

No-man's land getting facelift

Chicago sludge to restore land

United Press International
HARRISBURG, Ill. — A 192-acre no-man's land in the Shawnee National Forest is getting a facelift with liberal applications of Chicago sludge.

It is the Palzo Project, 17 miles southwest of the Harrisburg headquarters of Shawnee, on strip-mined land acquired by the federal government in 1966 and added to the forest system.

The Metropolitan Sanitary Sewer District of Greater Chicago picked up the tab for an application of 51 million gallons of liquid sludge to 81 acres. Shawnee officials are now negotiating with the district on applying dried sludge to some remaining acres in the highly acid tract in Southern Illinois.

Grasses and small trees are growing in an oasis-like setting against a backdrop of barren untreated acres and the gray skeletons of trees exposed to the acid runoff.

One planting of cereal rye was so lush it brought offers from neighboring farmers to harvest it and one said that unmined land in the area had never produced a crop its equal.

Foresters from throughout the nation have visited the tract and continuing test results have brought international inquiries.

Recently, four huge trucks rolled into the project with 80 cubic yards of dry sludge which was applied to a 73-foot square test plot.

Liquid sludge from the district's Calumet lagoon was used earlier to treat the 81 acres of the plot, regarded as probably the "hottest" strip mined land in the United States. It was applied during a three year period from 1975-78.

Mikeal Jones, a Tucson, Ariz., native and a hydrologist for Shawnee, is mothering the land restoration project.

Jones said the strip mining operation, before the federal government acquired the Palzo acres, recovered two seams of coal, exposing a double dose of shale with high deposits of sulfur.

The shale, exposed to the air and rainfall, created sulfuric acid in levels dangerous to man, animal and vegetation. The mining also created problems with iron, aluminum and cadmium.

The runoff from the Palzo acres flows into Sugar Creek which rims the plot on the west and then runs into the south fork of the Saline River and ultimately into the Ohio River.

"Normally you can expect three or four years' wear out of a pair of leather boots, but working around Palzo you can go through a pair in one year," said Jones.

Neutral soil has a pH rating of seven on the acid-alkaline scale with

numbers below it growing progressively more acid and higher numbers more alkaline. Before the liquid sludge applications, the Palzo acres had a pH of 2.5 — not quite at the battery acid level but too "hot" to grow anything.

With a special plow, the liquid sludge was incorporated into the top 12 inches of the acid soil. The treatment has brought the pH up to five.

Jones said the main accomplishment of the project thus far is to cover crops which help check erosion. No positive effects have been noticed yet in the runoff water "but

tests on water on the plots show good results," he said.

A Southern Illinois University research team planted 17 types of trees on the treated acres, including white pine, green ash, silver maple, sycamore and autumn olive, Jones said. The best results have been obtained with green ash, white pine and autumn olive.

Jones sees definite possibilities for the restored area as a recreation area or perhaps for timber production. Years of testing remain, however, before it will be known if the land can produce crops or cattle that could be safely consumed by man.

Lightning detected on Venus

United Press International
MOUNTAIN VIEW, Calif. — A vast rift valley discovered by the Pioneer Venus Orbiter probe may be the result of planetary activity strikingly different than that experienced on Earth.

The 15,000-foot-deep, 900-mile-long valley, seems to be the work of internal planetary forces that have forced open the planet's crust. These were findings released Wednesday in a report from the National Aeronautics and Space Administration's Ames Research Center.

Other information relayed from Pioneer Venus Orbiter include evidence of a "polar vortex" near Venus' north pole, a 650-mile wide, roughly circular region of down-flowing winds which may be a key mechanism in the planet's atmospheric circulation.

The discovery is based largely on a dramatic new series of photos of cloud formations in the planet's atmosphere.

The report also presents findings which confirm reports of virtually continuous lightning between 2 and 32 kilometers above the planet's surface, first detected by the Soviet Union's Venera probe last December.

"Chemical fires" due to reactions of various compounds in the super-heated atmosphere have been cited as a possible source for these eruptions of light, which occur as frequently as 25 times per second.

Electrical discharges like those which cause lightning on Earth also have been cited as a possible source although increased intensity close to the planet's surface and the unusually steady character of the glow make this explanation less likely.

The probe's magnetometer also has identified what seem to be unique magnetic field structures in the planet's ionosphere. Scientists suggest these magnetic structures may be caused by the strong "solar wind" coming into contact with the planet's ionosphere.

Polar bear dies in zoo after beating

United Press International
ST. PAUL, Minn. — An intruder at the Como Zoo apparently beat to death Kuma, the zoo's popular polar bear, with a piece of pipe and a concrete block. Zoo Director John Fletcher said the beating took place after hours.

Police said they had no early leads, but Fletcher said it was possible the intruder got in through a section of fence that was being repaired. The pipe and concrete block were found in the bear grotto Tuesday.

"I don't know the reason, but bears are the subjects of a lot of attacks in zoos," Fletcher said.

Zookeepers found Kuma dead when the zoo opened. Her mate, Mato, had to be tranquilized before the body could be removed.

The St. Paul Zoological Society offered \$500 for information leading to the arrest of the attacker and the Minnesota Humane Society added \$100.

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ED SIMONINI — Many said Simonini would be too small for pro football but after his rookie season, Simonini has been a starting linebacker, for the Baltimore Colts for the past 2 seasons. Simonini, who is one of the most popular players ever to play at A&M, was an all-SWC selection four times, a rare honor. Simonini helped A&M produce one of the nation's best defenses in 1975.

FRANK MYERS, 6-4, 255, A two-time all-SWC choice at offensive tackle. Drafted by the Minnesota Vikings where he started much of the 1979 season.

MARK DENNARD, the 6-2, 245-pound center was an all-SWC selection his last season at A&M (1977) and was drafted by the Miami Dolphins where he spent most of the season last year on the disabled list. Honorable mention all-American his junior year.



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