

The Bearing Tree
October 27, 2008

The improbability of life is exemplified by the Bur Oak—Mossycup Oak, *Quercus macrocarpa*, large-seeded oak—call it what you will, this tree is the sloth of the plant world: inefficient and slow. During each stage of its lifecycle sequentially whittles its odds of survival. Beginning with the billions of pollen grains produced expectantly each spring, only hundreds of these would-be trees successfully navigate the erratic winds of Southern Minnesota to land upon another adult Bur Oak. These develop into acorns—the autumn mainstay of squirrels—and a race ensues between the mammalian feeding frenzy and the oak seeds' methodical attempts to germinate. Forgetful October squirrels are an oak's best friend.

From the tens of acorns that sprout, infant trees emerge the following spring and summer. These are invariably devastated by insects, rabbits, and white-tailed deer. The pressure from these herbivores continues year after year until a select number of trees—if any at all—outgrow the reach of the hungry and develop enough leaves to minimize the effects of insect feeding. Young trees bear little resemblance to their tangled dome-shaped kin, but given several centuries of deliberate, unhurried growth they will attain the shape of this iconic symbol of the Upper Midwest.

I often wonder about how the hurried lives of modern humans have changed this time-dependent cycle. Land development now interrupts much of the Bur Oak's native range, presumably augmenting the inefficiency of wind pollination—if individuals are too separated to exchange pollen, acorns may never form. Manicured lawns and grazed farmland make acorns easy targets for squirrels and the recent boom in the white-tailed deer population certainly decreases the survival of seedlings. Decreased fire frequency favors non-native invasive shrubs like buckthorn and honeysuckle that shade young oaks; at the same time these species increase the probability that deer will consume the oak's nutritious leaves and twigs.

In some instances human sentiment for the history witnessed by each individual tree increases the rate of transition from pollen to tree. Prescribed burns prevent the clogging effect of buckthorn and honeysuckle. Planting acorns and protecting young trees from deer and rabbits increase the probability of survival. However, in our efforts to preserve, it is possible that we will lose the majestic Bur Oak that we know and love, for in oak forests, this tree is as straight and ordinary as any ash, maple or hackberry. In the case of the Bur Oak, more is not always better—conserving the natural history of this tree and its improbable life are as important as protecting the tree itself.