

"All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts. The land ethic simply enlarges the boundaries of the community to include soils, waters, plants and animals, or collectively, the land ... a land ethic changes the role of Homo Sapien from conqueror of the land community to plain member and citizen of it... it implies respect for his fellow members, and so also respect for the community as such."

— Aldo Leopold, "Sand County Almanac"

## The Inclusive Wealth Index

Including natural capital when measuring a country's true wealth and sustainability

For many years, scientists and environmentalists have been advising us that the conventional indicators of wealth, such as gross domestic product (GDP) or the **Human Development Index** (HDI) are failing to fully account for the wealth of a country or the sustainability of its economy. The limitations of these conventional measures may be in part because changes in natural resources are not factored into national accounts. As a result, societies do not have an accurate measure



Woodland

of their economic viability, therefore lacking accurate information on the impact of current policies on human well-being.

At the Earth Summit (Rio +20) in 2012, the International Human Dimensions Programme on Global Climate Change (IHDP) and the United Nations Environmental Program (UNEP), in partnership with the Natural Capital Project, a joint partnership of the Stanford Woods

"The movers and shakers on our planet aren't the billionaires and the generals — they are the incredible numbers of people around the world filled with love for neighbor and for the earth who are resisting, remaking, restoring, renewing, revitalizing."

- Bill McKibben



**Downy Violet** 

(continued from page 1)

Institute for the Environment, the University of Minnesota's Institute on the Environment, the Nature Conservancy and World Wildlife Fund, released a new wealth indicator called the Inclusive Wealth Index (IWI). The Inclusive Wealth Index goes beyond conventional GDP, to include natural capital in addition to human and manufactured capital when measuring a country's true wealth and the sustainability of its growth. In the words of the Inclusive Wealth Report 2012, "Despite significant advances in the past 25 years, humanity has failed to conserve resources, safeguard natural ecosystems or otherwise ensure its own long-term viability."

We may ask, what is natural capital? Natural capital is the value of the Earth's lands, waters and biodiversity. To recognize the value of this natural wealth is to support human well-being. Under the IWI, natural capital calculations include fossil fuels, minerals, forest resources, agricultural land and fisheries. Ecosystem services and water accounting were not included in the current report due to lack of reliable data. Ecosystem services provide the following:

- Moderation of weather extremes and their impacts
- Disperse seeds
- Mitigate drought and floods
- Protect people from the sun's harmful ultraviolet rays
- Cycle and move nutrients
- Protect stream and river channels and coastal shores from erosion
- Detoxify and decompose wastes
- Control agricultural pests
- Maintain biodiversity
- Generate and preserve soils and renew their fertility
- Contribute to climate stability
- Purify the air and water
- Regulate disease carrying organisms
- Pollinate crops and natural vegetation

While many economies appear to be getting wealthier, it is often at the expense of the natural wealth. Currently, natural resources are only measured according to their monetary value when they are extracted or used. In current wealth measurements, forests are not valued for their inherent beauty, nor for the grace and pleasure they bring to humans, nor for the habitat that they provide for innumerable species. Nor are they valued for providing clean air and water, or as functioning carbon sinks. The only measure of value, when using conventional GDP as the indicator, is how many products are extracted. As an example, when GDP is used as the primary indicator of a nation's wealth and quality of life, if all the fish in the sea were to be caught and sold, there would be a substantial increase in global GDP from the immediate commercial transactions. However, by this method, there is no measure or indicator to provide data on the negative environmental and future economic impact of having no more fish.

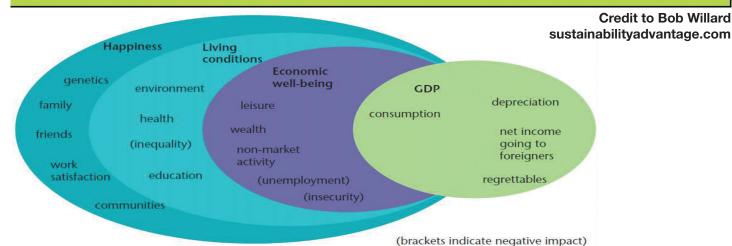
John Sulston, chair of the Royal Society working group on population and Nobel Prize-winning scientist, commented on the report, saying that traditional measurements of wealth fail to take into account the state of the world around us and the inclusive wealth index was a way of correcting this deficiency.

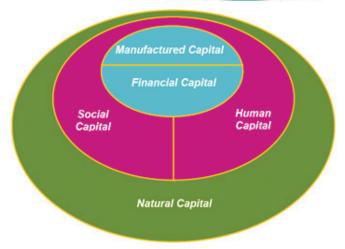
"Applying the IWI to a sample of 20 countries reveals some that are considered good economic performers are actually in the environmental red, borrowing natural resources that they just can't pay back," he added.

Heather Tallis, lead scientist at the Natural Capital Project and a biology research associate at Stanford University, asks this question: "Our GDP is predicted to go up because of the Deepwater Horizon Oil Spill in the Gulf of Mexico. Do we really think the spill made the United States better off?"



**Custered Poppy Mallow** 





The IWR states that, "We need new indicators that tell us if we are destroying the productive base that supports our wellbeing." The Inclusive Wealth Report advocates an approach to sustainability based on measuring natural, manufactured, human and social forms of capital. The Inclusive Wealth Index is a crucial first step in transforming the global macroeconomic paradigm, by ensuring that citizens and decision makers have the correct information in order to have a true measure of economic development and well-being - and to take a very close look at our true values, needs and goals.

Read more at: http://phys.org/news/2012-06-countries-inclusive-wealthaccounting.html#jCp

The full Inclusive Wealth Report may be found on the following website:

http://www.ihdp.unu.edu/article/iwr

UNU-IHDP and UNEP (2012). Inclusive Wealth Report 2012. Measuring progress toward sustainability. Cambridge: Cambridge University Press. The Natural Capital Project http://www.ihdp.unu.edu/article/iwr

phys.org http://phys.org/news/2012-06-countries-inclusive-wealthaccounting.html

> **Ecological Society of America** http://www.esa.org/

Bob Willard's website: http://sustainabilityadvantage.com



## ODE TO WINTER

The winter solstice promises longer days ahead January's chill ushers in February's icy beds Alas March awakens the lungs of the Earth Its winds span the entire prairie girth April is hope reborn Helps us to forget Winter's cold frozen scorn - Amy Ciaccio-Jarvis

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**One Bean** By Anne Rockwell and Megan Halsey

Grade Level: PreK-2, 3-5

Rockwell and Halsey's text presents a clear account of seed germination and plant growth for very young botanists. Richly detailed illustration brings the story to life.

## One Good Apple: Growing Our Food for the Sake of the Earth

By Catherine Paladino Grade Level: 3-5, 6-8

This is an excellent book to discuss agriculture issues with middle scholars. Paladino brings to light many of the problems surrounding agriculture and the use of poisonous pesticides. Here students are offered an alternative: organic farms which use companion planting and composting. The book ends with activity suggestions for students to promote organic farming and gardening.

## Our Nest By Reeve Lindbergh and Jill McElmurry

Grade Level: PreK-2

A child snuggles in bed and listens to a bed time story. The story pursues the theme of nests from birds in trees, cats in piles of clothes, hens in hay, and mice in discarded gloves and gradually enlarges the concept of nest to include a harbor and the cosmos itself. This rhyming tale is accompanied by reassuring illustrations for an uncertain age.

# Parts Unknown: A Naturalist's Journey in Search of Birds and Wild Places

By Tim Gallagher Grade Level: 9-12

In this collection of nature essays, Tim Gallagher combines his interest in birds and his fascination for parts unknown, the regions of the world that early maps left blank. The book is divided into sections focusing on places, rare raptors, and birding and

ornithology. Gallagher is editor-in-chief of Living Bird, the magazine of Cornell's Lab of Ornithology, and a photographer. A photo insert has some amazing views of birds in their natural and often barely accessible environments.

## **Q is for Quark** By David M. Schwartz and Kim Doner

Grade Level: 3-5, 6-8

This ABC examines some elemental and cutting edge concepts in science and even takes on sacred cows, such as the notion that water in the Northern Hemisphere really spins counterclockwise as it goes down a drain. Schwartz says that it can go either way and that its direction is determined by other factors. Fill a sink and experiment. This enlightening and entertaining book is loaded with marginal illustrations. It also has a glossary.

#### The Radioactive Boy Scout: The True Story of a Boy and His Backyard Nuclear Reactor By Ken Silverstein

Grade Level: 6-8. 9-12

In June 1995, David Hahn's Tom Swiftian quest for an atomic energy merit badge from the Boy Scouts ended when a team of moon-suited men from the EPA chain sawed and vacuumed up every scrap of his parent's potting shed. This brief and exciting book tells how a high school student researched, procured materials, and nearly built a breeder reactor, endangering the 40,000 residents of his small town.

#### Rain By Manya Stojic

Grade Level: PreK-2, 3-5

"It was hot." So begins Stojic's colorful tale of the rain returning to the African savanna. In succession, animals use different senses to anticipate the rain. When it comes, life flourishes, and when it stops and the savanna bakes once again. The last page echoes the first, making this book for children 4-8 a powerful introduction to cycles in nature.

#### Rain Forest Secrets By Arthur Dorros Grade Level: PreK-2. 3-5

Dorros, who has traveled all over South American rain forests, gives young readers a good look at the plants, animals, ecology and the consequences of destruction of rain forests in this engaging picture book.

## **The Rainbow and You** *By E. C. Krupp, Robin Rector Krupp*

Grade Level: PreK-2, 3-5

An astronomer and an artist help children 4-8 become rainbow experts. They will learn about the importance of rainbows in ancient cultures, why bending light creates colors, and how to make rainbows at home. A page of "rules" explains differences in the appearance of rainbows.

# Return of the Osprey: A Season of Flight and Wonder By David Gessner Grade Level: 9-12

Widespread use of DDT nearly destroyed the Osprey. Gessner's book chronicles a spring in his Massachusetts town in which more young Ospreys survived than had in more than 50 years. He watched four pairs on Cape Cod from March to September. He details their lives and describes the landscape they inhabit. Be advised, the author uses strong language to convey his

## The Sacred Balance: Rediscovering Our Place in Nature, 2nd edition

By David Suzuki Grade Level: 9-12

emotional states.

Suzuki argues that the environment is so fundamental to our existence that it must transcend politics by becoming central in the values of all members of society. There is no environment "out there." We are part of it. Suzuki suggests how we can meet our needs and still create a life that is sustainable, fulfilling, and just. The last chapter lists practical approaches in changing the way we think and live.

#### Seas of Life - Ocean World By BBC

Grade Level: 3-5, 6-8

This photo-packed introduction to the oceans and ocean life examines different water environments, such as tidal zones, coral seas, temperate and tropical seas, the poles, the open ocean, and the deep. A glossary is provided, as are pages of facts for each ocean zone.

## The Secret Life of Dust: From the Cosmos to the Kitchen Counter By Hannah Holmes

Grade Level: 6-8, 9-12

Dust might seem a dry subject, but after reading this book you'll think differently. Examine everything from space dust to soot, the tiny particles that float on air, drift in cracks, and fill our lungs. Dust became the earth we inhabit. It affects our weather. It can cause disease. Learn about some of the creatures that live in dust, and meet the scientists who study it. A generous appendix lists related websites for each chapter.

## **Shaping the Earth** *By Dorothy Hinshaw Patent and William Munoz* Grade Level: 3-5. 6-8

Intended for readers 9-12, this generously illustrated introduction to the forces that shape Earth, covers volcanism and plate tectonics; erosion by water, wind, and ice; and changes resulting from plant and animal life.

## **The Top of the World: Climbing Mount Everest** By Steve Jenkins Grade Level: 3-5, 6-8

Jenkins's cut-paper collages and dramatic, realistic depictions of an Everest expedition make this book a must-read for kids age 9-12. Jenkins effectively combines scientific information about weather, altitude, and climate with information about Sherpas, native cultures, and geography to create an altogether engaging experience.

#### Volcanoes By Quadrillion Media

Grade Level: 6-8, 3-5

All of your students' questions about volcanoes will be answered in this informative book! Discover the reasons for volcanic eruptions, why volcanoes are concentrated in certain areas, how scientists can predict volcanic action and much more.

## **The Waterfall's Gift** *By Joanne Ryder and Richard Jesse Watson* Grade Level: PreK-2, 3-5

A young girl and her family vacation in the cabin her grandfather built long ago. She revisits secret places and does things she used to do with her grandfather. She eats berries, skips stones at a waterfall, and greets an otter. Watson's egg tempera paintings are filled with details of plant and animal life.

#### Wild and Swampy By Jim Arnosky

Grade Level: PreK-2

Can you imagine a place where crabs climb trees and birds swim underwater? Explore a mangrove swamp with Jim Arnosky. See cottonmouth moccasins, barred owls, alligators, anhinga, and more. This picture book for 4-8 year olds is a great introduction to an unusual environment.

#### Wild Birds By Joanne Ryder and Susan Estelle Kwas Grade Level: PreK-2. 3-5

This poetic introduction to wild birds and bird watching features common backyard visitors. Each bird is pictured in its usual niche demonstrating typical behavior. An identification key is provided along the border of the copyright page to assist fledgling birders.



Sharing the forest with the spirits today, In the milky sunshine of Winter's way, Like vapors rising from a sunbaked road, With unspoken words the past is told, With but a hint yesterday revealed, A momentary connection of a time that is sealed, In the hungry wind-pushed birds that sail, And the crow induced flicker of a hunting squirrel's tail, And the usually hidden whitetail's lair, Exposed by sleeping leaves and green briars bare, If their voices were louder, perhaps they might say, "Take a look at what is happening to earth today." As eyes become focused on the land in despair, It slowly decays from wont of care, So many distractions from which to choose, Such a precious thing for man to lose, And as I sit against a tree the vision disappears, And the diesels are running, validating my fears, And commercials keep coming at every turn, Money to be made and money to burn, For it is our evolution to forget the past, And the release the hand of nature's grasp, But our spirits are the ones paying the cost, As things that are pure are slowly lost, Replaced by wantings of needy ideals, With few words left to slow the wheels, And if I had but one dream, one idea, one wish, The litter of life would not line the ditch, And thought would be given to our every move The concerns of profit, I would surely remove, And the hands of man would be placed on the ground, To feel the musky moisture and the dirt that is found To permeate the soul of wayward thought, From the path in which our lives are caught, To know each creature as a sister or brother, And never forsake our life giving Earth Mother, For I shared the forest with the spirits today, In the milky

- Nighthawk

sunshine of Winter's way.

# Fall Burn At Aroma Land And Water Preserve

Weather conditions finally allowed for a controlled burn at the Aroma Land and Water Preserve late this Fall. Controlled burns are important to managing native prairies, which otherwise become overrun with brush and trees.

#### **YARROW**

Achillea Millefolium

Compositae

It is thought that knights of Medieval Europe used yarrow as their principal healing tool in treating wounds of battle or internal complaints, so abundant are its curative properties. In fact, yarrow's official Latin name is Achillea millefolium; the first word showing that legend ascribes its use to Achilles and his comrades during the Trojan War in Greece to handle their healing needs. Millefolium means "thousand leafed," referring to its multitude of tiny leaflets - maybe a thousand on one plant.



Yarrow is of value as a companion plant, as it repels Japanese beetles, ants, flies, and garden pests, much as does its close relative, Tansy. Yarrow will augment the volatile oils in herbs surrounding it, making it a good companion to other herbs. Its currently known medicinal uses include diaphoretic (will cause sweating - it will break a cold or fever), styptic (stops bleeding by contracting blood vessels), tonic (strengthens and invigorates organs - being helpful then to the entire nervous system), and astringent (reduces secretions and discharges). Folklore claimed that it aided in baldness if the head is consistently washed in a strong tea of Yarrow. For centuries in Europe and America, yarrow has been used as a healthful snuff, a toothache remedy, and as a stand-in for hops in the brewing of homemade beer. In culinary use, it has been occasionally used as a substitute for cinnamon or nutmeg.

Jethro Kloss, author of Back To Eden, says that yarrow is excellent for hemorrhages and bleeding from the lungs, for promoting urination or bladder complaints. An ointment of it is useful for old wounds, ulcers, and abscesses. A douche of yarrow tea is good for vaginal discharge and other female troubles. A warm enema of it is good for problems in the bowels, including bleeding and hemorrhoids. Jethro Kloss used strong tea enemas as treatment for typhoid fever (he found it more useful than quinine), diarrhea, dysentery, even in infants. Kloss used yarrow in treating diabetes, Bright's disease, chicken pox, measles, and smallpox.



Yarrow has such a wide range of uses and is so deeply cleansing to the body that it is valuable in supporting an immune system taxed by many serious illnesses.

by F.C. English

#### Bibliography:

Coon, Nelson - Using Plants For Healing

Kloss, Jethro - Back To Eden

Lust, John - The Herb Book

Rodale Press Book Division - The Rodale Herb book

Tenney, Louise - Today's Herbal Health

# FOREST PRESERVE SITES

#### Shannon Bayou Environmental Education Center and Administrative Office

This 46-acre preserve is located at 3301 Waldron Road in Aroma Park, along the Kankakee River. The Center provides space for programs about natural history, ecology and preservation of open space in the Kankakee River Valley. The walking trail area features plantings of many native trees and plants, including native tallgrass prairie species, a butterfly garden of native plants. The site includes ¾ mile asphalt and fine gravel walking trail, a picnic shelter, and picnic tables.

Shannon Bayou 3301 Waldron Road Aroma Park, IL 60910 41°04'47.61N 87°48'44.31"W

#### **Aroma Land and Water Preserve**

One of the best sites in the area for woodland wildflowers, this 133 acre site is located on Hieland Road, 1.4 miles south of Highway 17 East. A 1.2 mile walking trail winds through several different types of natural areas, including high quality forest, prairie, and wetland ecosystems. It also has nearly ¼ mile of Kankakee River frontage, and the associated floodplain forest. There is ample parking in the parking lot on Hieland Road, and a playground, maintained by the Kankakee Valley Park District, for children.

In 2008, the District added a 30-acre piece of property adjacent to the Aroma Land and Water Reserve (Aroma LWR). This area has been seeded back to prairie species indicative of the dry sand prairie found within the current preserve. The Forest Preserve mows a loop trail that branches off the existing 1 ¼ mile trail that meanders through the main body of the Aroma LWR. In the summer of 2011, 49.5 acres of mixed pine and hardwood forest were added.

Approximately 40 percent of the Aroma Preserve is a wetland and lies within the flood plain of the Kankakee River. In the spring, the wet oak forest gives a spectacular wildflower display while the wetland and sand prairie are the most colorful in the summer.

Aroma Land and Water Preserve 1578 South Hieland Road St. Anne, IL 60964 41°06'02.90"N 87°45'24.08"W

## Gar Creek Trail and Prairie Restoration

Approximately 85 acres, this site is located about one-half mile east of Route 45 on River Road adjacent to Kankakee Community College. The 16-acre restored tall grass prairie was planted in 1992. A 2.5 mile trail, suitable for hiking, bicycling, and cross country skiing, is a cooperative project with the Kankakee Valley Park District. The trail begins at the prairie, winds along Gar Creek, through oak woodland, and down to the banks of the Kankakee River.

At river's edge, the trail connects with the Kankakee Riverfront Trail Project, which will start at the Aqua Illinois property at Hawkins and Water Streets, go through Shapiro Developmental Center, Kankakee River Valley Forest Preserve, Kankakee Community College, and connect with River Road Park and Splash Valley, of the Kankakee Valley Park District.

Gar Creek Trail and Prairie Restoration 501 River Road Kankakee, IL 60901 41°05'30.84"N 87°51'32.78"W

#### **Waldron Arboretum**

Located 1.1 miles south of I-57, this site was once a landscape nursery. On this 90 acre site there is a fine gravel hik-

ing trail suitable for bicycling and cross country skiing. The trail winds through 30 acres of woods, including a small prairie restoration area.

In the winter of 2008, the District acquired an additional 60 acre parcel which had been primarily in agriculture. Future development plans are pending based on the districts needs and funds available through federal and state grants.

Waldron Arboretum 2755 Waldron Road Aroma Park, IL 60910 41°05'36.28"N 87°49'26.51"W

#### **Strasma Grove**

Nestled in a neighborhood in Kankakee, this site is 2 acres of mature native trees.

> Strasma Grove Duane Boulevard Kankakee, Illinois 60901 41°06'28.33"N 87°50'43.56"W

#### **Limestone Reforestation Site**

This site is a 30 acre preserve and reforestation site, with mixed trees and grasses.

Limestone Reforestation Site County Road 3750 West Kankakee, Illinois 60901 41°08'38.96"N 87°56'51.08"W

#### **Zeedyk Meadows**

This is our newest Forest Preserve site, consisting of four acres of trees and grasses.

Zeedyk Meadows Warren Street St. Anne, Illinois 60964 41° 06' 24.92" N 87° 44' 35.77" W

Look at the trees, look at the birds, look at the clouds, look at the stars... and if you have eyes you will be able to see that the whole existence is joyful. Everything is simply happy. Trees are happy for no reason; they are not going to become prime ministers or presidents and they are not going to become rich and they will never have any bank balance. Look at the flowers - for no reason. It is simply unbelievable how happy flowers are.

- Osho



#### Kankakee River Valley Forest Preserve District

1301 Waldron Road • P.O. Box 13 Aroma Park, Illinois 60910 815-935-5630

web address: www.krvfpd.org e-mail: dale@krvfpd.org

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Permit #135 Kankakee, IL

# ON TRAIL..

Call Jean Hurrle at 815-549-9072 for information on times and dates for current programs at your forest preserve. Spring and summer programs include moonlight hikes, wildflower and native prairie walks, and animal tracking. You can also find our programs advertised in the Daily Journal and WVLI radio, or check out "programs" on our website: http://www.krvfpd.org

But when I consider that the nobler animals have been exterminated here - the cougar, panther, lynx, wolverine, wolf, bear, moose, deer, the beaver, the turkey, etc., etc. - I cannot but feel as if I lived in a tamed, and as it were, emasculated country... I listen to a concert in which so many parts are wanting... for instance, thinking that I have here the entire poem, and then, to my chagrin, I hear that it is but an imperfect copy that I possess and have read, that my ancestors have torn out many of the first leaves and grandest passages.

- Henry David Thoreau, Journal, 1856

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