Number of species complementary growth and resource use by various types of species. We the edge of the Crawfish River. At the same time, we determined seasonal tested these predictions in summer 2006 by measuring the productivity of Figure 1. 100 120 160 200 120 160 200 20 30 60 20 60 0 May June July August Species per Quadrat

How diverse is the wetter part of Faville Prairie?

By recording the species present each time we sampled, we learned that the average number of species per 0.25-m² quadrat increased from four in May to ten in June and August. The total number of species we found in all quadrats increased from 20 in May to 35 in August (Figure 1). In stark contrast, the reed canary grass stand averaged little more than one species per quadrat and a total of 4 species in August for the 10 quadrats we harvested. Theory predicts that the diverse native prairie should produce far more biomass than the reed canary grass.

How productive is Faville Prairie?

While it is easy to predict differences in productivity, it is extremely difficult to measure them. Five times during summer 2006 (May, June, July, August and November), we clipped vegetation in 0.25m² quadrats in the native and invaded areas of Faville Prairie. In the native site, we separated biomass into live, standing dead, and litter components for each of four functional groups (woody species, forbs, grasses, sedges). The three components for our four functional groups and 10 quadrats produced over 250 bags of biomass, which were dried for two weeks at 60˚C and weighed.

Next, we moved from the field to the computer. Not satisfied with a single calculation for annual aboveground productivity, we compared results from 25 formulae (Jelinski 2007). For example, one estimate was simply the peak live calculation for annual aboveground productivity, we compared results from 25 formulae (Jelinski 2007). For example, one estimate was simply the peak live value of this invader. Faville Prairie is diverse and productive, but reed canary grass is more productive and its control is urgent in order to sustain this prairie remnant.

Faville Prairie has proven its value as (1) a prairie remnant that reminds us what the landscape might have looked like decades to centuries ago; (2) a research site that allows us to test theory and advance science; and (3) an educational gold mine for students working toward graduate and undergraduate degrees.

References


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