

The

Central

Spine

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In the early part of the century a reclusive young Frenchman named Jean Giono, only 18 years old and given to long trips on foot into mountainous heights unfrequented by tourists, ventured into that ancient region where the Alps thrust down into Provence.

He found barren colorless land. Nothing grew there but wild lavender.

After three days walking through unparalleled desolation and out of water he rested near the ruin of what had once been a village. True, there was a spring there but it was dry. Another five hours of walking and he still had not found water and nothing gave him any hope of finding any.

In the distance he saw what he thought was the trunk of an old solitary tree. Instead he discovered that he was looking at a human being. It was a shepherd. Thirty sheep lay about him on the baked earth.

The shepherd shared water from his gourd and invited the traveler to stay the night.

After a simple supper of soup the shepherd brought out a small sack of acorns and poured them on the table, carefully inspecting them one by one, separating the good ones from the bad. When he had selected one hundred perfect acorns he went to bed.

The next morning he plunged his carefully counted acorns into a pail of water, picked up an iron rod about an inch in diameter and a yard and a half long, let his sheep out to pasture in the care of the dog, and silently climbed to the top of a nearby ridge. There he began thrusting his iron rod into the ground, making a hole into which he dropped an acorn. Then he refilled the hole.

For three years he had been planting trees in this manner. He had planted 100,000 acorns. Of these 20,000 had sprouted and he expected to lose half of them to rodents and the whims of Nature. There remained 10,000 oak trees to grow where nothing grew before.

It was his opinion that the reason the land was dying was for want of trees and he was doing something about it.

Then came the War of 1914 which involved young Giono for the next 5 years.

With demobilization and a small bonus in his pocket, plus a desire to breathe clean fresh air again, Giono again took to the road and returned to the shepherd in the Alps.

The oaks of 1910 were ten years old and taller than a man. By then the young forest measured eleven kilometers long and three kilometers wide. Birch trees set out five years ago were flourishing and well established. Water again flowed in brooks that had been dry since the memory of man.

This was the most impressive result of the chain reaction started by the young forest.

The wind had scattered seeds where water had reappeared and there were willows, rushes, meadows and flowers.

Hunters after boar and hares were amazed at the transformation in the hills but attributed it to a natural caprice of the earth. No one ever saw or detected the shepherd who by then was twenty to thirty kilometers away, still peacefully planting trees.

No one would have believed his perseverance or the magnificent generosity of his soul.

Fifteen years later in 1935 a government delegation came to view and marvel at this "natural forest." By then the slopes were covered with trees 25 to 30 feet high. The government put the area under its protection and "charcoal burning" which had caused the desertification of the area in the first place, depleting the original forest, was strictly forbidden.

Another decade and everything had changed. The hard dry wind that used to rage over the mountains had softened to a gentle scent laden breeze. There was water falling into a pool. Ruins had been cleared away, houses restored, young

couples had moved in, children played.

Eventually the population reached 10,000 people who unknowingly owed their happiness and comfort to one man armed with only his own physical resources and moral convictions, and magnificent dedication.

JOHN and PAT GRAHAM are attempting to do the same restoration on the desert, collecting seed and replanting land that has been scraped bare, over grazed and otherwise abused, restoring it to its normal natural vegetation.

John and Pat work from early spring to late fall, wherever seeds are ripe, through some of the hottest, most difficult weekends of the year.

Their version of the Gift of Hope follows.

Vera Gamet.

THE SEED COLLECTING YEAR by JOHN AND PAT GRAHAM

Our beautiful southwestern desert with its multitude of inhabitants, human, animal, and plants, have come under attack by one of its most plentiful inhabitant, modern man. Following is an account of an effort, no matter how effective or ineffective, by myself and my wife, to stem the somewhat predictable devastation. From a project started to simply travel, explore and make a few dollars on our trips, to supply seed of succulent plants to various profit and non-profit organizations, also to reforest selected habitats of any succulent plants either listed as endangered or not. The account encompasses time, plants, personal experiences of a seed collector's year, not necessarily a true calendar year. The account encompasses boundaries, natural and man made, into areas where few people will venture.

FIRST WEEK OF APRIL: First trip of the "seed year" to observe bud, flower and fruit development on plants of Echinomastus johnsonii var. lutescens in the Wickenburg area. This plant has been used as an indicator to determine when actual seeding trips will begin. Weather conditions can and do cause variations in seed development by as much as two weeks from one year to another.

LAST WEEK OF APRIL: Echinomastus erectocentra var. nevensis. Up at 3:00 AM. Prepare water containers, food, and various gear. Load truck with all required (spouse included) and leave by 4:00 AM. Pat records mileage and destination in her log. At this time of morning, quiet prevails over the desert with first light just showing over the eastern horizon. Our first stop is Ajo where liquids are obtained, coffee for humans, gasoline for truck. A blackbird keeps flying to one of the pumps and observing his reflection with many accompanying squawks and dancing, quite taken with himself. We leave Ajo and arrive at our destination within Organ Pipe Monument at about 8:15 AM. Climb short hill and check first grove of plants. Seed is ready but many fruits have split at base with an army of ants and stilt-legged insects covering each plant. Return to truck. Pat and I put on belts carrying canteens, weapons, camera, seed collecting tools. Then start collecting and distributing seed. Several proven techniques are employed while collecting and distributing. Where ants are not too many we gently tap shoulder of plant which disperses ants and expedites collecting fruit. For every five to ten fruits collected, seeds of one fruit are distributed under brushes, rocks, cracks, buried, etc., not very scientific but it works. This area has been one of our target areas for revegetation. When we first visited the area about 6 years ago many plants had been completely encircled with rocks highlighting their presence for visitors by some well-meaning park attendant. These plants were either dead or dying. Revisited the following year and all were dead, literally baked to death by excessive heat. We continue collecting until 1:00 PM. The temperature had risen to about 100 degrees and the canteens were low. We have covered about four miles of rough terrain, and after bending over from the waist for at least 3 hours we are tired. We returned to the truck, eat our usual lunch of tuna fish, crackers and fruit juice. Then depart. We arrive home about 6:00 PM, tired but with

the first trip of our "seed year" a success, and with the observed knowledge that in six years time the plant population had risen by at least 50%.

NEXT DAY: Echinomastus johnsonii: Up at 3:00 AM, gone again by 4:00. Drive to area southeast of Quartzsite. Road is a bear for about 13 miles. I hit one wash too hard and heard a thud. I turned to see if Pat's head had penetrated the roof of the truck. No, just 5-gallon water jar in back tipped over and water seeping out. We arrive at out collecting area about 8:45 AM. Immediately gear up and set off. We discover seeding plants distributed in groups. Success again. We are about 4 days behind the plant's schedule. Seeds are few but sufficient enough to make the trip worthwhile. Also collect seed of Echinomastus plants which have both red and white flowers, believe it or not! Return to truck about 2:00 PM, eat usual lunch and start home, arriving about 6:00 PM. A second success. Note: in two days time we have covered 800 miles, some of it hard, in our truck.

FIRST WEEK OF MAY: Echinomastus erectocentra: Up at 2:00 AM and gone by 3:30. We stop in Tucson for coffee, donuts and gas, and then on to Benson area. There are five locations spread over a 6 mile area where plants occur frequently. Despite our best efforts of seed distribution population has declined rapidly over the entire area due to gross--repeat gross--over-grazing. Matter of fact, had a run-in with one of the locals about plants on his property. (Went back on his property the next year and plan to continue efforts with or without permission,) Did not take many seeds. Distributed most on a steep (steep is to take 3 steps up and slide back 2) slope of river drainage. Left area about 11:00 AM.

SAME DAY: Echinomastus intertexta: We arrive in our seeding hills about 1:30 PM. This is one of our best success stories. Plants had declined around Sonoita area. We picked a location several miles away and started seeding several high limestone hills quite heavily. Hills are now covered with seedlings and young plants. We continue collecting until 4:30 PM when the long day finally caught up with us. We drove to Patagonia and spent the night. Our efforts for the day were briefly summed up by one of the inn keeper's comment upon registering. Quote: "My, but you certainly could use a bath!"

SECOND WEEK OF MAY: Echinocereus engelmannii, Boyce-thompsonii bonkeriae: Left at 6:30 AM. Spent day collecting Echinocereus seed from Florence Junction to the mountains above Roosevelt Dam. First encounter with "no-sees."

THIRD WEEK IN MAY: Pediocactus bradyi and P. peeblesianus var. fickeiseniae: Up at 1:30 AM and gone by 2:30. Arrive in Cameron area at 7:30 AM. Temperature in mid 50's with a strong cool wind blowing, not exactly ideal weather for our usual shorts and T-shirt attire. Seed of Peeblesianus is ready. We collected seed, sometimes on hands and knees. After this chore I take seed from previous year's trip and place in many different locations. This area is another one of our successes. The population has more than doubled in four years.

SAME DAY: Pediocactus bradyi: We arrive in Marble Canyon area at noon and start looking for plants. Bradyi has been collected by commercial nurserymen and "esteemed" botanists to the point of total extinction. One of the nurserymen was caught this year with many endangered plants and animals in their possession. (Too bad he wasn't caught digging plants of Bradyi, which he did.) Efforts are now under way by several Federal agencies to rescue and expand the remaining population. If any "esteemed botanists" happen to read this writing I have a single, simple question: "Why in hell do you have to collect two (2) shoe boxes full of Bradyi to sit on a shelf waiting to die?" We spent several hours collecting and distributing seed from previous

year's trip. The plants grow among chips of white and red quartz which reflects the sun's rays into our eyes making collecting a real headache after about two hours. We stop at 3:30 PM and head for Cliff Dweller's Lodge to enjoy a cool soft drink for Pat and a tall cold beer for myself. We are known as the "Chili people" at the Cliff Dwellers since I hold the record for the amount consumed at one sitting. The place is unique. It is the jumping off point for river rafters, casual vacationers, BLM personnel, ranchers, Navajos, Sierra Club hikers who play Grand Canyon Suite while hiking. The owners are really super nice people whose love for the isolation and beauty of this area is very pronounced.

The afore written is but a small portion of the many different plants, times, and experiences acquired in our seed collecting trips. I shall relate a few more but in order to go through a complete "seed collecting year" I would need to write a book (author I am not.) I think by this time the readers have a fair idea of the efforts put forth in order to accomplish this project.

FIRST WEEK OF JUNE: Pediocactus sileri: Up at midnight and leave at 1:30 AM. Arrive in Fredonia area at 7:30 AM. We start collecting and distributing seed. Seeds are ready but few. All Pediocactus have one problem in common: the weather. Their flowering time coincides with spring rains and cold fronts making fertilization a very chancy proposition. We are interrupted in our "seeding" by a Piute Indian police officer, Billy Bullets, who after questioning our purpose, says to be sure to inform the tribal headquarters of our activities! We already have standing permission from a tribal member. Billy walks away more or less shaking his head.

SAME DAY: Sclerocactus whipplei var. intermedius: Truly the worst possible conditions encountered of any seed collection trip. Gnats (no-sees) are the worst possible condition. They literally swarm by the thousands, biting and chewing, making sores which last for weeks, scars which last for months. After being chewed on twice a solution had to be found. Insect repellants are a feast to them. Motor oil!! Maybe!! I smeared oil all over all exposed flesh and under the tops of my wool socks. It worked! Pat thinks I am totally crazy to even to attempt under these conditions, particularly when returning to the truck I am completely covered with dead gnats and motor oil but with seed. She absolutely refuses to go with me.

THIRD WEEK OF JUNE: Opuntia erinacea var. ursina: Up at 1:30 AM and gone by 2:30. Arrive in Chloride area about 7:30 AM. Start collecting "Grizzly Bear seed". This project has a single focus: to try to obtain 1,000,000 seeds for shipment to a commercial nursery in Spain. This nursery will germinate, grow, and ship seedlings to Saudi Arabia for outdoor landscaping of the growing middle class society in that country. Interesting, exciting--yes! We are partially successful. 25 grocery bags full and 3 hours later we are totally exhausted with a 200 mile return trip still to be made. After cleaning we had 250,000 seeds, enough to fill a large grocery sack. Note: We still distributed lots of seed.

SECOND WEEK OF JULY: Coryphantha vivipara var. desertii: We are up at midnight and leave by 1:00 AM. Stop in Laughlin, Nevada, for gas for the truck. Arrive in the mountains south of Las Vegas at 8:30 AM. Gear up and start hiking up the mountain to one of our selected habitats. Seed ready and plentiful. Population has increased noticeably in several years. Caution must be exercised in collecting this fruit. We try not to break any spines. They are brittle. Use tweezers. Also checked seed maturity of Agave utahensis var. nevadensis.

LAST WEEK OF AUGUST: Agave utahensis var. eborispina: Up at 1:00 AM and gone by 2:00.

Drive to mountains northwest of Las Vegas. Road into these mountains should be traversed with 4-wheel drive vehicle only but we managed to make it in our small 2-wheel drive after much coaxing and sweating. We had looked for this Agave in the mountains south and west of Las Vegas for three years. These locations were taken from reference books and an article in the Cactus and Succulent Journal. We continued to find nevadensis not eborispina. We have hit upon exactly the right plant at the right time and location. We collected many fruits and distributed even more seeds. The true eborispina is rare even at its best locations. Seeds have been distributed to two commercial growers, botanical gardens, and private growers, which will eventually introduce this plant and make it available to everyone. I am not normally a fan of Agave since they seem to creep up and stick me when I am not looking but eborispina is the most beautiful Agave ever encountered. I highly recommend the plant to professionals as well as amaterus.

THIRD WEEK OF SEPTEMBER: Echinocactus polycephalus: Up at 2:00 AM and leave st 3:30. This trip involves another member of our family more than people, plants or time. A small totally spoiled Yorkshire terrier named "Geena." The nature of our travels usually does not allow for the presence of this family member but we had to take her along on this trip. Let your imagination loose for a while and try to picture the following scene: large man and woman dressed in boots, shorts, T-shirts carrying a small wicker basket with pillow on whose soft lining is perched a small long-haired, multi-colored dog, bright eyes flicking back and forth trying to see everything at once. All three creatures are tramping across the Mojave Desert. Hard to imagine. A large jackrabbit had the same problem: couldn't believe his eyes or his nose.

A summation is now in order to possibly explain whatever motives or logic is at the root of our efforts and travels. Our deserts were created by natural forces far beyond any power we may actually comprehend. We, as rational humans are the care-takers of that creation and must accept that responsibility. Too many times have plants, animals, birds, fish etc., been driven into extinction by careless and non-responsible actions. Federal programs come and go. Botanists come and go. Well meaning organizations come and go. That usually depends on the amount of money or fame involved. If we have but one good deed to leave behind let this be that we cared enough to preserve the creations that depend on us for their survival. Whatever contributions that Pat and I make towards this survival is gladly given, as long as we are capable of climbing the next hill we shall continue our efforts.

A special thanks to my wife, Pat. Without her love, encouragement and help none of the trips would have been possible.

John Graham.

"For a human character to reveal truly exceptional qualities, one must have the good fortune to be able to observe its performance over many years, If this performance is devoid of all egoism, if its guiding motive is unparalleled generosity, if it is absolutely certain that there is no thought of recompense and that, in addition, it has left its visible mark upon the earth, then there can be no mistake."

Jean Giono
"Orion" and "FRIENDS OF NATURE
Brooksville, Maine.

HIGHLIGHTS OF THE CACSS YEAR 1986

Treasury Report 12/31/85 CLOSING BALANCE \$373.99

January: Fred Kaspar led discussion on seed propagating. Marilyn Fitz-Randolph was appointed Librarian and Historian Dottie O'Rourke appointed Publicity Chairman

New officers:

- President Marvin Williams
Vice President Fred Kaspar
Secretary Elaine Taylor
Treasurer Skippy Burdick
Affiliate Directors: Mike Gallagher, Jackson Fitz-Randolph, Glenda Temple

February: 1986 Cactus Show. First time in a tent.

March: Plant planting party for Convention plants. Bob Moulis spoke to the club and showed his "Fantastic" slides.

April: Gary Nabhan, Asst. Director of the Desert Botanical Garden spoke on ethnic plants and showed slides. Discussion on whether or not the club should increase dues. Board to take action. Elaine Taylor and Lewis Steichman were married April 6th in San Diego.

May: Dues were raised to \$25.00 per member. Associate membership remained at \$2.50. Plans for the 1987 Convention were briefly discussed. Plan now! Ruth Greenhouse gave an excellent talk on plants of the Sonoran Desert and their uses.

June: CACSS member John Graham talked on "Seed Collecting Trips" he and Pat make into the desert collecting and distributing seeds of endangered cacti species.

July: Panel made up of Fran Tolleson, Frank Hennesey and Victor Gass discussed members of the Ice Plant Family, the Mesembryanthemum.

August: Silent auction. Lots of plants and fun and made \$473.00 for the treasury. The best ever!

September: Special Board meeting to discuss rule changes for the 1987 Cactus Show. Discussion on diseases and "creatures" that attack our plants.

October: Tour of proposed trail "Plants and People of the Sonoran Desert." Ilza Hahlo art show "Desert Moods" viewed.

cereus

November: Mark Dimmitt of Desert Sonoran Museum spoke on Hybridization of Echinococereus.

December: Annual Christmas party at home of Henry Treisler.

Treasury Report 11/23/86 CLOSING BAL: \$423.09

Elaine Steichman, Secretary.