AFRICAN SAVANNAH, ASIAN SWAMPS MAKE CALIFORNIA ZOO HOME

Consider a job as guardian of the savannahs, the open plains of Africa. The sun beats down relentlessly on the vast stretches of grass struggling to grow in poor soil and, in the dry seasons, with little moisture. Antelope, giraffes, rhinoceros, hippos, leopards, lions and zebras feed on the grass, tramping it into the ground, and eat the plants down to their roots.

Or consider a job overseeing the rain forest and swamps of southeastern Asia. Heavy rains deluge the area twice each year, in July and January. Land is swampy, a mixture of silt and runoff water from the mountains. Animals live in the trees to avoid the water and move around by "flying."

Much like the preceding missions impossible are tasks performed daily within the more manageable confines of the San Diego Wild Animal Park. The park has compressed northern, southern and eastern Africa and Asia into an 1,800-acre wildlife preserve in the San Pasqual Valley, 30 miles north of San Diego. But that still leaves the park's staff contending with the diverse terrains and environments of southern California, more than 3,000 wild animals and about 3,000 different types of plants.

It was a different story six years ago. When the park opened in May of 1972, verdant hillsides and lush gardens were only a figment of horticulturist Jim Gibbons' imagination.

"My first experience with the Wild Animal



Making a habitat for exotic animals out of vast areas of cut and empty hills has taken six years.

Park was a sunny day in January, 1972," Gibbons recalled. "Arriving at the park site early one morning, I looked over vast areas of cut and empty hills and tried to visualize how we would do away with the nakedness. I realized we had quite a job to do, so the entire gardening force dug in and in six years I believe we finally have begun to cover the grounds in verdant growth."

In the early spring of 1972, the horticultural staff began to create a forest. The park's hills and slopes were bulldozed bare and then hydroseeded, a process of applying seeds and slurry with pressure guns. Literally, it was an uphill battle. Bare decomposed granite on the slopes was interspersed with fractured rock outcroppings; the only hopeful signs for plantings were good drainage and porous soil.

An almost constant irrigation program was necessary to germinate the seeds. For the park's water needs, a half-million gallon steel water storage reservoir had been completed in September, 1971, and in the fall of 1972, a water line was completed to the Reed Reservoir, which was incorporated into the City of Escondido water system. Water also is re-used from the sewage treatment plant for irrigation.

When those early plants reached 18 inches high, the park began a vigorous fertilization program that continues today. Every three to four months, with IBDU (Par Ex slow release 25-4-8) fertilizer is applied by helicopter. "We needed a way to cover a large area in a short time," Gibbons said about the aerial fertilization. "It was effective and it wasn't all that expensive." The task of covering up to 400 acres with 10 tons of fertilizer, which would require the work of seven men for two weeks, can be finished in about one hour. A hopper beneath the helicopter is loaded in about three seconds by having a man on the ground ready to pour in the fertilizer. Gibbons said the animals pay the chopper little mind.

The slow release fertilizer releases nitrogen by movement of water in the soil and is not greatly affected by changes in temperature or bacterial action. All materials used by the park's horticultural staff must be approved by a veterinarian for toxicity as well.

As a result of fertilization and other intensive cultural programs, trees have reached heights averaging between 30 and 40 feet with four to sixinch diameters. Exceptional trees are closer to 60 feet with 10 to 12-inch diameters. Eucalyptus and acacia also have grown rapidly in just six years, along with other shrubs, vines, grasses and wild flowers. These products of years of care earned the horticultural staff the Grand Award in its category in a nationwide competition sponsored by the Professional Grounds Maintenance Society in 1976.

In addition to providing beauty, the forest serves as a screen, windbreak and food source for the animals. The eucalyptus is cut and transferred to the San Diego Zoo (park's parent facility) for nourishment of the koalas and the acacia provides browse and fodder for the giraffes and other park animals. Many native mammals and birds also find

a home in the forest canopy.

Gibbons might feel like crawling up into that forest canopy himself once in awhile, for the past year's successes haven't eliminated the problems. This year the staff's biggest challenges have come not from the environment quirks of Africa and Asia, but from those of Southern California, where this season has been the wettest in nearly 40 years. Those unexpected crises aside, the idiosyncracies of caring for the native homelands of exotic animals remain. The habitats are vast - up to 125 acres; the environments are in a delicate balance. The animals would be the last to realize they weren't actually "at home." The 22-person horticultural staff, in addition to Gibbons, must make sure imported plants from East Africa don't end up in the Asian Highlands, for example. And then there's the problem of giraffes and elephants eating those expensive trees. Trees are ringed with telephone poles to dissuade the giraffes.

"It's altogether a different line of work," said Ray Michael, construction and maintenance manager. Michael and his 11-person staff are responsible for maintaining the existing buildings and supervising new construction. They're also responsible for knowing facts not in the mental storehouse of the ordinary person - like how high a baboon can jump (11 feet straight up and, if he's got the right footing, 15 feet horizontally). Gorillas can not cross the 15-foot-deep waterless moat that surrounds them, and they do have trouble climbing the smooth stucco plaster wall on the other side of the moat.

Those facts weren't quite as important when zoos were synonymous with cages. But these days, no wild animal in his right mind would want to escape from the San Diego Wild Animal Park. The gorillas, for example, have heated floors in their sleeping quarters and are fed warm milk every morning. "They're fed, they're cared for. Why would they want to leave?" asked Michael.

They don't. As a result, the park has become a major animal research center where many endangered species have reproduced. It is also a center for the animal lover. Visitors enter the park in the 17-acre Nairobi Village, which contains an Aviary, Petting Kraal, Animal Care Center, Congo River Fishing Camp, Gorilla Grotto, embarkation point for the Wgasa Bushline monorail and entrances to the Kilimanjaro Hiking Trail and Tropical America. The monorail takes passengers on a five-mile guided tour past social groups of various animal species; the hiking trail takes visitors on their own 11/4-mile East African safari, which affords a safe but close view of lions, tigers, cheetahs, giraffes, rhinos and other animals.

With all that, the park is less than half developed. Another 1,200 acres await the park's planners. But managing 1,800 acres still beats taking care of two continents.

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