

THE  
GARDEN



CUCURBITA PEPO  
var. Portugese Pumpkin

DOCTOR

DECEMBER 1988

# · PREFACE ·



Imagine, for a moment, going back in time and ACTUALLY SEEING the magnificent creatures pictured above. Hiding safely behind a prehistoric magnolia tree, you'd hear their huge feet crashing through the vegetation, their reptilian screams; see now their big wet eyes glinting. Dinosaurs REALLY DID walk the ground where many of us now live, but sadly have been extinct for 65 million years, never to be seen again unless some very ambitious experiments using their frozen eggs succeed. Our grandparents (but not us) shared this planet with the quagga, a large African mammal that resembled both zebra and giraffe. But it now too is extinct, gone forever, killed off by white hunters.

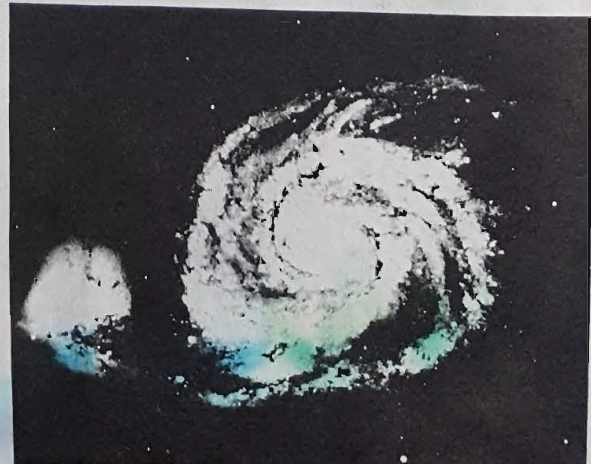
We too, can join the dinosaur and the quagga. And humans are no less wonderful a life form despite our global sins as a species, for we too are each a specific site where the universe LITERALLY becomes aware of itself... by degrees. Look at the galaxy below. We call it M-51, and it is so distant that, despite light's speed of over 186,000 miles per SECOND, the image we see of M-51 took millions of years to get here... to look at that huge spiral galaxy is to look back in time. That thought, if held for a moment, can bring us a sublime, wordless joy. So can waking up at sunrise and seeing the first autumn frost shimmering dry garden stalks. Or noting your reflection in a shop window and LIKING it. Or tasting the nectar in the rosy florets of clover, as many of us haven't since we were children.

Dinosaurs were once THE most common land vertebrate on Planet Earth, as we are now. Something cataclysmic destroyed them... evidence indicates it was a huge meteorite impacting the earth and subsequently shrouding it with dust, smoke and water vapor, cutting off sunlight and chilling the atmosphere, thus killing much of the vegetation that formed the basis of the food chain topped by the dinosaurs. Well, many days in August and September of 1988 the skies here in Colorado were darkened ominously by smoke from the faraway forest fires in Wyoming's Yellowstone Park. The noonday sun cast an oddly dim yellow light that barely warmed Denver. I only hope that some of the militarist conservatives who scoff at "nuclear winter" were here to experience directly a fraction of what would occur if the world's cities and forests were ignited by thousands of nuclear detonations.

Each moment of our lives IS a miracle, and for all of the sadness, frustration and pain that accompanies consciousness, there can be a far greater array of positive, expansive feelings IF we are fully aware at times, fully thoughtful of possibility and choice in seeking the third alternatives that I think humans alone can create and discover. All that is left of the dinosaurs are footprints, fossilized bones and a few precious frozen eggs. Maybe M-51 is gone now, its demise unseen from earth's perspective for millions of years hence. But WE ARE HERE NOW, at the top of a new food chain and thus we are the new stewards of the earth, responsible for and guilty of rendering several species of animals and plants extinct EVERY DAY! Someday very soon children may gaze wistfully at pictures of elephants, imagining their huge feet crashing through vegetation, their big wet eyes glinting.

Imagine that for a moment.

*John Starnes*





# Good News

Since 1984, Wisconsin farmers who use erosion controlling techniques such as the planting of cover crops or low-tillage receive state tax breaks.

Japanese school children are taught classes on reducing waste and increasing the reliance on recycling.

U.S. farmers are now employing 230 beneficial insect species in their fields to control crop pests, saving them \$100,000,000 annually and thus sparing the environment from many tons of pesticides.

Maine has banned the sale of irradiated food.

Jerusalem artichokes (Sunchokes) contain only 22 calories per POUND!

Beginning in 1981 Nicaragua banned the import of the highly toxic and environmentally-persistent insecticides Leptophos, DDT, Endrin, Lindane and Dieldrin, all of which the U.S. exports.

Of the 800,000 known insect species, only 1% can be regarded as enemies of the human species.

Brazil plans to produce 11 million gallons of ethanol (fuel alcohol) annually for its cars from the orange peel it once discarded! Although burning alcohol DOES release carbon dioxide that contributes to the Greenhouse Effect, it is carbon dioxide that the fruit trees extracted from our modern atmosphere, whereas burning gasoline releases prehistoric carbon trapped in underground deposits of oil... THAT huge tonnage of carbon once created a monstrous Greenhouse Effect, making the ENTIRE primitive earth either tropical swamp or scorching desert.

Steven Pavich's organic farm in Arizona grows 2,000 TONS of poison-free grapes each year, not to mention melons, tomatillas and several other crops... organic farming IS economically sound.

Commercial farmers using compost instead of chemical fertilizers experience crop yield increases up to 300% !

Weevils are now being used experimentally to control thistles instead of herbicides. The weevil larvae eat the thistle's seeds, thus preventing the noxious weed's recurrence.

Norman Freestone, a plum grower (no kidding) has switched successfully to using predatory insects to control crop pests after experiencing severe health problems induced by the pesticides he once used. And by using mulches and cover crops he has reduced his orchard's water consumption by a seasonal 30-50%!

There are an estimated 1 BILLION organic gardeners in the world.

The North American alligator, once on the endangered species list, has responded so well to U.S. conservation efforts that a limited hunting season has been re-instated.

The University of Southern California School of Medicine reports that the children of organic gardeners are  $6\frac{1}{2}$  times LESS likely to develop leukemia than the children of chemical-using gardeners.

Freedom is nothing but a chance to be better. Albert Camus

Trees

Trees are the best,  
they hardly even rest.

Without them we wouldn't  
be alive.

And I wouldn't know how to dive.

They grow so tall and high.  
And go up to the sky

They give us shade.

So we can play.  
In the meadow far away.

Trees are my favorite.

by Elizabeth Shelburne, age 7½

Lesson

Wait for summer.

Find a lake deep in the Rockies and  
walk across the water.

Use each footprint as lense  
to view fish and stones beneath you,  
deep in the clear cool.

Close your eyes,  
breathe deep and  
become the sky.

John Starnes


TELL ME

Tell me the open highway is black bread,  
is nothing, the air you breathe.  
Tell me a lonely man is like a secret,  
the moonlight softer than  
the snow, the darkest rain.  
Tell me you love the rain  
that falls forever in the darkest fields.  
Tell me more.

Tell me the sorcery of the wind  
is real, is the breath of stones  
in the white valley that loves nothing.  
Then to come upon it once  
like unexpected rain, like sudden blood,  
to feel it rising through your hands  
and to let yourself go, the loneliest  
bird, the secret darker than  
this road. Listen.

Silvia Curbelo

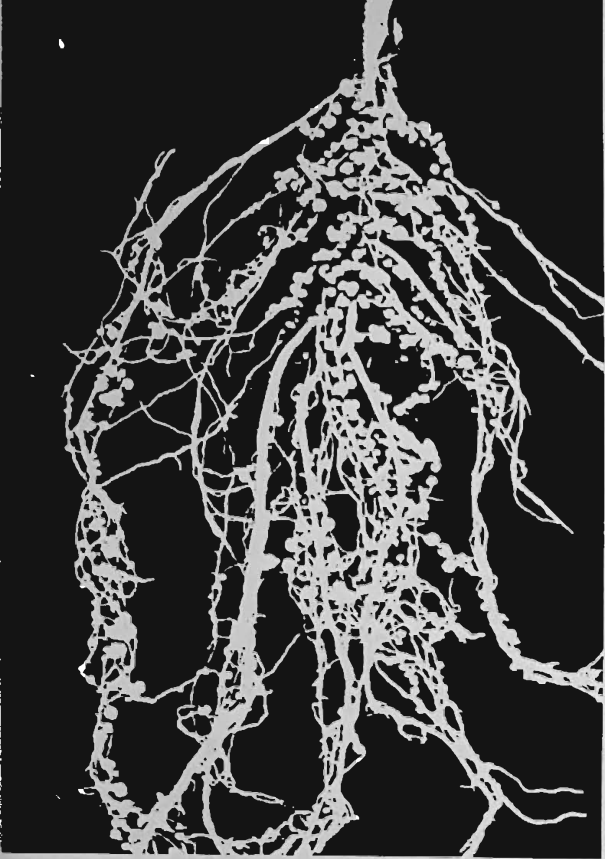
# SHARING SECRETS



Organic gardening allows each of us many painless opportunities to reverse REAL WORLD PROBLEMS by a number of means, often because our way of gardening uses "waste materials". We conserve water by applying thick layers of plant-derived mulches, which then also decay and feed our soil while controlling erosion. Those leaves and grass clippings we heal our soil with are otherwise destined to generate the Greenhouse gas methane in a landfill somewhere near someone else's water table. Luckily, healthy garden soil teems with a bacteria that ABSORBS methane, converting it into a natural nitrate ferti-

lizer! Organic gardening especially contributes to planetary healing by NOT introducing toxic artificial chemical pesticides into the biosphere. Our gardens become host to a myriad of living things caught in a hostile city environment. Think globally; act locally. Healthy "political" activism is often simply living effectively, using our daily lives to "vote" for positive change. Organic gardening reveals the wisdom and ease of keeping our eyes peeled for Third Alternatives. Below are a few tools.

1. Buzz non-salty food scraps, including spoiled pet food in a blender with water and slosh this all over your lawn and gardens each day. Those starches, sugars and proteins feed beneficial bacteria, fungi, actinomycetes and earthworms who in turn create healthy soil.
2. Dried corn cobs and husks make excellent tinder and when burned instead of starter fluids derived from fossil fuels release only carbon dioxide of modern, not prehistoric origin, slowing by a bit our industrially-induced recreation of primitive Earth's carbon-rich and thus HOT atmosphere.
3. Boycotting MacDonalds and Burger King is an easy way to be an active world citizen on a number of fronts WITHOUT MARTYRDOM. Their greasy burgers are usually composed of cow meat from herds grazed primarily on what was once rain forests in Third World countries. The burgers are then usually sold in plastic boxes puffed up with CFC's, the gases currently destroying the Earth's ozone layer. So by not eating at these establishments you can accomplish the following powerful acts:
  - a. You will discourage rainforest destruction.
  - b. You will reduce damage to the ozone layer critical to the biosphere.
  - c. You will reduce the methane problem from tropical cattle farming.
  - d. You will decrease animal suffering.
  - e. You will discourage Third World governments selling cow meat as cash-crop while their people starve for grain.
  - f. You will be opposing the burning of fossil-carbon fuels used to ship cattle, feed and meat.
  - g. You will help prevent extinctions caused by rainforest destruction.
  - h. You will help protect global rain cycles governed by rainforests.
  - i. You will not be diverting grain from people's mouths to livestock.



Various species of Rhizobia bacteria can live symbiotically in the roots of legumes like peas, soybeans and clover, resulting in the nodules seen above. Rhizobia extract nitrogen from the air and deposit it in the soil as a natural nitrogen fertilizer. You can buy Rhizobia inoculant at nurseries and feedstores. The use of artificial fungicides will kill Rhizobia in your soil.



Dragonflies are predatory insects, favoring mosquitoes and flies caught in mid air. You can use a seive to capture their large, slow-moving larvae in quiet streams to introduce them to your fishpond.



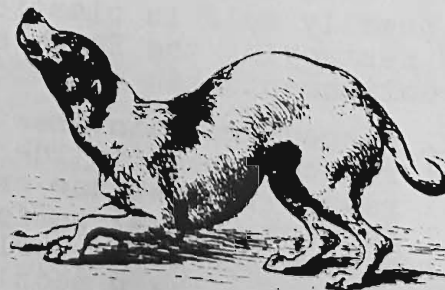
Just as a well-established, well-tended organic garden will not be bug-ravaged, worms cannot thrive in a clean, healthy, well-nourished pet. Likewise, using one-shot chemical wormers is analogous to attacking the cabbage worms with malathion. Even a less toxic mechanical wormer such as diatomaceous earth is like hand-picking slugs. In either case, what's being done to improve the vitality and resistance of the host and prevent future recurrence? And just as it takes time to build the vitality of soil, building the vitality of your pet to the point where it does not invite or support parasitic infestation is a process involving various elements over time.

Dogs are scavengers and therefore omnivorous. Cats are more like true carnivores. Fresh raw vegetable matter, especially greens, are a natural and necessary part of even a wild carnivore's diet however. If your pet does not get these foods daily, he will always be deficient. Among other things, this regular dose of cellulose fiber does a mechanical job of sweeping out the gut, making it more difficult for pest colonies to form. Alfalfa sprouts, carrots, romaine and squash are well-accepted and others can be given later. They can be ground in a food processor or grated finely and added in small amounts at first. Young cats and dogs take easily to these foods. Just be persistent with older ones. Soaking things down with meat or fish broth can induce many pets to eat anything.

Feeding a bit of crushed garlic twice a week provides a non-toxic gentle vermifuge (worm-repellent) as well as a systemic tonic which any wormy animal is in need of. Fasting on liquids at least one day a week is the most beneficial practice you could incorporate for your pet. It is totally natural to animals in the wild, allowing the gut to clear, rest and de-toxify. Again, offering broths or thin soup can help all of you get through the fasting day.

Once these sorts of practices become normal routine, an herbal worming can be attempted. This basically involves administering vermifuge and laxative herbs teas to a fasting animal. Herbs I've used successfully for worms include thyme, vervain, wormwood or chamomile with senna leaf and ginger as laxative. At first you might need to do this for two days, easing back to regular (improved) diet. You might need to repeat this every month to 6 weeks. You can also add one of the vermifuge herbs mentioned above to food for 4 days in a row every month.

As health of the pet improves, worms desert the environment. They need a weak and toxic host. My dog has not been wormed in years and I can't imagine having to do so. For more information on these theories and practices and for dosage information I refer you to the following books: *Natural Health for Dogs and Cats* by Richard H. Pitcairn, D.V.M., Rodale Press and *The Complete Herbal Book for the Dog and Cat* by Juliette de Baircliff-Levy, Arco Publishing.



Ellen Smith, Master Herbologist, writes, teaches and consults on all aspects of herbalism and natural healing. Send SASE to PO Box 9038, Denver, CO 80209 for a free copy of Smith's Natural News.





before

# HEAD

# REST

after



The mind of a child is often iridescent, finding and creating wonder by entering fully in the moment. As functional, efficacious adults with goals and responsibilities, we do well to occasionally lose ourselves in joyous simplicity. For 2 quarters we can buy ourselves a gift we loved as kids... a bubble-blower. Keep the lightweight bottle of liquid soap in your purse or glove compartment or on your back porch or balcony... few spontaneous activities are purer and simpler than just blowing bubbles. Watch the amazing spheres of iridescence float away and pop. Worry about nothing. Repeat as needed.

Angry? Too busy and still can't get caught up? Hate your job but feel you can't quit? Paul Harshman, co-organizer of the First Annual EcoFair shares this free and easy de-stressing technique. Next time you're driving on the interstate or open highway, SCREAM! Keeping your eyes on the road, scream as loud as you can. After 2 or 3 screams your tension may begin escaping on its own in a series of increasingly gratifying screams. No one will hear you, so SCREAM until you feel good inside your skin again.


Make a list, ON PAPER, of everything you can do well, everything you like about yourself, physically, emotionally, or intellectually. Give yourself permission to enjoy reviewing and adding to this list of reasons for liking yourself.... you can list your faults later, if you wish, but for now consider carefully the harvest of skills and character resources your seasons as a sentient being have brought forth.

If you've been feeling tense for days or weeks or months because of obligations, fears, commitments or just plain overwork, take a few hours off one day even though you "shouldn't" because "there's too much to do".... stroll through the city zoo, eat something decadent while sitting in the shade of a tree. Lie on the beach a few hours. Read a book in the park. Take a swim in a community pool. Meditate. Watch Road Runner cartoons. Do what you want. Not only will you return to your busy life refreshed and rewarded (which is the whole idea) you will discover that your "world" did not collapse in your "absence".

Reach up and pluck a leaf or needle whenever you walk beneath a tree. Tear it up with your fingers, close your eyes for a second and sniff the nice, chlorophyll scent. With time you'll note that each species has its own fragrance. My favorites include Brazilian Pepper Tree and Malaleuca (Punk Tree) in Florida, and spruce here in Colorado.

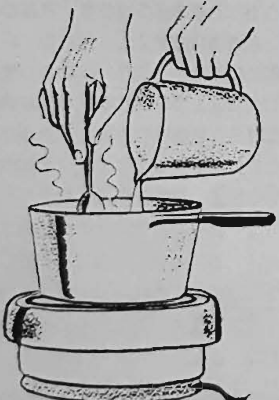
"Talking on water wasn't built in a day." Jack Kerouac

# weird food

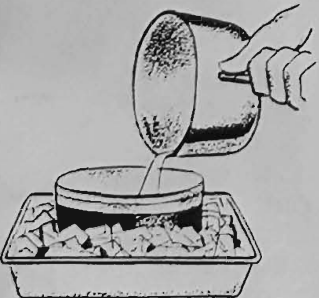


August 10, 1988 presented me with a cool but sunny Colorado morning. As usual, I had gotten up just after sunrise and began coloring fresh black and white prints of the September issue of "The Garden Doctor". Later, I photographed my various gardens, boiled some cucusa slices and laid them on screens to dry for use in winter soups, drugged myself with a few cups of black coffee and by 9 a.m. was starving. So I stopped working and selected a gauche tourist plate from New Mexico and began to arrange a breakfast meal the way I arrange the paste-ups for "The Garden Doctor"...pleasing myself with layers of color, form and function. So on the plate went a handful of raw pole beans (Kentucky Wonder, Case Knife, Blue Lake and Scarlet Runner), several sun-warmed cherry tomatoes (Sweet 100), a sliced raw turnip (Purple Top Globe), a sliced raw beet (Detroit Dark Red), a raw ear of hybrid sweet corn (Burgundy Delight), two raw carrots (Danver's Half Long), a huge chunk of home-made bread, and two sweet-tart crabapples for dessert. My wonderful dog Sergeant and I then sat in the front lawn, surrounded by arching flower beds and shared that wonderful breakfast...Sergeant loves raw root crops and my bread. Nothing was weird about our meal except



that most of it was raw. It was a contemplative mid-morning pause in a very busy life schedule. I got a good laugh as Sergeant, busily gnawing on my corn cob, got pounced on by my cat Lovely to trigger their daily ritual of wrestling and playing tag. They really like each other.



Starting my days like this, consuming raw food in peace and quiet, allows me to feel healthy, at times loving me and the bit of planet I move about on. As a result, I get one hell of a lot done each day, and eating like that allows me 2 or 3 GBM's (Glorious Bowel Movements) each day. No Metamucil for this kid!



I share this fairly typical summer morning of mine to:

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- A. Encourage you to try more and more different vegetable foods raw, as they are far richer in enzymes and vitamins and flavor, and...
  - B. to emphasize that eating need not be like filling up on unleaded, a habitual eating from boxes and cans. A well-mulched organic garden can provide a LOT of fresh food with LITTLE work..eating it raw saves both cooking and cleaning time. Like me, many of you lead VERY busy lives...why not see eating as a nurturing of the body and mind, a confirmation of those quietest but best reasons for staying alive?
- 

"Green Acres is the place to be, farm livin' is the life for me; land spreadin' out so far and wide...." Oliver Wendell Douglas 1967



**F**



ew acquisitions of data have affected me more than that I gained from the Vegetarian Society of Colorado while we and others participated in the 3 day First Annual EcoFair here in Denver. I had been an omnivore since the mid 70's after a two year experiment with absolute ethical veganism which, near the end, left me nearly immobile in this complex, interrelated world. But the folks at the booth staffed by the Vegetarian Society of Colorado distributed to me and many others pamphlets concisely demonstrating the need FOR and the ease OF a pragmatic vegetarian lifestyle, one based on an activist stance (not martyrdom) as a WORLD citizen. Since I now see vegetarianism as a spectrum beginning at semi-vegetarian and progressing towards first ovo-lacto (eggs and milk) then vegan (total vegetarian) and lastly fruitarian, I feel free to operate within that spectrum as both my intellectual and emotional needs dictate. Thus a joyous, not self-denying approach to creating positive change can be adopted, one free of the need for absolutes in a world rarely capable of providing them. But since a rare steak can taste so good and your income can now afford meat, why be vegetarian? There are a few reasons to consider.



The first is good health. Think about it...when's the last time you met an obese vegetarian, their body quivering with white, pasty cellulite? Probably never, because plants provide more essential nutrients per calorie than animals, so you can PIG OUT but not get fat. Green leafy veggies, for example, calorie for calorie, provide more iron than beef, more calcium than milk and equal carrots and citrus in their units of Vitamins A and C respectively. Whereas animal foods lack fiber while containing saturated fat, plant foods supply a full range of nutrients AND fiber, with little fat, usually unsaturated. As a result, vegetarians are rarely constipated, are 'slimmer, have lower cholesterol levels, and a decreased likelihood of degenerative diseases like hemorrhoids, appendicitis, diverticulosis, heart attack, colon cancer, and diabetes. Osteoporosis, a weakening of the bones due to calcium loss, is regarded by many as a consequence of growing old. But research has now demonstrated this condition to have a causal relationship with the over-consumption of protein so common in meat-based diets.

Healing a damaged world ecology is, for me, the most powerful reason for considering taking a place within the vegetarian spectrum. Tens of millions of acres of temperate and tropical forest are cut down and burned ANNUALLY to create grazing lands whose fertility is short-lived. Such land, robbed of ground cover, first succumbs to severe erosion then desertification. The rampant growth of the Sahara desert during this century is a case in point. In 1930, a full 40% of Ethiopia was forestland; today only 3% is tree-covered. Since large forests contribute greatly to rainfall by transpiring moisture and cooling air masses, today's African famines can be traced to the deforestation induced by livestock production. It takes 4,000 gallons of water to produce 1 day's food for a meat-eating person, 1,200 gallons for an ovo-lacto vegetarian, but only 300 gallons for a total vegetarian.

(continued...)



"Eat nothing with a face." Donna Church (Radha)



continued...

Every day, animals raised in the U.S. to be eaten produce 20 BILLION pounds of poop. And since "modern" chemical-based agriculture doesn't use manure to heal the soil with nutrients, micro-organisms and organic matter, most of it ends up in streams and rivers nature never meant to handle such tonnages of nutrients. The result is eutrophication (population booms of algae that then die and decay, thus robbing the water of oxygen while saturating it with methane and ammonia). The Greenhouse Effect now raising global temperatures, is caused primarily by two gases, carbon dioxide and methane. Fossil fuels release carbon dioxide when burned, and are burned in great quantities to heat animal pens, to transport livestock and their flesh and to raise the grain fed to livestock. Thus cow meat requires 40 times more energy input per pound than soybeans. Ceasing production of animal foods in the U.S. would so drastically reduce energy needs that not only would the construction of nuclear power plants become totally unneeded, but there would be far less pressure to intervene in the Middle East to secure oil supplies to insure "national security". And pesticides applied directly to livestock animals to control parasites leach off their hides (into their meat?) and then enter the already badly poisoned environment, including the water table. Human starvation could largely be ended if the grain currently being fed to livestock readily supports forests, orchards and annual food crops. The last two points could do more to address the political and social instability suffered by peoples fighting over land usage and reform than the expensive and ineffective military theatrics in vogue with the super-powers.

And what of animal suffering. Pet owners will attest that birds and mammals clearly experience a wide range of feelings familiar to each of us. Captain was a wonderful dog in my life for 15 years, and living with him all those years and witnessing his tragically-rendered euthanasia convinced me completely that love, fear, joy and terror are NOT unique to humans. My friend Steve Hodge has expressed a growing interest in removing mammals from his diet out of concern for their subjective experiences as sentient beings. For many others, sensitivity to animal suffering is enhanced by learning of the atrocities of modern livestock farming. While gathering chicken poop at huge egg farms I've seen the tiny cramped cages often containing 3 chickens in ONE CUBIC FOOT! Two of the three birds are sometimes reduced to sitting atop the dead body of their prisonmate. Debeaked with electrically-heated pliers to reduce the pecking and cannibalism caused by such severe overcrowding, both chickens and roosters are subjected to brutal methods of sex determination using metal instruments. Roosters are made into "capons" by surgically removing their gonads WITHOUT ANESTHESIA. Birds used first for egg-laying then meat can move so little in their tiny cages that the flesh on their feet and their claws often grow around the wire mesh floors. Cows and pigs, usually stunned before having their throats slit and bowels removed while hanging from their hind feet, are often NOT stunned, and thus experience this fully conscious. Calves destined to become "veal" are subjected to horrifying conditions; they spend their brief lives (after being separated from their mothers shortly after birth) chained inside a wooden crate to restrict movement to keep their muscles weak and tender; they are forced to remain in this prone position and drink a liquid completely lacking iron to induce the severe anemia responsible for veal's pale color. Even milk cows and layers raised for egg production are killed when their output falls below "acceptable" levels. In short, livestock animals in the West today never know the idyllic "life on the farm" of their counterparts in our grandparents' day. Theirs are short, over-crowded, stress-filled lives during which they likely will never get to stretch their wings or legs, never run with abandon beneath a real sky. Sustained

"Ruth is stranger than friction" Lisa Douglas

(continued a few pages hence)



inter occurs when either hemisphere of the earth is tilted AWAY from the sun in the daytime; this happens annually during the earth's orbit of the closest star. When it is winter in our northern hemisphere, it is summer in the southern hemisphere. That is why amaryllis and other plants from below the equator bloom in our homes and greenhouses during our winter...the plants somehow "know" that it is summer back home. Thus, winter is not a "time" but a planetary climatic event that traverses from one hemisphere to the other as our and other planets orbit the sun. Neat, huh?

For snowy climate gardeners like the Woodworths in New Jersey, Louise Crane in Massachusetts, or the Wynkoops in Colorado, the darker, shorter, colder days limit plant culture to indoors and heated greenhouses. But if root crop beds are mulched with about 2 feet of leaves after the first hard freeze the soil will remain soft, allowing January harvests of turnips, sunchokes, carrots and other root crops...just push away the snow and leaves, then replace the leaves after harvest. Use the roots and dried and frozen vegetables from summer to make a cauldron of hot soup, and sit curled up in a chair and sketch the spring garden.

For mild-area gardeners like Janet Galipo in Miami, Jorli McLain in California, and Lyn and Ulla in the Virgin Islands, the months of November, December, January and February are the best months to grow the hardy (cool-weather) vegetables and flowers...the planting chart on the next two pages is for you folks gardening where frost is uncommon.

In mild winter areas neither the soil or the plants get to rest, so you balmy, palmy gardeners do very well to feed the soil in December or January. Fresh green grass clippings as a 4" thick mulch between the plants, or  $\frac{1}{2}$ " of chicken poop evenly broadcast over the gardens and lawn are my favorites. Or try 3 tablespoons of Atlas or Alaska brands fish emulsion to each gallon of water splashed liberally over your growing areas. Or broadcast soybean meal, alfalfa meal, fish meal, meat-and-bone meal, or organically-grown cottonseed meal as heavily on the garden and lawn as you would parmesan cheese on spaghetti. (Thanks to Michael at Rapids Feed and Supply Company, in Wisconsin for writing to point out that U.S. grown cotton is doused in hideous pesticides banned for use in food crops; traces may appear in the seed meal). Drastically cut back then divide and replant cannas, bananas, ginger and sugar cane; start papaya seeds indoors in a sunny window in February. Water your orchids a bit less to let them rest.

All of us should be on guard for low-level depression caused by the shortened daylength's effect on the pineal gland...exercise vigorously DAILY to keep blood levels of endorphins up. Read by a bright light. Winter offers us modern folk a chance to see the long shadows from a sun low in the south sky as reminders that we are embraced by rhythms far bigger and older than we can imagine...awareness and learning are enhanced by the humility granted by recognizing that we are each unique but tiny.



The crops below may be planted through late winter in snow-free, mild areas just as frost danger passes; that way full growth can be achieved before the heat of summer. Peas, however, and tolerate light frost but dislike summer heat. Hence they are called "Hardy"...



...and so for those reasons the crops below are best planted in spring in snowy areas just as frost danger passes; that way full growth can be achieved before the heat of summer. Peas, however, LOVE cool weather and can tolerate snow, so plant them EARLY!



VARIETY

EASY FROM SEED?

SEED DEPTH

EDIBLE PORTIONS

<u>VARIETY</u>	<u>WHEN</u>	<u>EASY FROM SEED?</u>	<u>SEED DEPTH</u>	<u>EDIBLE PORTIONS</u>
Brussels Sprouts	October-January	YES!	1"	entire plant
Broccoli				
Cabbage				
Collards				
Kohlrabi				
Kale				
Bok Choy				
Mustard				
Kai Choy				
Wong Bok				
Cauliflower				
Radishes				
Daiikon				
Turnips				
Rutabagas				
Onion sets	October-January		3"	leaves, bulb
Peas	"	YES!	1"	entire plant
Corn Salad (Feticus)	"	YES!	1"	leaves
Swiss Chard, Beets	"	YES!	1"	entire plant
Carrots	"	YES!	1"	entire plant
Lettuce	"	YES!	1"	leaves
Parsnips	"	uneven germination	1"	root

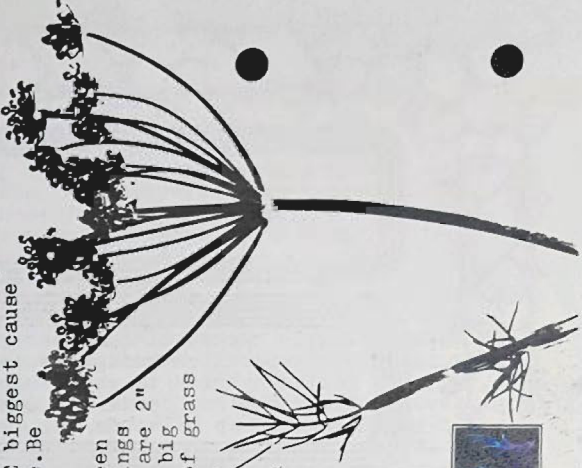
HARDY ANNUAL FLOWERS

Annual phlox

- Sweet Peas
- California Poppies
- Petunias
- Snapdragons-buy 6 packs
- Fansies-buy 6 packs
- Stocks
- Sweet Alyssum
- Calendulas
- Lobelia
- Larkspur
- Dianthus
- Blue Salvia (Victoria or Blue Bedder)
- Ornamental Cabbage or Kale
- Ruby Chard
- Gypsophilia
- Annual Althea
- Verbena
- Carnation
- Shirley Poppies
- Asters
- Bachelor Buttons

Hardy annuals, like hardy vegetables, prefer cool weather and tolerate light frosts but succumb to summer heat. Plant them fall and winter in snow-free, mild-winter areas and in spring in snowy areas, provided that the likelihood of temperatures below the upper 20's is low. To prepare the bed, turn plenty of organic matter into the top few inches of the soil, as seeds need a loose, rich, moist medium to sprout well in. Sow large seeds, like sweet peas, in finger-made holes twice as deep as the seed is wide then cover with soil. Tiny seeds, like those of Shirley Poppies or Sweet Alyssum, may be lightly raked into the loosened soil. Then sprinkle a very light ( $\frac{1}{4}$ " ) layer of grass clippings over the ENTIRE bed to retain moisture. WATER YOUR NEW FLOWER BED FOR 30 MINUTES DAILY FOR 2 WEEKS USING AN OSCILLATING SPRINKLER! Letting the soil dry out is THE biggest cause

of failure. Be sure to mulch the soil between the seedlings when they are 2" tall with big fistfuls of grass clippings. Hardy annuals bloom much longer if you take bouquets.

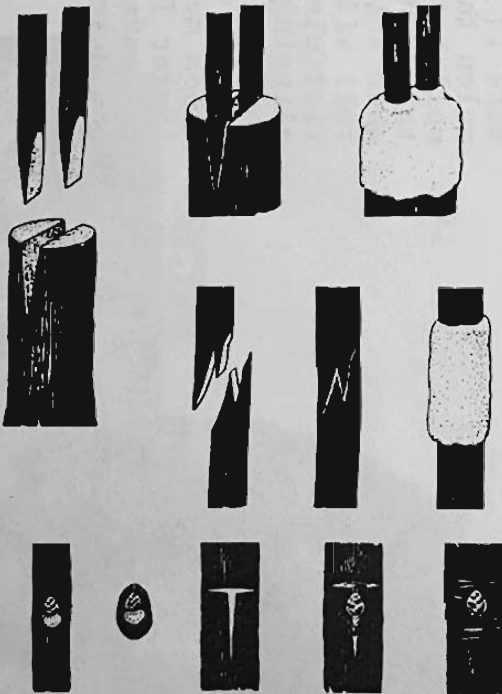


"Somewhere over the rainbow,  
bluebirds fly,  
Birds fly over the rainbow,  
why then, oh why, can I?"  
Dorothy

Sample packet with 1 beet juice fingerprint:  
 Nicotiana sylvestris. Tobacco family, tender annual,  
 5-6 feet with white blossoms. Press seed into rich  
 soil after frost danger, keep moist in full sun.

Sample packet with 2 beet juice fingerprints:  
 9th generation marigolds, back-bred from tall  
 yellow hybrids to recover pungent, insect-repelling  
 fragrance. Sow seeds ½" deep in spring after frost  
 danger. Keep moist in full sun; heavy bloomer.

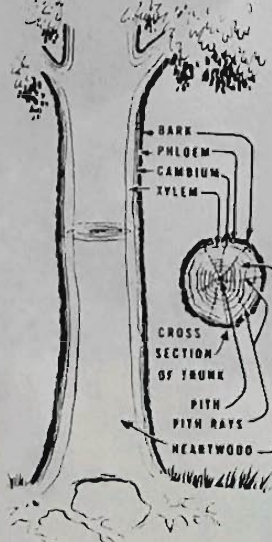
Plymouth  
 1957



DIFFERENT METHODS OF GRAFTING. Top row: cleft grafting. Middle row: whip grafting. Bottom row: budding.



WHEN GRAFTING  
 BE SURE THAT  
 THE CAMBIUM  
 (LIVE TISSUE)  
 LAYER OF BOTH  
 SCION AND THE  
 STOCK ARE  
 ALIGNED  
 EXACTLY.



Dear John...  
 I just received your "Garden Doctor" on St. Croix. Am proud  
 to be your first subscriber outside the U.S. I love the  
 issue-especially the blend of good organic sense and  
 politics!  
 Lyn Goldsmith, St. Croix, U.S. Virgin Islands

Dear John...  
 Lyn showed me your newsletter-what a treasure! I want it,  
 and need it for inspiration....  
 Ulla Neuberger, St. Croix, U.S. Virgin Islands

Dear John...  
 I love your magazine and your way of doing business. Both  
 are sane and wonderful and give me hope for the world.  
 Ruth Reinertsen, Trapper Creek, Alaska

John...  
 You are a super garden doctor! I've enjoyed each issue  
 and feel like a child opening my box of Cracker Jacks to  
 see what my prizes are for this month.  
 Jo-Ann Seiquist, Los Gatos, California

Dear John Starnes...  
 Well, I have just finished reading my second issue of  
 "The Garden Doctor" from cover to cover and back again and  
 I just love it! I mean-what can you say about a publication  
 that quotes Emerson and discusses "chicken dooki" practical  
 in the same breath?! And it is so beautiful-beautifully  
 drawn, designed, layed-out and colored-a feast for eye and  
 intellect. The extra pages are great, but don't change  
 another thing-it's almost too good to be true as it is.  
 Janet Galipo, Miami Beach, Florida

Dear John...  
 Thanks for the great work and the best magazine I receive-  
 Joni Veatch, G.M. Garden Service, Inc. Seattle, WA.

...it will still be a nice world to be in if you continue  
 "Sharing Secrets" with gardeners.  
 Julia Baraniuk, Southampton, Massachusetts

Dear Mister Starnes,  
 ...Thank you for this commendable service you have chosen  
 to provide.  
 Annette Phillips, Canoga Park, California

Dear John,  
 It's been wild getting a personal greeting on the envelopes  
 of your outstanding publication...thank you and please  
 continue to be.  
 Christopher Rinn, North Highlands, California

Dear John,  
 Just received my first issue of "The Garden Doctor". I find  
 it very informative, interesting and unique. Hats off to you  
 and your unusual way to inform. Keep up the good work, I  
 think it'll be a success for you-I know it was for me.  
 M. Hittner, Family Natural Health Foods

...continued

torture that we would not dream of subjecting our family pets to need need not be employed to fill our plates.

Whether or not humans were designed to eat meat has long been debated. We DO possess rudimentary canines. But our intestines, like those of most herbivorous mammals, are 12 times our body length, not the 3 times of carnivorous mammals. I see us as having evolved as omnivores who would eat whatever we could find in a hostile prehistoric environment. And Eskimos, of course, did fine for centuries on a totally meat-based diet. But the point is, our bodies and minds allow us to CHOOSE. The choice to not kill, torture and eat animals exists for us. Choice can be a very frightening thing because it requires awareness and responsibility. But choice is liberating, too, for it reveals and creates possibilities where none were seen before. That is a blessing seemingly reserved for us humans. So choosing to move about within the vegetarian spectrum (rainbow?) can be an effective response to the global issues that we need not feel powerless to address.

I wish to thank Vivia Dee Hayden, not only for her energetic work for the Vegetarian Society of Colorado, but also for subscribing to "The Garden Doctor" and showing each issue to many people. And thanks to Kate Lawrence for giving me the pamphlets that affected me so. It's been a long time since a pamphlet changed my life! Thanks to Keith Akers for his book "A Vegetarian Sourcebook". We met at the October 1 World Vegetarian Day Dinner held in Denver at the First Unitarian Church on Lafayette Street. Much of the information in this article is from his book, and also from "Diet for a New America" by John Robbins. Good reading both. I hope you will look further into vegetarian lifestyles as means to eating and living well while encouraging well-ness both within yourself and the world without.



Vegetarian Society of Colorado  
P.O. Box 6773 1-303-777-4828 (Vivia Dee)  
Denver, CO 80206 1-303-753-6964 (Kate L.)

Vegetarian Information Service  
P.O. Box 70123  
Washington, D.C. 20088

North American Vegetarian Society  
P.O. Box 72  
Dolgeville, N.Y. 11329

International Vegetarian Union  
10 Kings Drive,  
Marple,  
Stockport,  
Cheshire SK6 6NQ  
England

Toronto Vegetarian Association  
28 Walker Avenue  
Toronto M4V 1G2  
Ontario, Canada

American Vegan Society  
Box H (Old Harding Highway)  
Malaga, NJ 08328

Vegetarian Dieticians and Nutrition Educators  
(VEGEDINE)  
1225 Lenox Avenue  
Miami, FL 33139



# The Wall Street Kernel

The First Annual EcoFair, created by Tim Garst and Paul Harshman, provided a forum for 37 exhibitors to share with the public their products, services, and publications geared towards a broader vision of healthy economies, people and the planet's biosphere. On September 16, 17, 18 this open air fair took advantage of Colorado's pleasant autumn weather to feature music, speakers (including your truly), healthy vegetarian food, alternative health care products and services, natural Noevir cosmetics, Dr. Frank Martin's chiropractic clinic, the "Tilth" company's soil healers and beneficial organisms, the Colorado Pesticide Network, the Sierra Club, R.E.A.L. (Recycling Ecologically Attuned Lifestyles), COPA (Colorado Organic Producers Association), and many other organizations all working towards a more humane human presence on the planet.

Tim and Paul were aided by several businesses. Arvada Rubbish Removal donated free dumpsters and pickup, although most everything was recycled by either U.S. Recycling or Tri-Cycle. Photocomm provided an amazing photovoltaic array that used the sun to meet the EcoFair's electrical needs except for the pizza ovens. The Sierra Club did much to inform the public of the coming EcoFair through its own newsletter. And possible sponsorship of the Second Annual EcoFair may include the grocery store chain King Soopers and the Denver Museum of Natural History. I know for a fact that "The Garden Doctor" will be there again, for the EcoFair was well-executed, especially for a first time event, and provided a valuable clearinghouse for many people. So committed to this event was Tim Garst that he borrowed against a lifetime collection of music equipment to finance it. To learn how to attend, sponsor or rent a booth in The Second Annual EcoFair, call Tim Garst at 1-303-237-6935 or write him at:

EcoFair  
8657 West 20th Ave.  
Lakewood, CO

80215

Special thanks to the Denver Botanic Gardens for donating the Nicotiana sylvestrus seeds and for subscribing to "The Garden Doctor" to include in their library collection.

More and more people with money to invest are looking for portfolio holdings that reflect their own views and values. As a result, several mutual funds have arisen that offer "socially-screened" portfolios and relatively low initial investment minimums. The money invested in these "socially-screened" mutual funds has skyrocketed from 40 billion dollars in 1984 to 400 billion bucks in 1988. Fund managers find that sorting out "good" companies from "bad" ones is difficult due to the complex, interrelated nature of human economic activity. For example, Dow Chemical Company is a very generous giver to charities, but manufactures and sells huge quantities of the deadly herbicide 2,4,5-T. Listed below, however, are a few respected "socially-screened" mutual funds, with their few "bad" holdings listed too.

1. Pax World Fund: 224 State St. Portsmouth, N.H. 03801  
1-603-431-8022  
Minimum: \$250  
(contains 3 firms that have S. African operations.)
2. Ariel Growth Fund: 307 N. Michigan Ave., Suite 2014, Chicago, IL 60601  
1-312-726-0140  
Minimum: \$2,000
3. New Alternatives Fund  
295 Northern Blvd.  
Great Neck, N.Y. 11021  
1-415-362-3505  
(contains 1 company doing Star Wars research)  
Minimum: \$2,650
4. Calvert Social Investment Fund  
4550 Montgomery Ave.  
10th Floor  
Bethesda, Md. 20814  
1-800-368-2748  
Probably most stringent "screener", though has 1 firm in S. Africa, 2 in defense. Minimum: \$1,000

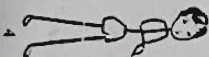
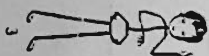
HewlPK  
Hexcel  
HISpac  
Hirco  
HYD  
HYGP  
Hilnb  
HillDep  
Hilton  
Himont  
Hitachi





amaranth

refers to 1,500 related species seen on the farm and in annual beds; many are beautifully ornamental, all are edible, both leaf and seed. In your sample packet marked with 3 beet juice fingerprints belonging to Kimberly Ezell are the seeds of "Amaranthus Cruentus K112, Dwarf Mexican, the classic amaranth of the Aztec civilization. This seed may show variation, since Amaranthochondriacus, Amaranthus Cruentus 1227, an ornamental variety plus pigweed grew in the vicinity.



The protein-rich seeds are higher in lysine and guanine than are both wheat or soybeans, and were the primary

grain of the Aztecs. The leaves

are an excellent cooked green, and the young leaves are fine raw.

CULTIVATION:

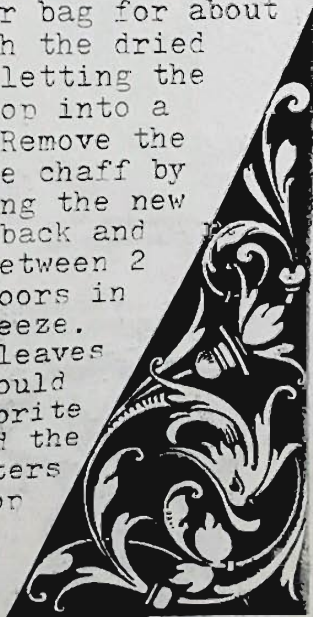
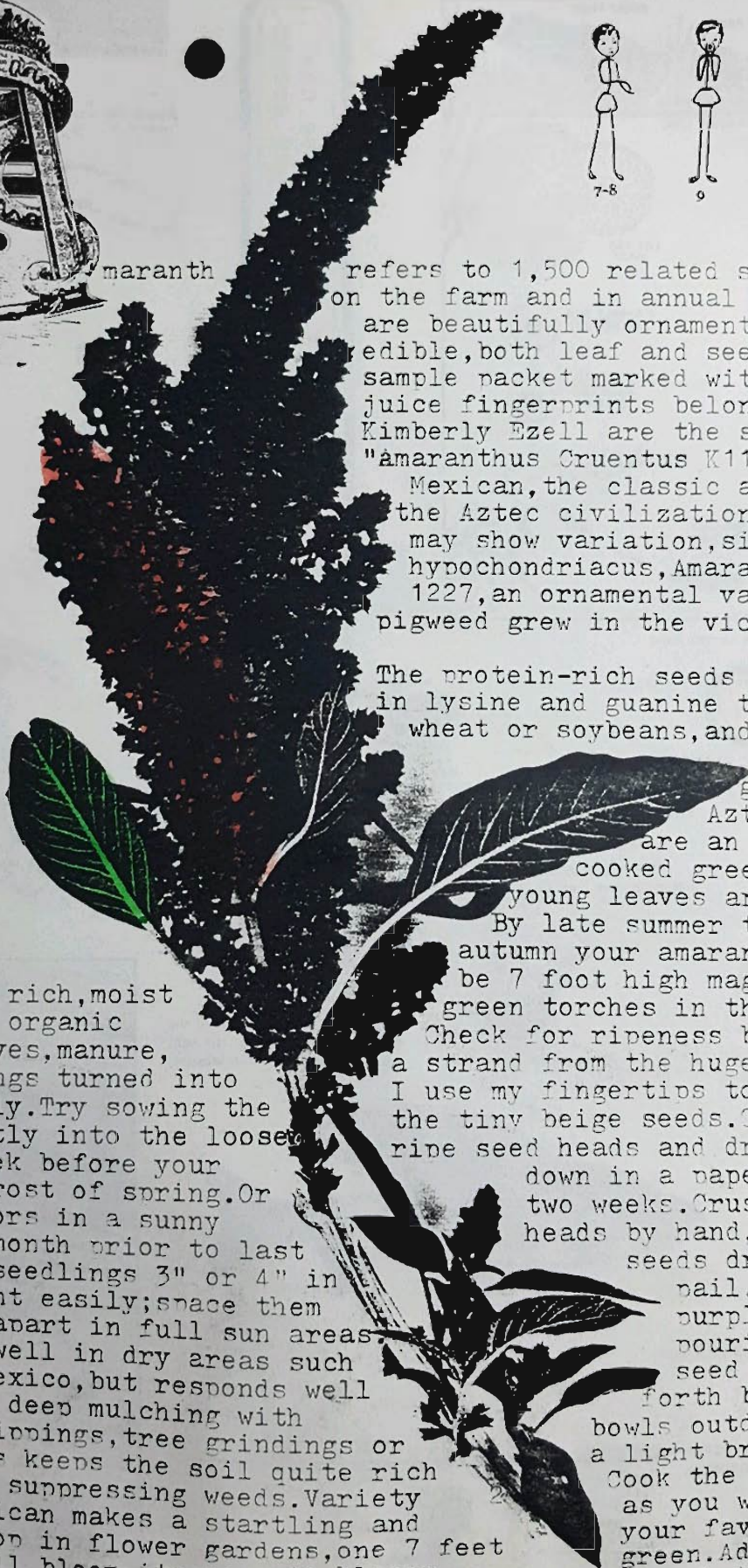
Provide first a rich, moist soil mass, using organic debris like leaves, manure, or grass clippings turned into the soil annually. Try sowing the tiny seed directly into the loose soil about a week before your last expected frost of spring. Or start them indoors in a sunny window about a month prior to last frost. Amaranth seedlings 3" or 4" in height transplant easily; space them about two feet apart in full sun areas. Amaranth grows well in dry areas such as its native Mexico, but responds well to a regimen of deep mulching with leaves, grass clippings, tree grindings or spoiled hay. This keeps the soil quite rich and moist while suppressing weeds. Variety K 112, Dwarf Mexican makes a startling and colorful backdrop in flower gardens, one 7 feet tall when in full bloom, its magenta blooms over two feet in height. To many, amaranth resembles a giant celosia.

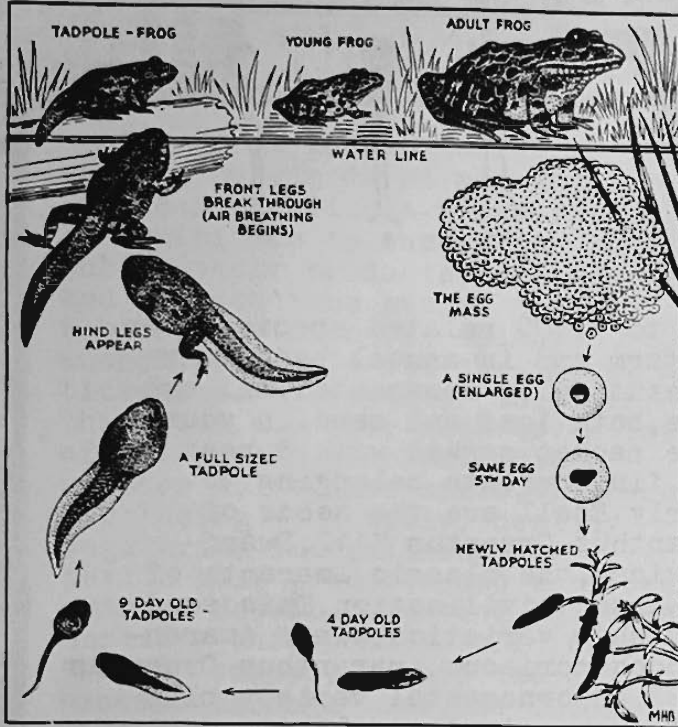
By late summer to early autumn your amaranths will be 7 foot high magenta and green torches in the garden. Check for ripeness by crushing a strand from the huge flower head; I use my fingertips to try to express the tiny beige seeds. Cut off the ripe seed heads and dry them upside-

down in a paper bag for about two weeks. Crush the dried heads by hand, letting the

seeds drop into a nail. Remove the purple chaff by pouring the new seed back and forth between 2 bowls outdoors in a light breeze.

Cook the leaves as you would your favorite green. Add the seeds to batters and doughs, pop like popcorn.





LIFE HISTORY OF THE FROG

Empirical awareness of the universe can foster joy, humility, curiosity and growth.

see, REALLY see

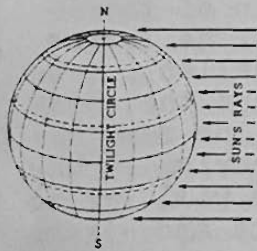


Fig. 19.15 The position of earth with respect to the sun on September 23 and March 21.

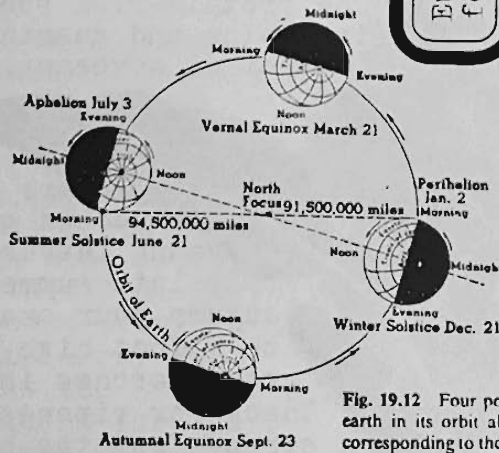


Fig. 19.12 Four positions of the earth in its orbit about the sun, corresponding to the four seasons.

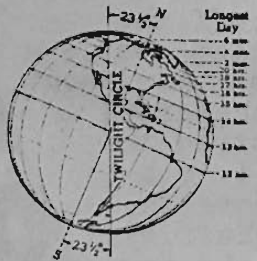
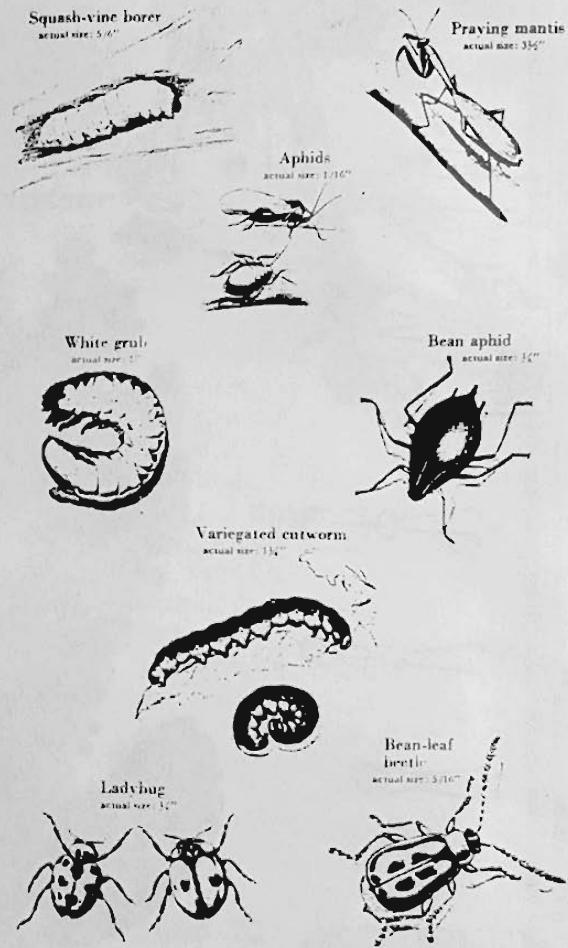
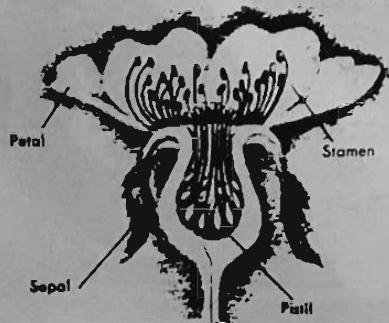
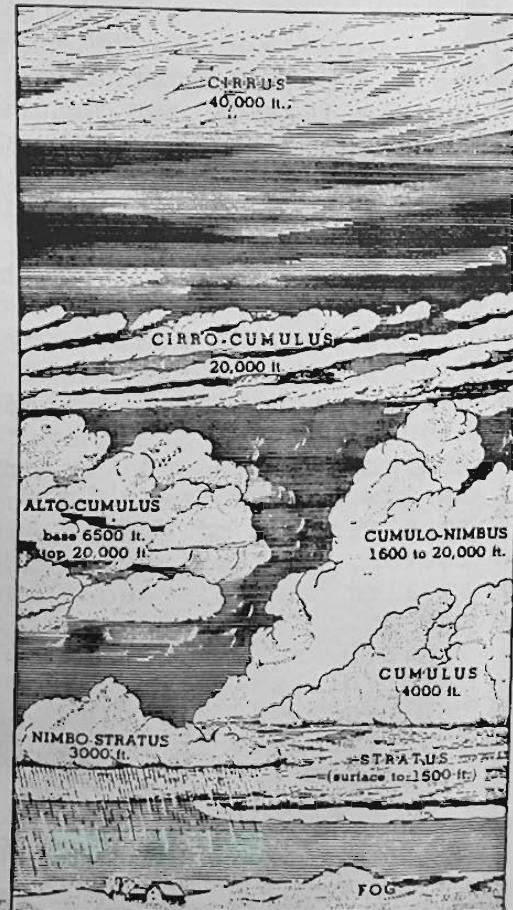
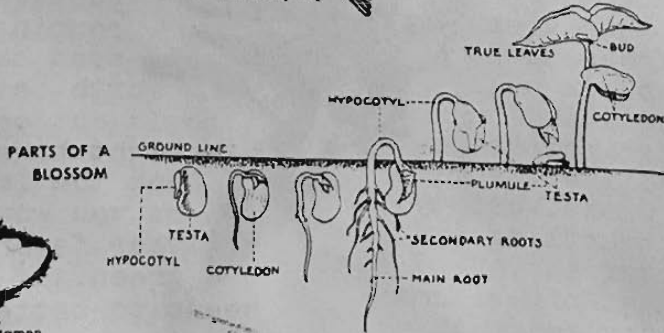
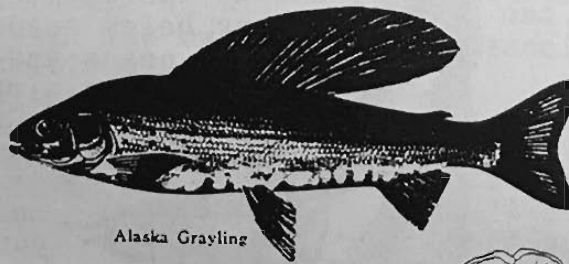
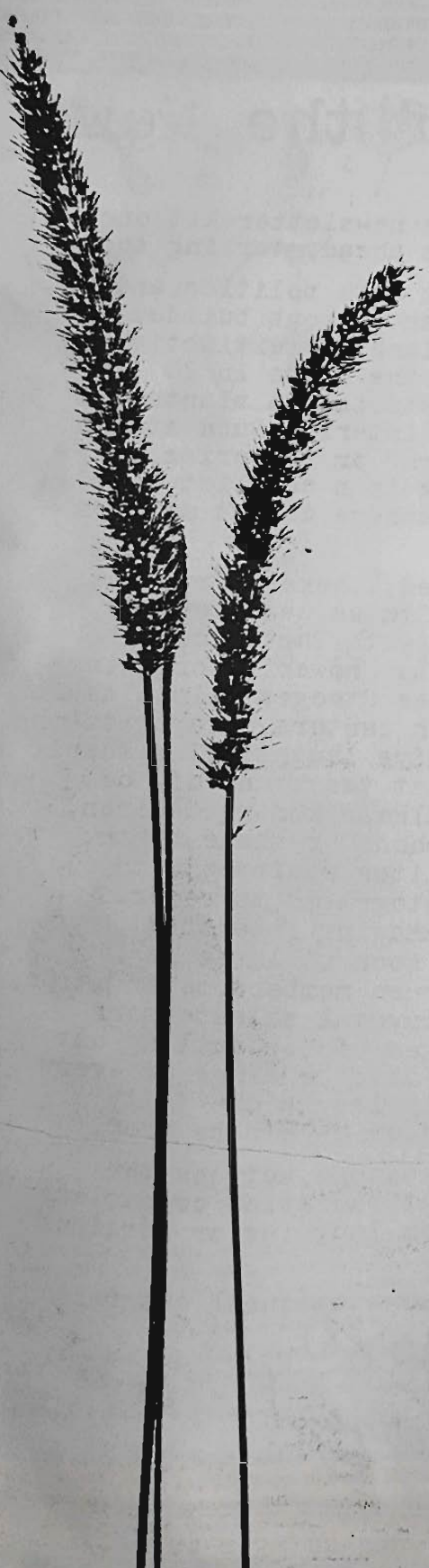


Fig. 19.16 Longest days. What is the length of the longest day where you live?





Reply to Andre

A coat full of sleep  
is wearing my city.  
Its pockets are stuffed with quiet  
and its sleeves have no dance.  
Beneath blankets and sheets,  
behind safe latch,  
lock,  
bolt,

we believe  
our rituals of safety  
our bedtime stories of protection.  
Everytime something evil screams into the night,  
we make our quiet LOUDER  
and sleep  
locked in.  
I am a poet breaking sleep and quiet.  
An ageless music is  
streaming through my hair,  
the flutes, the pipes, the violins,  
drums stretched with animal skins,  
bone-white woodwinds, hollowed branches,  
bells,  
laughter,  
tiny voices.  
These I have heard playing.  
I have sung  
and more:  
like the beating sound of breaking a mind or a soul,  
the long, long sound of prisoners of war,  
the dull hum of the dead coming home,  
the dirt floor, the no food drone.  
I have listened and heard

alone  
I have taken my strangest, best wishes  
and shaken them awake.  
Inside is orange moonlight that feels like deja vu,  
dreams as true as the words lovely or ugly.  
I'm aware of a voice insisting  
I know what's going to happen to you  
and I am not afraid it is true  
for I am wearing my scarves of sight like a third eye,  
like a fool,  
like a mother sure of her children,  
like a savior sure of her work,  
like I am the only troubador,  
lunatic, genius,  
witch, sage, queen,  
like I know the only rest without sleep,  
I know the only song without an end  
and I am singing, singing, singing.

Gianna Russo

Thanks to Gianna for this wonderful poem AND donating her poem payment to "The Garden Doctor".



# Margaret Head's View of the News

Well, I'm back, I'm relaxed, delighted to be in John's newsletter-kit once again... I'm tan, lean and looking forward to fine times ahead, starting today!

Lately the air has been heavy not only with CO2 but with politics, and we've heard countless times that Ronbo Raygun's nuclear weapons buildup either protects us or, more likely, threatens us with planetary extinctions. Soviet and American Strategic Weapons can criss-cross the globe in 20 minutes and descend on a target, rendering cities, forests, people, plants and animals into ionized gas the temperature of the sun's interior. Such atomic flatulence does nothing to prevent or stop "little wars" or terrorism, but provides an unsurpassed means to escalate irreversibly in a conflict between the superpowers. Destruction of the atmosphere and biosphere is not my idea of "National Security".

Clearly, an alternative defense methodology is needed... here is my plan. I propose that either the Soviet Union or the United States unilaterally begin replacing their stockpiles of Strategic Weapons with Threestoogic Weapons. No expensive Star Wars gimmickry here. Simple but powerful orbiting holographic lasers would beam huge projections of Three Stooges film classics onto the sides of mountains and clouds near population centers, incapacitating either Commie or Capitalist-pig citizens with convulsive laughter. The sound track would be simulcast on a jamming frequency so that the sound of Moe slapping Curly would emanate from every T.V., radio, Walkman, air raid siren, movie theatre, police car radio, N.O.R.A.D. radar headphone or phone booth. There would be no escape. Back-up spy planes or satellites equipped with hypersensitive emulsion plates could take Curlyan photographs to record the society-disruption caused by SDI (Slapstick of Damaging Intensity). The enemy's economic and social infrastructure would soon collapse, as first office workers, police, judges then stockbrokers, Politburo members, meter maids, Congresspeople, aerobics instructors, 7-11 clerks and crystal salespersons fell to the ground, laughing hysterically as huge images of Moe pulling out Larry's hair fill the sky. Threestoogic Weapons would also be aimed at every military installation... pilots cramped over with belly laughs can't fly airplanes. Nor could tanks be driven, missiles launched or M-16's be shot.

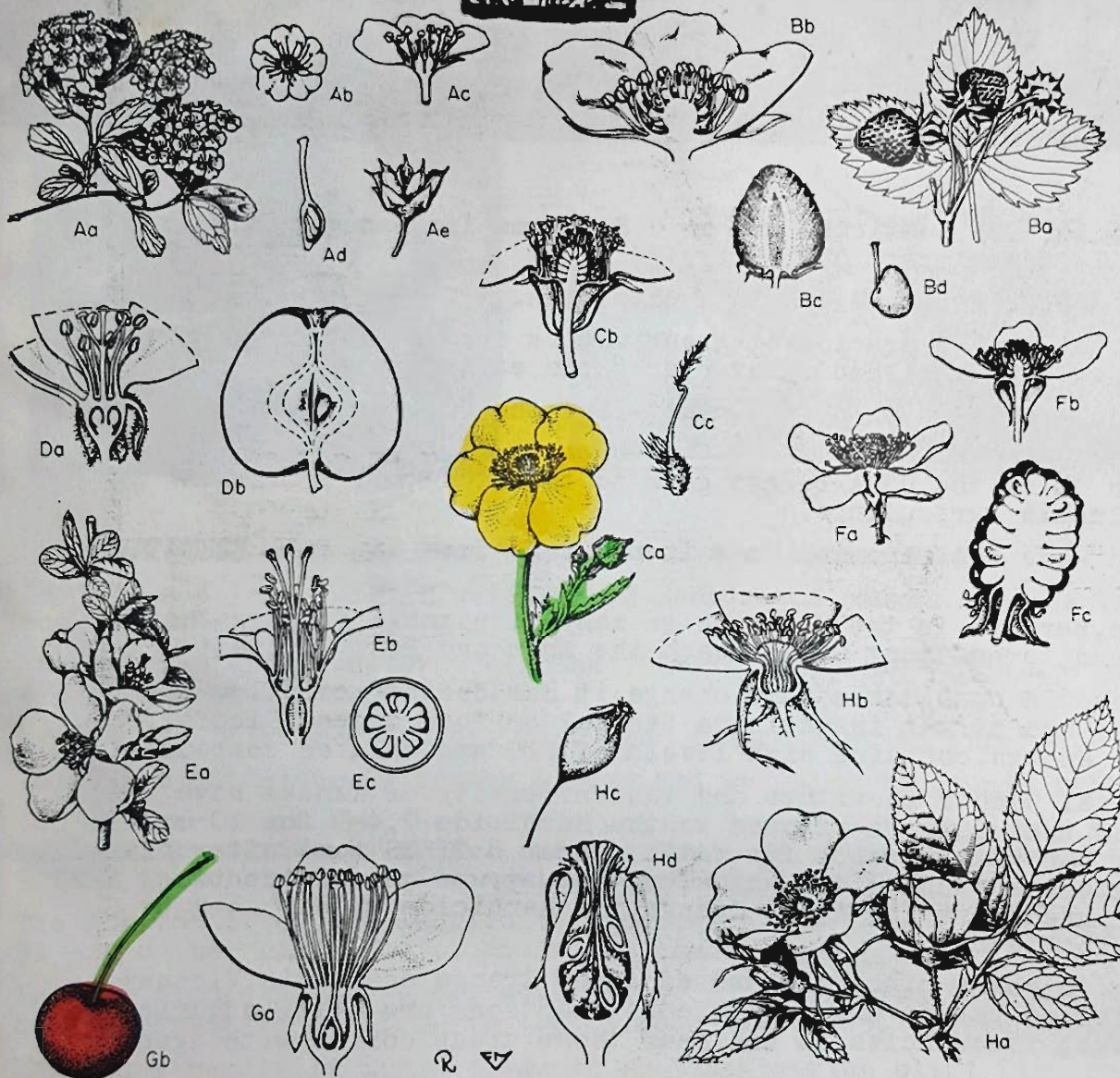
Best of all, Threestoogic Weapons, even in a full exchange between the superpowers, would not destroy our blue world with heat, radiation or nuclear winter. Casualties would be limited to sore cheeks from laughing or strained necks from watching the comedy on the clouds above.

World leaders would never be the same. I can imagine subsequent quarrels in Geneva:

- American President: "You see DAT?!"
- Soviet Premier: "Oh, a wise guy, HUH?!"
- American President: "WHOOH! WHOOH! WHOOH!"
- Soviet Premier: "Nyuck, nyuck, nyuck..."

XOXOXO  
Margaret Head

"If only God would give me a clear sign like making a large deposit in my name at a Swiss bank." Woody Allen



ROSACEAE. A, *Spiraea* × *Vanhouttei*: Aa, flowering branch, × 1/2; Ab, flower, × 1; Ac, flower, vertical section, × 2; Ad, pistil, vertical section, × 6; Ae, follicles, × 2. B, *Fragaria* × *Ananassa*: Ba, leaf and "fruits," × 1/2; Bb, flower, vertical section, × 1 1/2; Bc, "fruit," × 1/2; Bd, achene with persistent style, × 5. C, *Geum* hybrid: Ca, flower and bud, × 1/2; Cb, flower, vertical section (petals cut short), × 1; Cc, achene, × 2. D, *Malus pumila*: Da, flower, vertical section (petals cut short), × 1; Db, fruit (pome), vertical section, × 1/2. E, *Chaenomeles speciosa*: Ea, segment of flowering branch, × 1/2; Eb, flower, vertical section (petals cut short), × 1; Ec, ovary, cross section, × 4. F, *Rubus flagellaris*: Fa, flower, × 1; Fb, flower, vertical section, × 1 1/2; Fc, "fruit" (aggregate of drupelets), vertical section, × 1. G, *Prunus avium*: Ga, flower, vertical section, × 1 1/2; Gb, fruit (drupe), × 1/2. H, *Rosa canina*: Ha, flowering twig, × 1/2; Hb, flower, vertical section (petals cut short), × 1; Hc, "fruit" (hip), × 1/2; Hd, hip, vertical section, × 1. (From Bailey, *Manual of Cultivated Plants*, ed. 2, except for Bb, Ga, Gb, Hd, which are from Lawrence, *An Introduction to Plant Taxonomy*.)

*Woodsii* Lindl. [*R. Macounii* Greene]. To about 6 ft., sts. sometimes bristly, prickles straight or slightly curved; lfts. 5-7, obovate to oblong-obovate, to 1 1/2 in. long, simply serrate, glabrous to puberulent beneath; fls. 1-3, to 1 1/4 in. across, petals pink or sometimes white. Minn. to B.C., s. to Nebr., Ariz., n. Mex. Zone 4.

*xanthina* Lindl. Resembling *R. Hugonis*, but having a stipular wing along petiole, shoots lacking bristles, prickles stouter and more broadly flattened basally; fls. semidouble. N. China, Korea. Forma spontanea Rehd. Fls. single. Zo. - 6.

ROSACEAE Juss. ROSE FAMILY. Dicot.; about 100 widely distributed genera and 2,000 spp. of herbs, shrubs, and trees; lvs. mostly alt.; fls. bisexual, regular, sepals and petals 4-5, or petals lacking, stamens 5 to many, borne on edge of a calyx

tube, pistils 1 to many, ovary superior or inferior; fr. an achene, follicle, berry, pome, or drupe. The family includes many of the most important fr. plants and ornamentals in the N. Temp. Zone, most of them grown outdoors.

The Rose family includes apple, plum, peach, cherry, blackberry, potentilla, geum, pear, dewberry, chokecherry, raspberry, mountain ash, boysenberry, loganberry.

"IN ALL THINGS OF NATURE THERE IS SOMETHING OF THE MARVELOUS"

Aristotle  
300 B.C.



# Bad News

From 1943 to 1983 pesticide use on U.S. farms increased tenfold, but crop losses almost DOUBLED to 13%.

1 out of 6 U.S. drug addicts is a physician.

Eight of the twelve species of great whales are now in danger of becoming extinct, vanished forever from the earth's oceans.

24 million Americans, or 1 in 7, can't find the U.S. on a map of the world!

Less than 1% of the USDA budget goes to the study and promotion of sustainable agriculture.

The world wide soil erosion rate is now ten times the soil FORMATION rate.

Each year, parents in the U.S. use so many disposable diapers that if laid end to end they would reach the moon and BACK 7 times!

The EPA should consider a name change; it has decided to allow the commercial use of the insecticide Dicofol on food crops. Dicofol, curiously enough, contains high levels of DDT and related compounds.

The National Cancer Institute and the University of Kansas have determined that farmers exposed to the herbicide 2,4-D for 20 or more days per year develop lymphatic cancer 6 TIMES more often than farmers who don't use 2,4-D, which, by the way, was one of the two "active ingredients" in Agent Orange, the herbicide widely used by the U.S. in Vietnam.

More than 10 years since the use of Agent Orange ceased in Vietnam, badly deformed babies and spontaneous abortions are still occurring with unusual frequencies in and near those areas doused with Agent Orange.

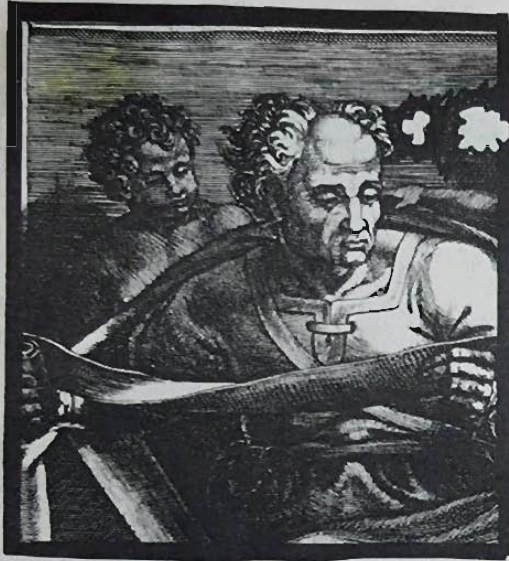
Despite the above two facts, 2,4-D is the most common herbicide in use for supposed weed control in residential lawns. Not only is it retailed in liquid form and in weed-and-feed fertilizers, it is sprayed on golf courses and by non-organic lawn maintenance "services" on the same lawns played on by children and pets.

2,4-D is licensed by the state of Florida for use IN and around lakes, rivers and drinking water resevoirs!

In 1900 there were over TEN MILLION wild African elephants. By 1970 there were less than 300,000. Now their numbers are measured in the thousands, all this because of the popularity of using their teeth (tusks) in jewelry, billiard balls, dentures, gun handles and tacky coffee table sculpture.

10,000 trout died in Utah's Ogden River as the result of an illegal dumping of the weed-killers 2,4-D and 2,4,5-D.

In spite of the cost of living, it's still popular. Kathleen Norris



Phukinay!



The hawk-head moth has been clocked at 34 miles per hour.

In 1934 a 4 foot lobster weighing 42 pounds was caught off the Virginia coast...ummm, Newbury!

One species of prehistoric elephant living 2 million years ago had tusks AVERAGING over 16 feet in length.

A flea can be frozen for one year then thawed back to life!

In 1970 a hailstone  $7\frac{1}{2}$  inches across and weighing  $1\frac{1}{2}$  pounds fell on Kansas.

400 million years ago the earth's oceans teemed with huge sea scorpions called Eurypterids by modern science. These carnivorous arthropods reached 9 FEET in length...imagine seeing something like THAT while snorkeling.

The African tree *Olea laurifolia* produces a very dense wood weighing 93 pounds per cubic foot...hence its common name, Ironwood.

In 1966 Arctic lupine seeds were found in frozen silt in Yukon, Canada and carbon-dated to yield an approximate age of 15,000 years...they sprouted!

The red serendipity berry produced by the Nigerian plant *Dioscoreophyllum cumminsii* contains a natural sweetener 1,500 times sweeter than sucrose (table sugar).

The hinge of a flea's hind leg is made of a superelastic protein called resilin. Muscle compression energy builds up in the hinge and when released in a kick propels the flea at 140 G's, or 50 times greater than that produced by the space shuttle after launch!

100 grams of healthy dandelion leaves may contain up to 14,000 I.U. of Vitamin A.

One species of orchid native to Venezuela produces 4 MILLION seeds per flower.

At 1,410 pounds per cubic foot osmium is the world's densest metal... it is blue-gray in color and in the platinum group.

At 0.005611 of a pound per cubic foot, hydrogen is the lightest element. It is also the most abundant one in the universe, is the source of the sun's energy and in combination with oxygen yields water.

A 520,000 carat (229 lb.) gem quality aquamarine was found in Brazil in 1910.

"I believe in crystal lite cuz I believe in me!" Linda Evans

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DENVER, COLORADO 80220

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