



**PINE ROCKLANDS  
BORN FROM FIRE**

**LAS TIERRAS ROCOSAS  
DE LOS PINARES-NACIDAS  
DEL FUEGO**

## **PINE ROCKLANDS - BORN FROM FIRE**

Prior to settlement, natural lightning-caused fires raced across Florida, shaping its wilderness landscape. Fire had a powerful influence in the evolution of plant and animal diversity in Florida. As Florida's wildland areas have diminished due to development, the role of fire in the management of preservation areas has become an important issue. To help maintain this rich diversity of life and restore the ecological health of habitats that are adapted to fire, resource managers rely on "prescribed burning." Prescribed burning is fire that is purposely set under specific weather conditions to reduce the natural buildup of vegetation and deadwood in a fire-adapted habitat. Miami-Dade County's pine forests, called "pine rocklands", are an example of a fire-dependent habitat that must now be maintained by prescribed burning.

The Florida Natural Areas Inventory ranks South Florida's pine rocklands as "globally imperiled" but, by any measure, this habitat is unique and precious. Beneath the tall, open canopy of slash pines there lies a rich understory of palms, shrubs, grasses, sedges, cactus, and wildflowers, 66

percent of which are tropical in origin. Pine rocklands contain the highest plant diversity of any other habitat in Florida and are home to more than 400 native plants, some of which are among Florida's rarest species. Four pine rockland plants are listed as federally endangered, and more than 50 species are listed by the State as endangered or threatened. Some plants, such as the deltoid spurge, Blodgett's wild mercury, Small's milkpea, and rockland lantana are among the species that are found only in South Florida's pine rocklands and nowhere else on earth.



Small's milkwort, *Polygala smallii*.



Great Horned Owl, *Bubo virginianus*  
photo by Grover Larkins

## **PINE ROCKLANDS - GLOBALLY IMPERILED**

Early settlers found an inhospitable environment in South Florida. To avoid the swampy Everglades, development was centered on the Miami Rock Ridge, a narrow, slightly elevated ridge of limestone that borders the western shoreline of Biscayne Bay, and extends southwestward into Everglades National Park. This ridge diverted the waterflow in the historic Everglades "River of Grass" that flowed from Lake Okeechobee, and forced the water southwestward through vast expanses of sawgrass where it ultimately reached Florida Bay and the Gulf of Mexico. The Miami Rock Ridge was divided into a series of islands by low, narrow "finger glades" that allowed some water to pass eastward through the ridge to Biscayne Bay (see map page 5). Pine rocklands, interspersed with dense hardwood forests called "hammocks," dominated the uplands.

Developers around the turn of the 20th Century cleared forests for building because they existed on relatively high, dry land. With the advent of the rock plow—a bulldozer adapted to pulverize the limestone substrate to create a rocky "soil" for farming—agricultural interests also began to clear pine rocklands to plant row crops. As development encroached upon agricultural lands, farmers moved westward, clearing more and more land. This process has left fragmented parcels of pine rockland and tropical hardwood hammocks



A pine rockland maintained by fire.  
*Tierra rocosa de pinos mantenida con fuego.*  
*Photo by Robert Karatzel*

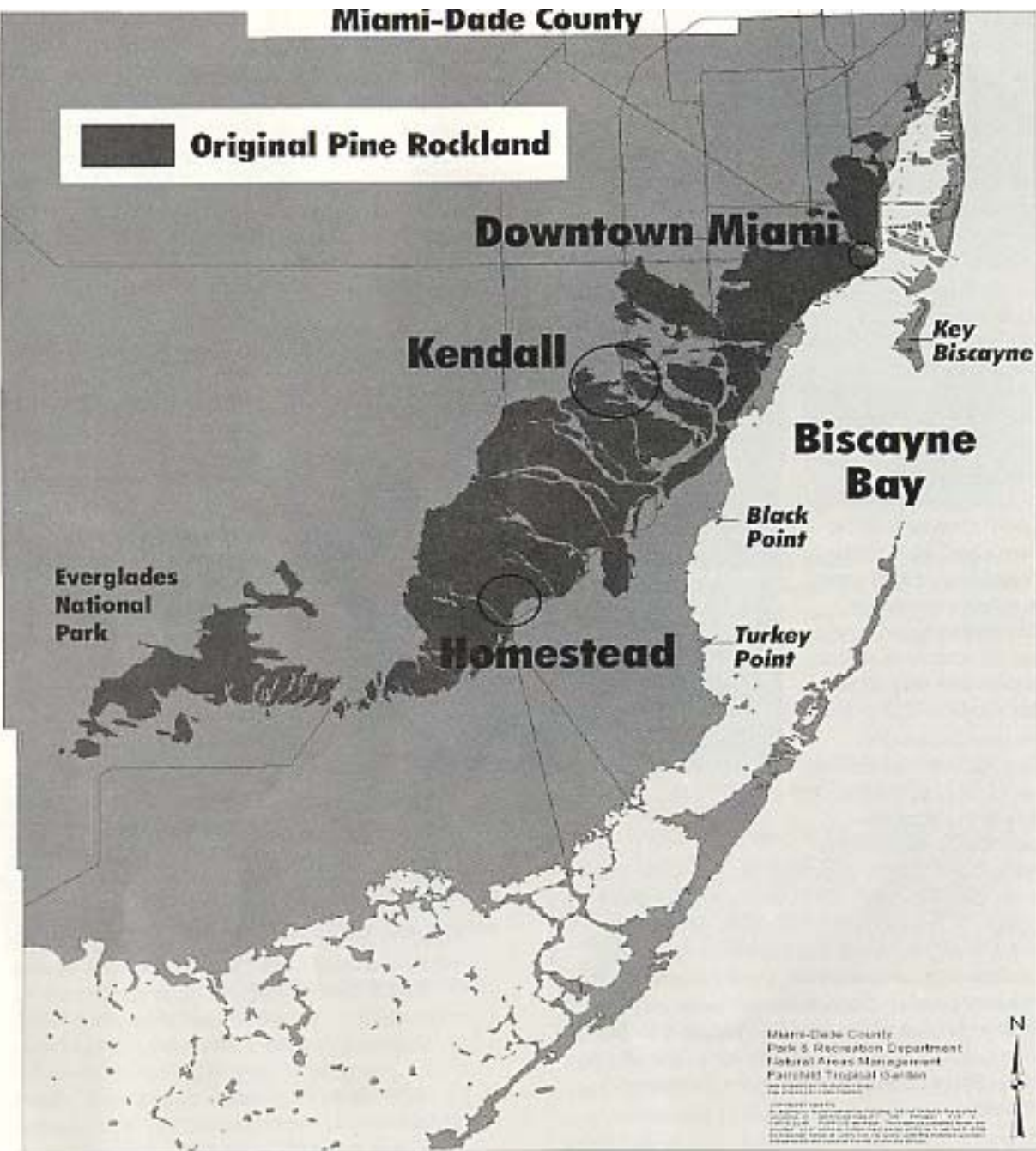


A pine rockland not maintained by fire.  
*Tierra rocosa de pinos no mantenida por el fuego.*

surrounded by urban and agricultural development. Today, only about 4,000 of the original 185,000 acres of pine rockland on the Miami Rock Ridge still remain. The largest stands include the Richmond Pineland tract that encompasses Metrozoo (850 acres), Navy Wells Pineland Preserve south of Homestead (400 acres), and Nixon Smiley Pineland Preserve east of Kendall Tamiami Airport (120 acres).

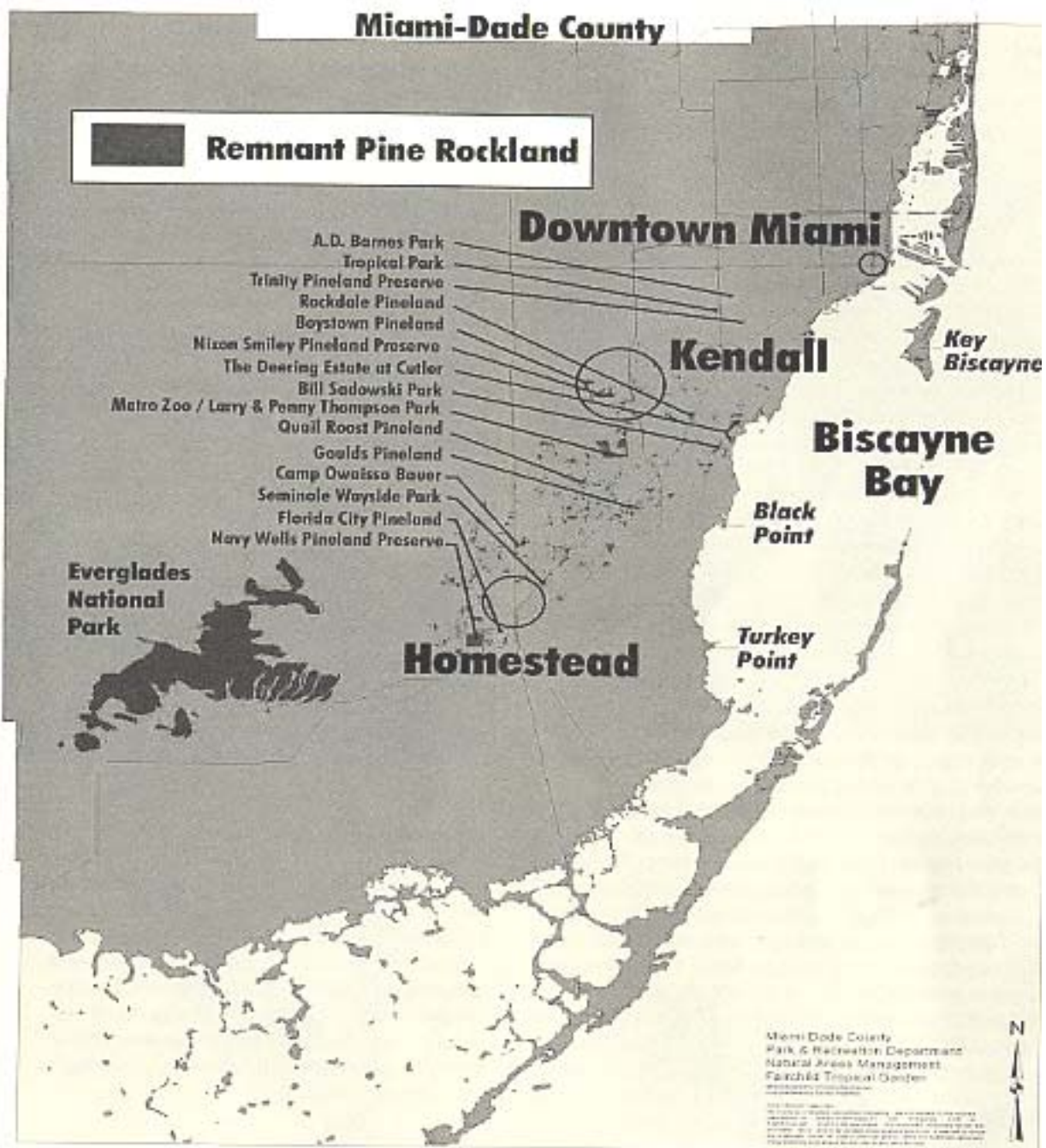
### **Preserving Our Pine Rocklands: Miami-Dade County's Environmentally Endangered Lands (EEL) Program**

In 1990, Miami-Dade County voters approved a two-year property tax increase which raised \$90 million to acquire, protect, and manage environmentally endangered wetlands and upland forests. Pine rockland habitat is a priority for the EEL program. To date, EEL has purchased 426 acres of pine rockland representing a 40% increase of this habitat in public protection. 58% of EEL's land acquisition funds spent thus far have gone to acquisition, and 52% of its land management funds have gone to management of the globally-imperiled pine rocklands.



Prior to Miami's settlement, pine rocklands encompassed 185,000 acres of Miami-Dade.

Antes de la colonización de Miami, las tierras rocosas de pinos abarcaban 185,000 acres del actual Condado de Miami-Dade.



Today less than 4,000 acres remain (outside of Everglades National Park) and less than 1,600 acres are protected in public parks and preserves.

*El desarrollo ha reducido el hábitat de tierras rocosas de pinos a 4,000 acres (sin incluir el Parque Nacional de los Everglades) dejando sólo el 2% de la cobertura original. Aproximadamente 1,600 de esos 4,000 acres están protegidos en parques públicos y reservas naturales.*