the basic parts of an acorn. Starting at the top is the stalk, the slender or elongated structure that supported the plant when it was attached to the tree. Next, the cupule, or cup, is the part of the acorn that resembles a little beret, albeit one made out of tiny scales. Below that is the pericarp, or the wall that keeps the fruit contained. The bottom tip of the acorn is actually the remains of the style, a pillar-like stalk through which pollen tubes grew to reach the ovary.

To identify an acorn, begin by paying particular attention to the scales found on the cupule, which may be thin and flat, or thick with a bumpy texture. Some species will have parallel ridges, or striations, running from top to bottom. All oaks native to North America and Europe have a spiral of overlapping scales on the cupule. Touch underneath this part because a white oak acorn tends to feel very smooth under the cap, but red oak nuts often have a tough outer shell with a silky inner lining. Next, note the shape of the acorn, which may be round, or globose; nearly round with a blunt tip; or elongated, referred to as 'ovoid' or 'oblong,' nuts that often taper to a point. Mature acorns are typically chestnut red, light to dark brown, or black in color, whereas a green or greenish-gray hue usually indicates a nut that fell prematurely.

Size is another important clue, as some species produce acorns that are smaller than half an inch, while others make nuts large enough to fill the palm of your hand. According to botanical experts, most acorns within a single species and region will exhibit a similar length. Comparing the dimension of the cupule and the nut also may be helpful, since variations include having a small, thin cup resting atop the nut to having one big enough to nearly envelope the rest of the acorn. Assess any hair found on the inner or outer surfaces, within the surface of the shell, and even just near the tip. Botanists described this growth as woolly, or covered with long, matted hairs; pubescent, or coated with fine, soft, short, hairs; or glabrous, or being smooth. Finally, be on the lookout for germinating acorns, since this helps to narrow the search to species that sprout at this time of year. White oak acorns tend to develop in the autumn shortly after falling from their trees, while red, or black, oaks usually remain dormant until spring.

These tips can get you started on the journey toward learning to identify the different types of acorns and the trees that bore them. To take your knowledge to the next level, you may want to seek out one of the excellent guidebooks to the oaks of North America and those right here in the Sunshine State. With so many types of oak flourishing in Florida, autumn presents plenty of opportunities to find acorns. Gather some of these natural gems, and you may want to use them in your harvest décor. Turn to the next page, and you'll find some design inspiration, ideal for your next seasonal celebration!