

*Nine years in the planning, three years in construction, Walt Disney World's new 500-acre Animal Kingdom theme park stretches the meaning of landscape and the boundaries of landscape design.*

By RON HALL/  
Managing Editor

**"N**ature takes millions of years to produce a landscape; it takes Disney three years."—Michael Eisner, President and CEO of Disney during Animal Kingdom's grand opening.

Several dozen of us, excited and wide-eyed, are traveling on a narrow winding trail through the heat and this exotic landscape. We're bumping and swaying along in an open-sided, 32-passenger safari vehicle. The landscape surrounding the trail is unlike anything most of us have ever experienced. Palms. Trees of implausible, non-Midwestern shapes. Savanna grasses. Termite mounds.

Except for some of the grasses, all are newcomers to this landscape. A few years ago it was pasture and scrub. But, from appearances we couldn't have known this.

Nor could we have known that the vegetation surrounding the tire-rutted road was laid out in beds by an energetic and voluble landscape architect with a penchant for wearing turquoise jewelry, colorful Hawaiian-style shirts, and khaki bush

shorts. Paul Comstock, architect and the lead creative designer, motorcycled over this very trail, and marked the future beds with spray paint as he went.

#### **Africa reborn**

This is "Africa" in Disney's Animal Kingdom, the newest theme park at massive Walt Disney World near Orlando. While this landscape seems ageless, it's both recent and, using Disney language "engineered."

The termite mounds in Africa are man-made. So is the road on which we're jolting along. Craftsmen purposely "aged" the trail by pressing tire treads and twigs and bits of vegetation into the still-wet concrete. The huge time-worn boulders, where lions lazily stare back at our lurching vehicle, are also themed concrete. The tree stumps along the trail? We learn that they're really

# Disney's **GRAND, GREEN** experiment

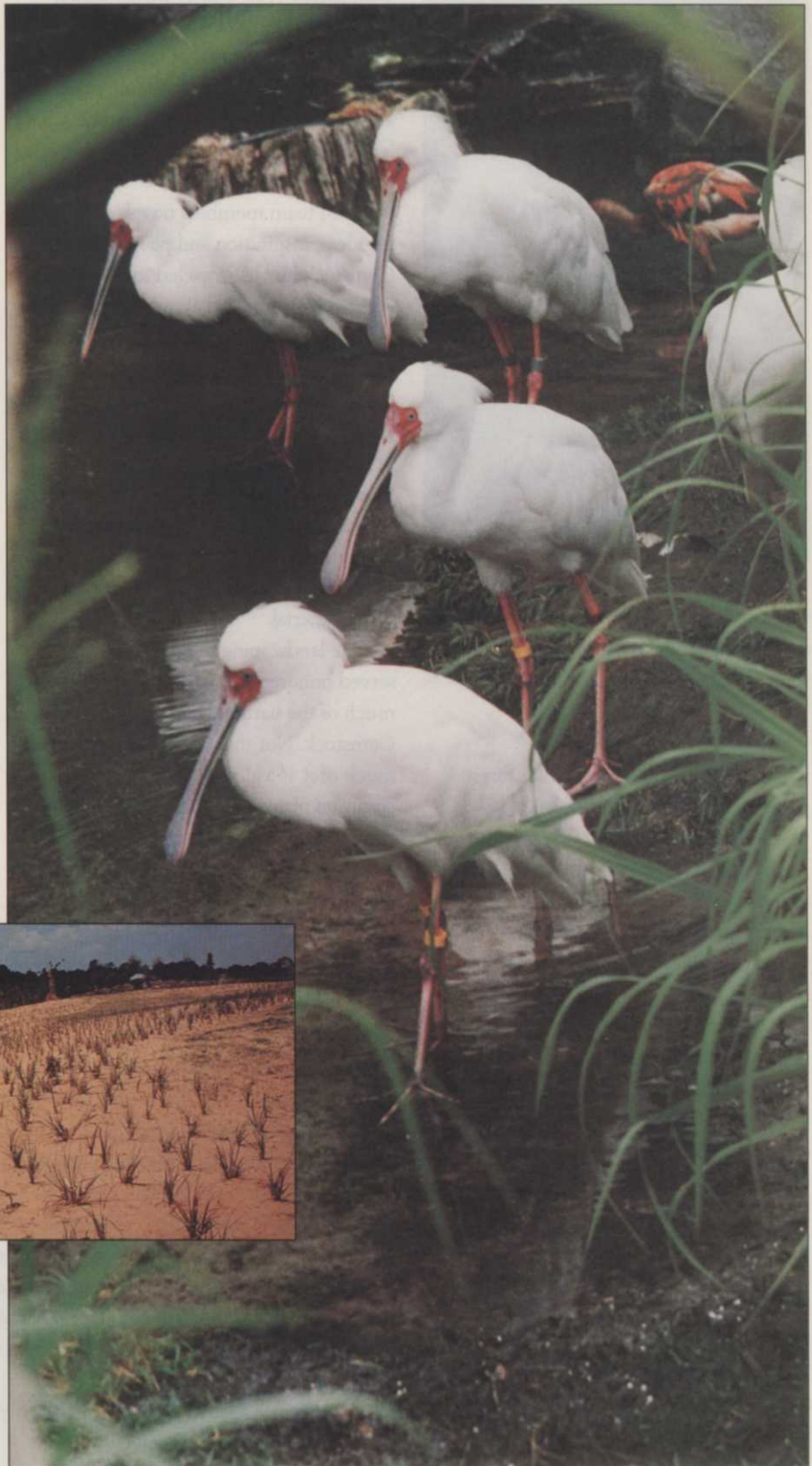
cleverly disguised animal watering stations. So skillfully is this landscape executed that it allows us visitors to believe (if only for 25 minutes) that this is East African plains land. This experience, known as the Kilimanjaro Safaris, is unlike anything in our neighborhoods.

#### **A massive job**

Planning for the 500-acre Disney Animal Kingdom (of which "Africa" is about 110 acres) began in 1990. The first of 4.4 million cubic yards of earth were moved here about five years later in August 1995. The theme park opened this past April. Disney Animal Kingdom is the fourth and by far the largest theme park at Walt Disney World.

It's also, by far, the most audaciously landscaped. Landscapes here aren't secondary to attractions; they are the attractions.

Disney Animal Kingdom has three main landscaped areas: the tropical Oasis at the entry; the Cretaceous Forest and magnolia grove in DinoLand U.S.A.; and "Africa" with its the riverine environments, grasslands and Gorilla Falls. "Asia," the final large section of the park, will open in



▲ Small grass plugs, individually planted to create a savanna as habitat for the African animals. Shown here is Chilean Cortideria Pumila.

► The presence of exotic animals challenges the theme park's landscape experts.





This huge oak was saved from a cattle pasture and replanted in Disney's Animal Kingdom. It's now one of the favorite locations for a family of gorillas.

spring 1999. It will feature a rain forest populated with Asian animals.

#### 'We loaded up'

"This is a big Darwinian-type experiment. It's 2.3 million plants, 260 species—a huge open-air experiment," says Paul Comstock, about the park's diverse landscapes.

As he strides beside a small, murmuring stream that's shaded by a profusion of ferns and fronds, he's gesticulating and talking about what he helped create. And pointing out plants like a collection of magnolias ("the world's first angiosperms"), or a monkey puzzle tree. If Comstock is anything, he's animated; he's enthused.

"Much of what we're trying has never been tried before, so we've loaded up with the plants. The fittest will survive. I'm sure we'll end up seeing certain plants dominating in certain areas," says Comstock, who seems to revel in the profusion of plants and exotic animals.

Comstock, who grew up in a family that operates a large plant nursery in California and, for a while, was a rock musician, joined Walt Disney Imagineering (WDI) in 1989. WDI is the design and development company that conceives and creates all Disney resorts, theme parks, and attractions. Comstock is one of nine WDI landscape architects for the Disney Animal Kingdom project.

WDI team members traveled the world for ideas, inspiration and plant material. Comstock himself traveled to 28 countries. Animal Kingdom has about 100 species of trees and shrubs foreign to North America, including the first tree planted at the site in December 1995, an *Acacia xanthophloea*, grown from a seed that Comstock acquired in Africa.

#### Close to home

But like Dorothy in Oz, the WDI team found that what they needed most was close at hand: imagination and lots of plant material.

The landscaping team, in fact, conserved hundreds of native oak trees and much of the natural native planting, says Comstock. Not that you would recognize much of it at a glance. "We like to use uncommon plants in common ways, and common plants in uncommon ways," he says on more than one occasion to make a point.

For instance, the Disney "Imagineers" planted St. Augustinegrass, a common lawn grass in the South, along the top of river banks, and it sent long, hanging tendrils over the banks. They learned they could make live oaks appear to be acacias.

#### Each tree selected

"We cast trees as characters into the landscape, taking into consideration size, shade and accent. Then if you can't use your ideal tree, you look around for somebody who can play that part," explains Bill Evans, the landscape architect that Walt Disney hired to landscape his Holmby Hills (CA) in 1951, and who subsequently became director of Landscape Design at WDI. "It's sort of like an 'understudy'. You keep a large cast of characters at hand."

(Now more than 80 years old, Evans has been involved with developing the landscapes at virtually all Disney locations, including serving as a mentor to Comstock at Animal Kingdom. He "officially" retired in 1975.)

The Disney Imagineering team also bought plant material from nurseries in California, Maryland, Oregon, Texas, Arizona and Florida. In some cases it even re-discovered "foreign" plants in its own backyard, like a forest of giant bamboo that had been growing for decades in the back of a cotton field on a Georgia farm. Years

cont. on page 18L

## Disney's Animal Kingdom landscape at a glance

**Location:** On southwest portion of Walt Disney World property near Orlando, FL.

**Size:** 500 acres including 110-acre African forest and grasslands

**Description:** Combines close encounters with live, wild animals of all kinds plus prehistoric dinosaurs and animated stars of Disney classic films.

**Animals:** About 1,000, representing 200 species, most acquired from zoos accredited by the American Zoo and Aquarium Association.

**Plants:** About 4 million, representing 3,000 species, including 40,000 mature trees (16,000 grown at the Walt Disney Tree Farm), 850 species of trees; and 2.5 million shrubs representing 2,000 species; 3,000 cycads (third largest collection in North America); and 260 different types of grasses.

**Landscape maintenance staff:** 45 "crafts" workers and horticultural specialists in the field, supported by 7 managers.



## Taming the 'wild' landscape

A lone gray elephant, silhouetted on a small rise about 200 yards away, uses its trunk to grasp a palm tree. The tree is about 20 feet tall. The elephant shakes the palm back and forth until the palm topples.

Rhinos are trampling the vegetation several hundreds yards away; antelope are feeding on the plants in another area.



Dennis Higbie says maintaining Disney's Animal Kingdom requires horticultural specialists.

"All of the other landscapes that I have been involved with are paint by numbers by comparison," says Dennis Higbie of Disney Animal Kingdom. "This landscape is more like an Oriental carpet. There is order to it, but the order may not be immediately perceived by the general public."

"You almost have to get yourself inside a different body to figure out how you're going to take care of this landscape."

Higbie is General Curator of Botanical Programs for Disney Animal Kingdom. He and his office staff of seven and field staff of 45 maintain the incredibly diverse landscapes at the new theme park. Not only are the trees, shrubs, flowers and grasses within the theme park meant to be viewed and enjoyed by thousands of visitors

daily; the largest landscapes (like 110 acres of recreated Africa) provide habitat for exotic animals and, in some cases, food for them too.

"There is such a variety of plants. The diversity is mind boggling," says Higbie.

Contrary to the "natural" appearance of the landscapes, they are in fact intensively maintained

Not even the rainfall is left to chance. Over seven miles of irrigation main lines and 20 to 30 miles of laterals traverse the landscapes in the theme park. There are moisture sensors in practically every bed. The computerized irrigation system uses Disney World's own recycled water.

Equal care was taken in putting together the horticultural staff at Disney Animal Kingdom. It contains an individual specializing in plants like cycads, and another in orchids along with trained general horticulturists.

Often the horticulturists work evenings under portable lights. In some areas of the theme park it's the only time they can work. This is the case in "Africa" where the large animals are removed from the landscape, fed and bedded down in their own special buildings each evening.

"We have to garden in such a way that the public shouldn't look at the landscape and say, 'Wow!' It shouldn't look like it's been tinkered with," says Higbie.

That's admittedly a tall order, he admits.

"These are not static systems. They are dynamic systems, and these landscapes will not stay the same. We have to be prepared to learn something new every day."

As for the presence of the large animals in the landscapes, and specifically the elephant ripping out the palm?

"Maybe we won't put the palm tree back there. Maybe we'll have to realize that if that's what the elephants are going to do, we'll give them that," says Higbie.

"If that's OK for Africa, that's OK with us."

*cont. from page 14L*

ago the USDA experimented with using the bamboo to protect cotton fields from cold winds.

After buying the bamboo from the farmer, WDI hired contractors to literally jack hammer out the root systems. The plants were then transported by truck and installed in the theme park.



The Kilimanjaro Safaris ride vehicle splashes through this section of the manmade Hippo River before continuing through Disney World's recreated African landscape.

Other specimen trees they found in other not-so-exotic sites, perhaps at a construction site or in a yard.

While it's predictable that Disney's Animal Kingdom will be a big hit with vacationing guests, the theme park's landscape is another matter.

"An unpredictability will take center stage," admits Disney President and CEO Michael Eisner. □

—RH