

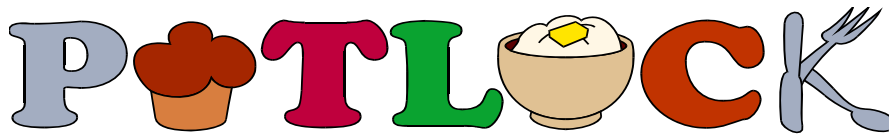


Grand Haven, Michigan

May 17

Volume 22  Number 8
May, 2011

6:30 p.m.



- **Bring a dish to pass and your place setting**

7:30 p.m.

ANNUAL MEETING

- **Bring up to 20 of your favorite bird / nature shots**

BOARD MEMBERS ARE NEEDED

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**Join us. Everyone is invited.
Programs are free.**

United Methodist Church of the Dunes
717 Sheldon, Grand Haven, MI

Visit the OIAS homepage at
<http://www.oias.org>

We need you!**May 14th**

Bird Count Day

Another opportunity to be a part of citizen science.

Spring birds will be coming through. It is always fun to see how many new ones you can find.

Let Carl know if you can help.

**Green Sea Turtles**

Judi Manning

Green sea turtles are reptiles whose ancestors evolved on land and returned to the sea about 150 million years ago. This species is one of the few that watched the dinosaurs evolve and become extinct.

They are cold-blooded and get their heat from the environment. The skin has scales. Its top and bottom are a bony outer shell and that protects them from a lot of predators. This shell is considered the most highly developed protective armor of any vertebrate species to have ever lived. There is opening for the head and one for the tail and limbs. Most turtles retract the head for added protection. Sea turtles cannot do that. Its head stays out all of the time.

Its shells are adapted to life in the ocean by being lighter and more streamlined than terrestrial turtles. The front and rear limbs have evolved into flippers making them efficient and graceful swimmers. They can swim long distances in a relatively short time, moving as fast as 35 mph. Every few minutes when they are active they come to the surface to breathe. When sleeping or resting, adults can remain underwater for more than two hours without breathing. They can contain higher concentrations of carbon dioxide in their blood than most air-breathing animals and use their oxygen efficiently. The muscles and blood store oxygen in large quantities. Juveniles must sleep afloat at the water's surface until they become adults.

Sea turtles rid their bodies of the accumulated salts from the seawater via a salt gland behind each ear which helps them maintain a healthy water balance by shedding large "tears" of excess salt.

Four of the existing seven species of sea turtles are found in Hawaiian waters: green sea turtle, the hawksbill, the leatherback and the olive ridley. The green sea turtle (or honu) is the most common.

They are aptly named for the color of their body fat which is green from the algae they eat. Adults eat only plants and are no threat to other marine animals. Similar to cows, green sea turtles depend on bacteria in their guts for digestion of plant material. Juveniles eat jellyfish and other invertebrates.

Adults can weigh up to 500 pounds and are found near coral reefs and rocky shorelines where algae is abundant. The back of their shells are mostly dark brown and can be covered with patches of algae. Fish feed on the algae and the turtle gets a clean shell (mutualism).

The life span is not known. Hawaiian sea turtles grow very slowly in the wild, taking between 10 and 50 years to reach sexual maturity. Twenty-five years is the average. This long period of

maturation is why it takes them so long to recover from population declines. Males and females look basically alike until they mature. When mature, males have long, thick tails; females have short stubby tails.

They spend most of their lives in the ocean. Females return to the beach they were hatched at in order to lay their eggs. Some migrate as far as 800 miles from their feeding areas to return to the same beach. Males and females migrate together and mate offshore from the nesting beach. They do not mate every year. The most popular beaches are on the French Frigate Shoals where it is estimated 90% of the Hawaiian population of green sea turtles mate and lay their eggs. The female nests only at night. She must pull herself out of the water, up the dry sand to the upper edge of the beach with her front flippers, which is difficult as they do not support the bulk of her weight in the sand. She uses her front flippers to dig a broad pit in the sand and the rear flippers to carve out a bottle-shaped burrow and then lays her approx. 100 leathery-skinned eggs. She may come ashore as many as five times every 15 days to make a nest and lay eggs. She covers them with sand, disguising the location and returns to sea.

The eggs incubate for about two months. Temperatures influence the sex of the baby turtle. Lower temperatures = males; higher temperatures = females. After breaking through the egg, the one ounce turtle takes a number of days to reach the surface. Working together, they remove the top until about an inch away from the surface. They stop digging if the sand feels hot, which indicates it is daytime. They emerge at night to avoid the harsh rays and possibly predatory birds. They must find their way to the ocean by heading towards the brightest horizon. Artificial lights on nesting beaches can mean death to the young turtles as they may become confused and get lost. After reach the ocean, they swim for 1½ to 2 days and remain at sea for at least one year. Not all reach the ocean as many are eaten by crabs and other predators along the way or become lost and die. Many are eaten by sharks and other carnivorous fish while at sea. Only a few baby turtles from each nest survive to become adults.

Adults in the water have two known predators: sharks and people. Tiger sharks feed regularly on green sea turtles. Near the Northwestern Hawaiian Islands, adults crawl up on the beaches and lay motionless in the sun for hours. They bask to avoid predation by tiger sharks and increase their body temperature to speed up metabolism.

The green sea turtle is found throughout the world's oceans, but they considered either endangered or threatened. Hawaii's population is listed as threatened. Those living off Florida and the Pacific coast are listed as endangered.

Once upon a time there were several million green sea turtles worldwide. Today fewer than 200,000 nesting females remain. In Hawaii, they estimate only 100 to 350 females nest each year.

Why the decline:

A. Hunting – They have been hunted for the shells to make jewelry and ornaments; skin to make small leather goods; meat and eggs for food; and fat for oil. In modern times the number of sea turtles taken has increased dramatically due to the profits they provide through commercial trade. They are the main ingredient in turtle soup. Large numbers were killed before the Federal Endangered Species Act of 1973 was passed. Hawaiian populations experienced dramatic declines. As they take so many years to reach sexual maturity, it has taken 20 years after the passing of the Endangered Species Act to see evidence of a recovery in Hawaii. Poachers continue to kill them throughout the world.

B. Effects of some Fisheries – Sea turtle deaths occur with incidental (or non-deliberate) catch in fishing gear. Commercial shrimp fishers use nets that trap and drown more than 10,000 sea turtles each year. Many could have been saved if shrimpers would use devices called turtle excluder devices that keep turtles out of the nets. Laws exist, but many still do not use them.

Thousands also become entangled in longlines, driftnets, coastal gill nets and other discarded fishing gear each year.

C. Marine debris – Litter and marine debris are deadly when they become entangled or they mistake it for food and ingest it. Plastic is particularly harmful as they are not easily digested and remain in the turtle's stomach for long periods of time, releasing toxic substances. They may also starve after ingesting plastic debris because it blocks the proper passage of food. Balls of oil and tar have also been found in the throats and stomachs of deceased sea turtles indicating oil spills cause another concern.

D. Coastal Development and Habitat Degradation – Nest beaches are lost each year to coastal development, leaving females without a familiar place to lay her eggs. Noise, lights and beach obstructions are disruptive to nesting areas and threaten this critical part of the sea turtle's life cycle. Pollution and degradation of their marine habitat also threaten their survival.

E. Fibropapilloma – A fairly recent discovery in the population of Hawaii and Florida's sea turtles causes the growth of large bulbous tumors on the soft tissues of the turtles. They do not appear to recover as the tumors spread to other parts of the body. The exact cause is still unknown, but scientists suspect a virus, parasite or other effects of marine pollution may be involved.

In Hawaii, many agencies including the State of Hawaii's Department of Land and Natural Resources have recently formed a team to help restore Hawaii's green sea turtle population to previous levels. The goals of this group are to identify research, management and enforcement needs for effective sea turtle conservation in the islands as well as promote sea turtle protection through public education.

There is international protection, however, trade in sea turtles and their products continues at an alarming rate even though it is against the law.

Reference: Green Sea Turtles, <http://www.earthtrust.org/wlcurric/turtles.html>



Turtles—Hawaii Memories

We were lucky. While in Hawaii earlier this year, we saw green sea turtles swimming in the ocean at a few locations.

We also saw a few of them basking in the sun on the beach. They had signs up. Everyone had to stay at least 18 feet away.

The highlight was when Carl and I spent a short period time snorkeling. In swam a good-sized turtle and to our amazement decided it would eat on the coral directly below us. I used my hands to stay in position and I thoroughly enjoyed watching it maneuver around the coral and eating algae. It stuck its head in many nooks and crannies.

We also enjoyed watching many species of fish swimming about, catch sunrays to show off their spectacular colors.



Bird-Safe Building

Judi Manning

“A typical skyscraper kills between 200 and 1,000 birds per year from collisions.”

“A typical non-skyscraper building including residential, kills between 1 and 10 birds per year from collisions.”

A bird-safe building can be a cutting-edge design, meet LEED standards and protect important species.

Site Strategy/Landscape

- Identify location and angle of birds' approach to the building, modify glass on this side
- Plant trees and other vegetation so they do not reflect on the building
- If want trees close to the building, plant them immediately adjacent to the exterior glass wall less than 3 feet away)
- Avoid glass walkways

Composition

- Create visible details birds will recognize
- Avoid reflective openings larger than 2 inches wide and 4 inches tall
- Add visible structural details like columns and balconies

Materials

- Use bird-safe glass or glass that is transparent to humans but not to birds
- Use window film, decals, decorative paint or grills to minimize clear window area
- Use non-reflective glass
- Add external screens to windows that open

Exterior

- Design facades that are visually interesting and create a physical barrier, i.e. vines or sunshades
- Use awnings to cast shadows and mute reflection

Interior/Lighting

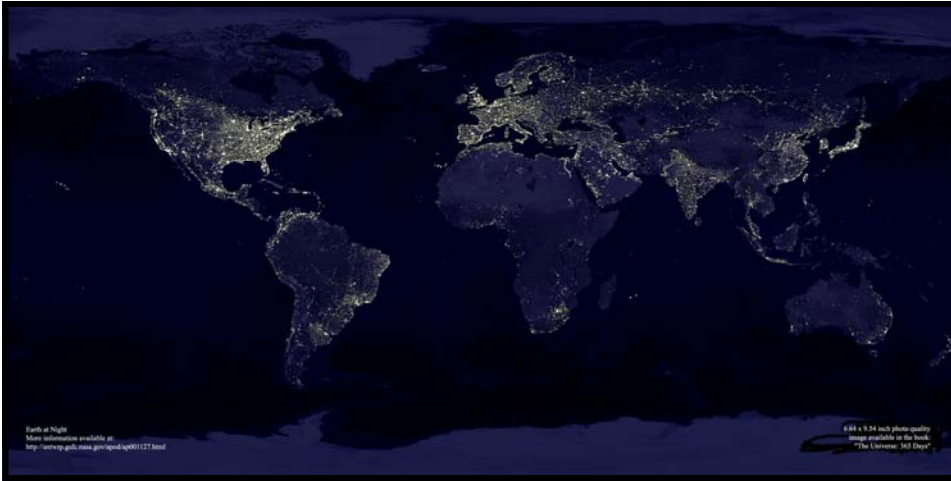
- Integrate lights that mute reflections or make space look solid, i.e. blinds, drapes hung close to glass, perforated shades
- Select pattern and material of window coverings to create a visible barrier for birds
- **Interrupt views through parallel glass facades with objects such as sculptures and furniture**
- **Avoid decorative lighting; for necessary outdoor lighting, avoid “up-lighting” by directing light toward the ground**
- Install motion sensors on interior lights to ensure they are not left on overnight

Objectives:

- ✧ **Create visual signals**
- ✧ **Minimize Reflectivity**
- ✧ **Minimize Light at Night**

Facts:

- ◆ Birds do not understand that reflections are false
- ◆ Birds do not understand that glass is a solid barrier
- ◆ Birds are easily trapped in niches, courtyards and other recessed areas
- ◆ Birds are attracted to light and try to fly into lit spaces
- ◆ Birds are attracted to vegetation indoors or reflected in buildings.

**LIGHT POLLUTION**

ACTUALLY MAKES OUR AIR WORSE.

Correspondent Judy Muller speaks with the author of a new study by the National Oceanic Atmospheric Administration that shows how bright lights prevent an important molecule, which only works in darkness, from scrubbing ozone from the air. That makes smog worse. So, in effect, our light pollution is aggravating our air pollution.

<http://www.ecobuzzla.com/light-pollution-the-link-to-air-pollution/>

Excerpts from Starry Nights website:
<http://www.starrynightlights.com/lpIndex.html>

Light Pollution is misdirected or misused light... generally resulting from an inappropriate application of **exterior lighting products**. Light Pollution comes in several flavors... each with its own negative effects.

Sky Glow ... light wastefully escaping into the night sky and causing a glow over urban/suburban areas. (Outside lights left on at night; lights that shine up to the sky)

Glare ... light shining dangerously out into peoples eyes as they walk or drive by.

Light Trespass ... unwanted light shining onto a neighbors property or into their home.

LIGHT POLLUTION IMPACTS US ALL, in many ways. Some of these are quite obvious, others are much less obvious. For starters....

Light Pollution Wastes— billions of dollars annually in the United States. 5 to 10 billion depending on whose numbers you want to use.

Light Pollution Consumes—incredible amounts of valuable natural resources. Hundreds of millions of barrels of oil... and hundreds of millions of tons of coal... just so people can light the bottoms of clouds?

Light Pollution Pollutes—the air we breath through needless generation of electricity (most of which comes from fossil fuels)

Light Pollution Harms—nocturnal wildlife. Many species won't even go near an area that has bad lighting. Also, many species will simply stop reproducing if habitat destruction from overly bright lights becomes too severe.

Light Pollution Threatens—humankind, being linked to some serious ailments. [Light pollution is a threat to your health.](#)

HOW CAN YOU HELP

First up, you can decide if you're going to be part of the problem... or the solution. Each one of us can contribute to the reduction of Light Pollution in our own ways. First, by making sure that our exterior lighting is ordinance compliant lighting, which means they only light the ground beneath them and never shine across onto a neighboring property... or into the night sky.

Second, by making sure that your outdoor lights are only on when needed. By this, is meant that they're only on when there is activity in the area. Dusk to dawn lighting is to be strictly avoided.

Third, reduce the wattage of your bulbs. The human eye is remarkable in its ability to adapt to the amount of light present. Too much light can be overwhelming and glaring... actually reducing visibility. Even a small reduction in wattage will reduce light pollution. You might be surprised with how well you can see at night with a reduced wattage. Try it out and see what works for you. Checkout our [Outdoor Lighting Guidelines](#) for a more detailed explanation.

Pesticides/Eating Habits

- Eat lower on the food chain.
- Buy organic foods to discourage pesticide use.
- Grow your own food using alternatives to pesticides.
- Buy foods without additives and preservatives.
- Avoid highly processed foods.
- Support food co-ops and farmer's markets.
- Buy foods grown or produced locally.
- Be creative with leftover food.

At The Market:

- Use a permanent bag or take your grocery bags back to the store for reuse.
- Some food is sold wrapped in 3 or 4 layers of packaging...try to buy brands with minimum packaging.
- Try not to use throwaway cameras, flashlights or shaving razors.
- Buy packaged goods in bulk.
- Buy used goods (junk yards, thrift stores, garage/yard sales).
- Buy products in recyclable and/or recycled containers.
- Avoid plastics and disposable plates, cups and utensils; styrofoam should especially be avoided
- Buy/use cloth diapers instead of disposable.



If you change your mailing address or email address at any time, please contact me at oias@oias.org. Mailing newsletters to outdated mailing addresses costs the OIAS money.

Bird cams:

Eagles: usearch.com; pets; eagles

FAR FLOWING WATER
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Far Flowing Water is published eight times per year. If you would like to contribute to the next issue, **please have your articles to me by September 1st**

Our programs are made possible, in part, by an Emilie Baker Fund for the Environment grant from the Grand Haven Area Community Foundation.

Things to do for Earth

Judi Manning

Start an herb garden in your window sill

When planning a meal with fish, check Seafood Watch Program from Monterey Aquarium [<http://www.montereybayaquarium.org/cr/seafoodwatch.aspx>]

Follow principles of Kansha kitchen, don't waste food

Clean your medicine cabinet and drop the collection at a local safe medicine disposal site instead of dumping them in the toilet bowl

Take a hike or ride your bike

Buy bulk foods

Fix leaky faucets

Turn off lights when you don't need them

Once it gets warm enough, turn off the heat

Swap books through a book exchange

Cut down on sprays

Unplug cords from outlets once you're done charging your gizmos.

Donate unused clothing

Use the same shopping bag at least twice.

Reference: 25 Things to Do in April for Earth Month 2011, <http://www.sergetheconcierge.com/2011/04/25-things-to-do-in-april-for-earth-month-2011.html>

Owashtanong Islands Audubon Society

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PLEASE FORWARD

ADDRESS CORRECTION REQUESTED

<p><u>MAY 17</u> 6:30 POTLUCK 7:30 MEETING</p> <hr/> <p>MAY 14 BIRD COUNT</p>
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