Florida's Range Sites

Ed Sievers

Water is the single most important factor differentiating Florida's dozen range sites. However, rainfall and the ability of the soil to manage water are of little consequence. The distribution and abundance of rainfall is fairly uniform throughout the state and most rangeland soils are coarse textured with similar water holding capacities and rates of infiltration and permeability. It is topography, and its influence on natural drainage which most frequently determines the range site present. It is not uncommon for range sites to be differentiated by a foot or two of elevation. Variations attributed to soils and climate are generally of secondary importance. A brief description of some of Florida's range sites follows.



Sand pine scrub.

The sand pine scrub straddles excessively drained¹ ridges in central Florida and adjacent to the Atlantic and Gulf of Mexico coasts. Even aged stands of sand pines with dense understories of scrub oaks are characteristic. This is Florida's least productive range site.

The longleaf pine-turkey oak hills occur in west, north, and central Florida on high but moderately well-drained soils. Where periodic burning prevents hardwood regeneration, production peaks at 4,000 lb/acre². Creeping bluestem, lopsided and yellow indiangrass, and switchgrass are locally important decreasers. Wiregrass and saw palmetto are common increasers.

The cutthroat seep is found on seepage sites below the

²Production is expressed as air-dried annual aboveground biomass (excluding trees) from excellent condition range sites during favorable growth years.



Longleaf pine turkey oakhills.

better drained sand pine scrub and longleaf pine-turkey oak hills of central Florida. Creeping and chalky bluestem are the major decreasers, but the namesake, cutthroat grass, is considered an increaser. Production approaches 9,000 lb/acre, where slash pine overstory remains open.



Cuthroat seep.

The flatwoods are Florida's most abundant and widespread range site. The flatwoods occupy broad expanses of level, somewhat poorly drained soils. There are several variations of the flatwoods, distinguished by climate and soil. The south Florida flatwoods are most common. Creeping bluestem, chalky bluestem, and lopsided indiangrass are the

¹Drainage classes express the maximum height of the water table for a period of at least 30 cumulative days annually. Excessively drained >72"; moderately well drained 36"-60"; somewhat poorly drained 0-12"; and very poorly drained 0 - above surface.



South Florida flatwoods.

decreasers with wiregrass and saw palmetto the increasers. Production may exceed 7,500 lb/acre. Flatwoods generally occur as savannas of scattered slash pines. The north Florida flatwoods are less productive, attributed to denser overstories, shorter growing seasons, and cooler temperatures. The cabbage palm flatwoods characterized by the presence of cabbage palm, occupy calcareous soils scattered throughout central and south Florida. Species composition is similar to the south Florida flatwoods, but production is greater. The Everglades flatwoods occur on the thin rocky limestone soil of southeastern Florida. Consequently, species composition is altered, and production is drastically reduced.



Cabbage palm hammock.

Hammocks are small isolated stands of live oak or cabbage palm in central and south Florida. Both occur on level, somewhat poorly drained soils. The calcareous soils of cabbage palm hammocks enables slightly greater production than live oak hammocks, 4,000 vs 3,500 lb/acre.

Sloughs are common range sites associated with the south Florida flatwoods. They are slightly lower and serve as drainage ways during the rainy season. The soils are poorly drained and only herbaceous species prosper. The most prevalent decreaser is blue maidencane, and the most com-



Slough.

mon increaser is wiregrass. Production reaches 8,000 lb/acre.

The freshwater marsh, Florida's most productive range site, occupies inundated depressions scattered throughout the sloughs. Some marshes occur on organic soils or muck,



Freshwater marsh.

and may produce 10,000 lb/acre. Maidencane and cutgrass are the major decreasers. Common increasers include sand cordgrass, carpetgrass, and pickerelweed.

The scrub cypress is a small area on the western edge of the Everglades in southern Florida. These areas are characterized by sparse stands of dwarf cypress (less than 20 feet). Soils are very poorly drained and generally underlain by fractured limestone. Blue maidencane and maidencane,





Scrub cypress.

both decreasers, may produce 4,000 lb/acre.

The salt marshes are located on both the Atlantic and Gulf coasts in north and west Florida. Associated soils are organic, clay loams, or combinations thereof, many with



Salt marsh.

high sulfur contents. Zonations of vegetation are typical due to interactions of tidal water levels, salinity concentrations, and soils. Common decreasers are three cordgrasses and production reaches 8,000 lb/acre. Black needlerush is the most common increaser.

A Government Grazing Program That Works— Avon Park Air Force Range

R. Scott Penfield

Editor's Note: The author has been the Range Conservationist at Avon Park Air Force Range since 1977. Avon Park is the largest and most heavily utilized bombing and gunnery range in the eastern United States. Thirty-nine thousand acres of the range consists of two target complexes each containing a conventional range for primary training and a tactical range for advanced training. The remaining area is held as a buffer zone and by law its natural resources are managed under a sustained yield multiple use doctrine. Timber, wildlife, grazing, and recreational opportunities are all managed generally throughout the property. This article highlights the grazing program. Avon Park will be visited on the post tour at the annual SRM meeting in Orlando.

Profits are down, our resources are being depleted, management is not improving production—it's time for a change. Clean house, start over; institute a new program. Is this a board meeting of some large corporation? No, it's in central Florida, approximately 60 miles south of Orlando in the mid 1970's. They weren't discussing a failing corporation but a natural resource—the government's range resource at Avon Park Air Force Range. Years of continuous grazing had severely depleted the resources. The USDA Soil Conservation Service and the University of Florida rated all of the installations's 106,000 acres in poor condition. Income from grazing leases had failed to keep up with inflation as the lessees were paying the same grazing fees they had 10 years ago. Not only was the grassland resource depleted but fences, cow pens, and stock ponds had all fallen into disrepair.

Avon Park Air Force Range has representative plant communities typical to native central Florida. The flatwoods community with its characteristic flat surface and acidic poorly drained sandy soils dominates the majority of the property. Vegetation consists of bluestem grasses, legumes, shrubs, and pine trees. A sand hill ridge of approximately 11,000 acres runs from the north to the south down the center of the property and is characterized by deep sands that are well drained. Vegetation on the area is mostly scrub oak, sand pine and a variety of shrubs. On the slopes of the ridge exists approximately 2,000 acres of seep which creates a unique community found only in this region of Florida. A seep is an area where water flows to the surface forming shallow pools or very wet soil. This is the only region in the United States where cutthroat grass is found. This sod forming grass is considered a valuable grazing resource. The