

ONE POTATO MOREJanuary 7, 2002John D. Caldwell

Having lunch with Bob Hilton always is an adventure. For instance, there was this little moment some months ago: As I was taking a bit of a French fry, he asked, "What and when is a story?" I chewed and replied "There is a story in everything."

He responded, "Is there a story in a French fry?"

Well, now, you are about to find out about my boast. I believe there are stories to fill dozens of McDonald's paper cups.

Spanish soldiers searching for gold in South America found potatoes for the white man. A food for thousands of years in those high mountains, they were unknown in the rest of the world. Probably today's annual crop of 85 billion tons is more valuable than all of the Inca's gold. (They are 89 cents a pound at Kroger.).

First, let's pay a short tribute to other plant hunters who roamed the unknown world searching for plants that the civilized world could use for medicine, for food and for beauty. Most of their names are now lost in Latin phrases in old, hand-printed books while the number of scientific disciplines they spawned is amazing. There is much to say, too, for the homebound scientists who domesticated those wild plants, changing, perfecting, finding new ways to use them.

Edward O. Wilson, one of today's celebrated scientists, best described the challenge; "From a beetle without a name atop an orchid in a distant threatened forest may come a cure for cancer."

After reporting on just a few of these heroes, we'll get to the potato patch.

Professor Wilson, who is on the staff at Harvard and has the National Medal of Science and two Pulitzer prizes, wrote there have been thousands of discoveries and unimaginable numbers are still to come. A recent explorer in Malaysia found 750 species of trees on one 25-acre plot. There are, Wilson believes, about 3000 types of fruit growing in tropical forests, but only about a dozen are in actual commercial use. Some other experts estimate there are 100 million species in the world with only two or three percent named and classified.

You can see there are big jobs still ahead. Stories of the first heroes in the field probably are as unbelievable as what the future will bring. There are some sad and some wonderful old tales.

Those men had to develop the science as they explored. Take, for instance, four years in the life of Frank Meyer, a man the reference book says, was "fond of walking." He was a trained botanist and gardener. His trail: 1905 to 08 from the Yangtze to Manchuria, about 1800 miles. From 09 to 12 from the Caucasus through Persia to Turkestan and on to Tibet. In 1913 he started in Mongolia and walked to Kansu Province, China. That over 4500 mileage doesn't record getting to and from. Today's people have and tomorrow's will have comforts, acceptable scientific descriptions, electronics, good food, warm clothing and snug tents along with other marvels. Those men only had guts.

Take two Europeans who had been searching in Siberia for two years. They decided to climb a 14,000 foot mountain to see if there were any unusual plant specimens in that unknown area. All they found was the common dandelion.

George Rumph was an official of the Dutch East India Company who enjoyed the plants on those islands.

For seventeen years he studied and cataloged, working with the aid of his wife and daughters. Long before his work was completed, he went blind. Then an earthquake killed his wife and one daughter.

Another daughter stayed by his side and he finally completed the manuscript after 40 years labor and sent it on a ship to Holland. But a French warship attacked and his work went to the bottom of the sea. Still determined, however, he returned to his task. Then still another disaster. A fire destroyed his remaining drawings.

In 1690 he finally completed three volumes, but various questions held up publications until 1741, years after his death. The end of this sad story is that meanwhile other botanists had received credit that should be due him.

And you sometimes think you have a bad time at work.

There are many success stories, too. These men changed the world.

Two British had completed what they thought was their long assignment in Asia and prepared to go home when one was stricken with flu. That delayed them for a week. And that gave an unknown plant time to burst into full blossom. That incident was, they said, worth the whole trip.

In 1911 Frank Kingdon-Ward, the son of a famed professor of botany, was offered a chance to explore in Yunan. His career lasted 47 years and he is credited with 23,000 collections of seeds, publishing 137 papers and 23 books.

One of the happy stories relates a scientist who found an unknown peony at a remote monastery in Tibet and sent seeds to various locations around the world. Years later he learned the monastery had been destroyed

and monks, attempting to rebuild, could not find that peony. He provided the seeds.

A stout, strong man carried a type of cedar tree across a wide Chinese desert splitting his rationed one-half pint of water a day with the plant.

There are thousands of such stories worth reporting. Take the father-son team of Bartram. They found an unknown small, flowering tree in the Appalachian mountains and named it for their friend Benjamin Franklin. For an unknown reason the *Franklinia* died out in the wild but is preserved today from their seeds in Eastern parks and estates.

One of the truly remarkable men was Reginald Farrer, a native of Yorkshire who opened his distinguished career by publishing his first botanical work when he was only 14. Years later, after he had been two years in the area where later they built the Burma Road, he was having a terrible time. He had only a leaky hut for living quarters in the lowlands and was even more uncomfortable in the heights. During his rainy season he could see only a few yards.

He became ill and sent a trusted native helper on the four-day trip to the nearest military post for medical aid. But it was too late. He died. The native helpers were very sympathetic and gathered his "valuable" possessions to take to the post - his clothing, stores and other equipment. They saw no value in his many papers and destroyed them. We'll never know what was lost.

There still are many mysteries despite the years of study and achievement. Identical species of a rhododendron have been identified as growing in both Tibet and China. The seeds from Tibet grow easily in other parts of the world, but the Chinese seeds will not germinate in any other location.

One group of scientists crossed Tibet when the weather was 40 degrees at the highest and then India when 90s were the lowest. The seeds were divided and shipped to England, the United States, South America, New Zealand and South Africa for testing and study. Only 25 of the 250 species failed.

They've found some very odd plants - ones that survive because they do not follow normal rules. For instance, there is a rare tree-climbing vine in tropical forests that grows toward a dark spot at the base of a tree, where because of the thick growth the sun never shines. Once firmly attached, it shoots up toward the light.

Now on to the potato, a wonder of its own.

Cool weather is vital, the reason, no doubt, the Incas grew them so well in the mountains. But Incas wouldn't recognize today's crop. Then about the size of unshelled peanuts, they were dark and hard as rocks. Natives dug them and spread them on straw to dry out any moisture. Then they spread more straw and stomped, leaving them out to freeze - making, I suppose, the first freeze dried mashed potatoes. Thus prepared, the potatoes preserved well over the winter months.

One European described his first taste as "about the same flavor as an old cork - a horrible article of diet." The Incas had may varieties while there are about 300 today in many sizes and shapes - even colors. One of the potato mysteries is how they spread. At first they could be found only in a 400-mile strip of land on the Pacific side of South America, including on a few isolated islands. Unlike dandelion seeds which blow across the landscape, fruit seeds which are "passed" along by birds that have eaten the fruit, or coconuts which drop in the sea and float thousands of miles, potatoes had no way to travel except by vegetative propagation until the soldiers came. Creeping roots leave new potatoes.

To compare early preparation methods with the Incas', an early French cookbook said the potatoes should be cut in quarters or sixths "The pieces should be large enough to provide 2 forkfuls for well-bred eaters." And there is a restaurant in California now which has an elegant dish on the menu - twelve French fries, a finger-sized baked and a tricolored potato puree. \$40. A mashed potato machine has been patented. About the size of a Waring blender, it cooks potatoes and mashes them in about 20 minutes. You have to add your own gravy, however.

Spanish sailors took potatoes to Europe, but it wasn't until years later after Sir Francis Drake brought some to his friend, the horticulturist John Gerard, in 1597 that they began to attract wide attention. They had been fed to livestock and prisoners.

There is a monument with the inscription "To God and Francis Drake who brought to Europe for the everlasting benefit of the poor - the potato."

It was a lumpy introduction. Possibly a German king helped by threatening to cut the nose off of anyone who didn't plant and eat potatoes.

In 1576, it is said, Sir Walter Raleigh had grown potatoes he had brought from Virginia and gave plants to Queen Elizabeth's cook. That was a real disaster. The Queen was served the greens; the tubers were thrown away. The Queen rejected the food as disgusting.

The Scots refused the plants because they are not mentioned in the Bible. They might even cause leprosy, some thought.

Unable to import food from the continent during the Napoleonic Wars, England found potatoes could feed five times as many people from the same acreage as wheat and were a healthy, filling food. And the Irish, suffering from a never ending food shortage, gradually

took to potatoes, causing one Englishman to say potatoes were a food for "Irishmen and clowns."

The plants grew wonderfully in that cool climate and probably, because the people were fed better than they ever had been, aided in a huge population explosion. By 1780, about a century after being introduced, a traveler noted consumption averaged an astounding eight pounds of potatoes a day for adults. The population had zoomed from three million in the 1500's to eight million, making suggestions that potatoes were an aphrodisiac.

Then one of the world's most infamous natural disasters. Entire fields were wiped out almost overnight. What had been big healthy green plants developed black spots that spread quickly. One person wrote his garden was free on Saturday, but "quite offensive from decay on Monday."

Crops throughout the world were devastated over three different years. (At the same time cholera and typhus were epidemic.) The fungus was the wrath of God, many claimed; others blamed it on electricity and others said it was the railroads which were "taking people around the land at speeds never intended by the Almighty." The Massachusetts legislature offered the then amazing reward of \$10,000 for a cure. About one-fifth of the Irish population probably was lost.

An accident found a way to control the plague. Small boys had been stealing grapes in a French vineyard so the owner sprayed the grapes with a bright bluish-white chemical. When searching for a cure for a mildew which was damaging nearby grapes, an alert plant pathologist noted the sprayed plants were healthy. That mixture of copper sulfate and lime is still in use today on potato plants around the world. There are, of course, many reasons why the killer is mostly controlled today. But there was an outbreak in Montana only five years ago.

Plant scientists never stop attempting to unravel nature's mysteries. A purple colored potato now being grown in Hungary reportedly shows total resistance to the potato blight, but just think of eating purple potatoes. A huge American company is developing a genetically engineered species that contains an insecticide which kills the Colorado potato beetle, another major problem. If, and when, perfected this technique would save growers great fortunes in work and expense. A writer followed up on this news item and found the plants themselves are registered as a pesticide by a government agency, not a food. He grew a few of the plants and found them to be big and apparently very healthy, but he couldn't force himself to eat the potatoes.

There are about 50 million acres of genetically engineered plants in the country now. They include such interesting ideas as a grass that doesn't grow tall enough to mow, tomatoes that withstand frost and cotton that grows in many different colors.

Reading the news today must cause many of the same nightmares people of old suffered. Horror after horror is recounted in the Old Testament - pestilence after pestilence of old; then yellow fever, malaria, flu, polio within the last hundred years. Will we make it through today's threats - AIDS, anthrax, germ warfare, mad cow disease, ebolla, the rebirth of smallpox and tuberculosis, and no telling what fright we'll read about tomorrow? Last September murderers found a method that rivals nature's terrors - making airplanes into bombs. TB, by the way, has taken more lives than any other infection in history. We are lucky to be alive.

My own very limited survey reports people today are blaming God's temper less and less for today's terrors while asking science to find cures faster.

Oh yes. French fries. A French fry historian has a tough life.

If you think the rest of the world is in turmoil you should study the fry on your plate. Authorities can't agree on the history, the spelling or the best cooking method. Some capitalize French to note the country where they may have originated. After all, an old menu at the White House states President Jefferson served "potatoes cooked in the French manner."

But you'll get shouted at quickly. Other equally good cooks lowercase the word French, believing it denotes the style of preparation - cut in long, narrow slices. French cookbooks make no claim, just "fried potatoes." One authoritative history caps French in the index, but lower cases the description, "in all likelihood the dish originally was termed 'frenched fries.'"

Several food histories recount the style was brought to this country by soldiers returning from Belgium after World War I and even given the name of the "inventor." "Belgian potatoes" are described as baked, not fried, while deep fried are very popular there.

Cookbooks argue, too. Some suggest aging the new harvest at least three weeks while some natural chemical process changes the tubers, also soaking the cut potatoes in water before cooking, or partially cooking then freezing. Some want them sprinkled with flour or paprika. Several varieties of cooking oils or combinations are recommended. Each is claimed to be superior to the others.

Today's uniformly sized French fries use only the core of the potato. Much of the remainder is sold as slop for animals - the same use as over 500 years ago.

And that's all about the potato your going to hear from this commentator.

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