All praise be yours, my Lord, through all that you have made.

Saint Francis of Assisi

The whole universe together participates in divine goodness more perfectly, and represents it better, than any single creature whatever.

Saint Thomas Aquinas
Creation Covenant: Lenten Reflections on Integral Ecology

It is fitting to add reflections on ecosystems and species during Lent because of the interconnection of the entire Universe. The divine presence is revealed both in Scripture and in the entire Cosmos. As people of faith we want to respond not only to Jesus' passion, but to the sufferings of Earth. Pope Francis writes: “God has joined us so closely to the world around us that we can feel . . . the extinction of a species as a painful disfigurement. Let us not leave in our wake a swath of destruction and death which will affect our own lives and those of future generations.” (Evangelii Gaudium)

Suggestions for Convener:
Be sure all participants know when and where to meet, and that each has made a five-week commitment. Make copies on sustainable paper using both sides. Have name cards for each participant. When anyone is absent, put names in the center to include them in the group's prayerful energy. Find out if participants want refreshments and if so, how food will be provided.

Be creative with this material! Adapt it in any way that facilitates your group's prayerful reflection, faith sharing, community building, and commitment to action. Before the Scripture reading, allow time for participants to pause quietly or with music* to focus on the divine presence within themselves, other participants, and all life.

Take turns reading. Answer questions as they come or save till the end. Stop in time to complete the closing and to socialize. Plan ahead to prepare the suggested videos.

*Music
Consider using the same piece each week so that participants will remember this experience whenever they hear it. Possibilities include
   "How Great Thou Art"
   "What a Wonderful World"

Suggested Centerpiece:
Place a small globe or picture of Earth in the center each week. Add a beeswax candle or vigil, and light it during the Scripture readings. If you wish, add small artifacts depicting people, fish, birds, insects, mammals, plants or other species.

Scripture quotations are from Eugene H. Peterson's *The Message: the Bible in Contemporary Language.*
Week One: God's Covenant with Every Living Being

I. Introduction
Welcome, intros as needed, share why each chose this group. Look through booklet.

Allow time for silence or music to prepare for Week One. Then read excerpts from Sunday’s liturgy:

**Genesis 9: 8 - 19:** Then God spoke to Noah and his sons: "I'm setting up my covenant with you including your children who will come after you, along with everything alive around you — birds, farm animals, wild animals — that came out of the ship with you. I'm setting up my covenant with you that never again will everything living be destroyed by floodwaters . . . This is the sign of the covenant I am making between me and you and everything living around you and everyone living after you. I'm putting my rainbow in the clouds, a sign of the covenant between me and the Earth . . . This is the sign of the covenant."

Reflect on the reading. What does it mean to you that God keeps covenant with us and all that has evolved?

II. Information

**Covenant** — In Scripture, covenant usually means an agreement bringing about a relationship of commitment between God and the Jewish, and then Christian, communities. Yet Scripture says that in Noah's time, God’s covenant was made with everything that existed and would exist!

"Nature" is sometimes thought of as outside humans, something "out there" that we can enjoy and protect (or dominate and misuse). But "human nature" reminds us that we, too, are an integral part of nature. Nothing can be excised from the rest of creation. God lives and acts in all of it. We are kin, as St. Francis and other saints intuited. We now know we’re stardust!

"Mammals" include humans. Although Lent 2018 will focus on animals, keep in mind the flowers, trees, water, soil and everything else that forms their — and our — interconnected ecosystems.

**Rainbows** — Early believers couldn't have guessed what we know, that rainbows result when the Sun's light is refracted by rain or other water droplets: truly a bow caused by rain! They often attributed religious significance to what they could to understand.

We know many things that Noah and Scripture writers did not know: that Creation began c. 14 billion years ago with the first Flaring Forth; that about 4.5 billion years ago, that stardust coalesced and eventually became our planet and every earthly being; that early fish evolved into
amphibians, birds, and mammals in ecosystems that evolved interdependently over millions of years. These species are our ancestors, all the way back to stardust. In the womb we reprise these major stages. Creation includes the entire interconnected Cosmos. Thomas Berry reminded us that “Nothing is itself without everything else.”

For centuries humans have thought in either/or patterns, and this often led to judging one part of the pair as superior to the other. A hierarchical pyramid developed that placed God at the pinnacle, man (yes, males) below "him," then women, then animals, etc. Modern scholarship is moving to a both/and pattern. We can image life in a circle embedded in, and dependent upon, its ecosystems. Our loving Creator enlivens it all. Each creature has its own abilities and responsibilities. Humans retain everything that makes us special, yet every single other creature has its own dignity and rights within this communion of subjects.

The 2011 United Nations Environment Programme (UNEP) estimated the total species (plants and animals) at about 8,700,000. 25% dwell in the oceans. Animals that lack backbones (e.g., insects, mollusks, sponges) compose an estimated 97% of animal species. The remaining 3% include amphibians, reptiles, birds, fish, and mammals. A handful of forest soil can contain up to 10 billion bacteria, about a million plump yeasts and fungi, and tens of thousands of other creatures! Awesome!

The dove in this Sunday's Gospel belonged to one of c. 9000 - 10,000 bird species. The wild animals Jesus lived with were among the nearly 5,000 species of mammals. Fish, the earliest symbol used for Christ and food we know he ate, include c. 28,000 - 32,000 different species. Butterflies, a common resurrection symbol, total c. 15,000 - 28,000 species.

What Sacred Scripture stories (besides the ones above) do you remember that feature or mention animals?
If you love or have loved an animal of any kind, briefly tell the group about your pet.

III. What is God saying to us?

What can we learn about God’s activity in our world from the animals we love as pets?

IV. This Week (and this Lent):

Find a picture/ symbol/ artifact of an animal Jesus might have loved. Place it somewhere that will remind you of the wonder, sacredness, and interconnection of all creation.

V. Closing

Watch a video of “Christian the Lion Reunion.”
All: We thank you, Loving Creator, for the wonders of creation, the development of ecosystems over millions of years, and for species that grow in loving relationships.

Socialize.
Week Two: Being Kicked Around

I. Introduction
Share what picture/ symbol/ artifact you chose that Jesus might have loved.

Allow time for silence or music to prepare for Week Two. Then read excerpts from Sunday's liturgy:

Psalm 22: 23 - 24: God has never let you down, never looked the other way when you were being kicked around. God has never wandered off; God has been right there, listening.

Mark 8: 34 - 37: Don't run from suffering; embrace it. Follow me and I'll show you how . . .

What good would it do to get everything you want and lose you, the real you?
How might we connect these readings with thinking about biodiversity and extinctions?

II. Information

Extinction indicates total elimination from creation. It is irreversible (unless scientists make new discoveries and have access to DNA). Millions of species have gone extinct in the course of evolution (often after evolving into a new species). This is usually gradual, a few going extinct each year. However, five major extinctions have occurred with a single event or brief time span, the last being c. 66 million years ago when a meteor hit Earth. Non-avian dinosaurs and c. 75% of plant and animal species went extinct. Today a Sixth Great Extinction has begun, and it is human-caused.

Camilo Mora, lead author of the 2011 United Nations Environmental Program (UNEP) study, says: “The question of how many species exist ... is particularly important now because a host of human activities and influences are accelerating the rate of extinctions. Many species may vanish before we even know of their existence, of their unique niche and function in ecosystems, and of their potential contribution to improved human wellbeing.” Anyone who understands our interconnection with all being is concerned, even pained, by these losses.

Species that have taken billions of years to develop, and that play a unique role in ecosystems, are disappearing and will never return. For those who believe that all life is sacred, it is a desecration to eliminate species because of carelessness, greed, or any human selfishness. In addition, extinctions deprive present and future humans of the beauty, diversity, and wonder of creation. We, too, developed in ecosystems and are deprived when they are damaged. Rights must be balanced, but destroying species "to get everything you want" is not acceptable.

Endangered species. On December 4, 2017 Inger Andersen, the Director General of the International Union for the Conservation of Nature (IUCN), said: “Healthy, species-rich ecosystems are fundamental to our ability to feed the world’s growing population and ... end hunger by
2030. … Today’s IUCN Red List update raises the alarm about their decline and stresses the urgency to address it – for the sake of our own future.”

You might be surprised to know that the first purpose of the **Endangered Species Act** (in the U.S.) is *not* to save species! That goal follows from the first: “The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [italics mine], to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.”

The "eco" in ecosystems, ecology, ecojustice, ecospirituality, and Ecozoic era (when humans live in harmony with the natural world) comes from the Greek *oikos*, meaning house. Used in ecosystems, house refers to the community that interacting organisms consider home, each microlevel an integral part of ever-larger related communities.

Causes of alteration of ecosystems (the primary reason for extinctions) include climate change, deforestation, land development, pollution, pesticide use, war and resulting atmospheric fall-out, disease, invasive species., overconsumption, illegal wildlife and animal parts trade, and bush meat hunting. About 5 million tons of plastic trash dumped into the oceans every year accumulates toward the center of the mid-ocean gyres and occupy about 40% of the ocean surface. Our “plastic footprint” rivals carbon footprints in killing life. What plastic consumption could you reduce?

Since God has made a covenant with creation and God never wanders off or looks away, as the Scripture assures us, what has gone awry? How can it be that we have extinctions? How can it be that there is destruction from floodwaters and fires?

**III. What is God saying to us?**
Think of an animal (fish, bird, mammal) that has characteristics you share, for better or for worse. What is the animal, and why did you choose it? What might the Divine Spirit within want us to learn through these insights?

**IV. This Week**
What ecosystems have you experienced that helped you to become “the real you”?

**V. Closing**
Watch a video of how wolves changed Yellowstone National Park in the U.S.
All: **Help us, Holy Spirit, to value creation so much that we will gladly make sacrifices to protect it and help all Earth thrive.**

Socialize.
Week Three: Unjust Commerce

I. Introduction
Share a significant ecosystem in your own life that helped you become “the real you”?

Allow time for silence or music to prepare for Week Three. Then read this excerpt from Sunday's liturgy:

**John 2: 13 - 17:** [Jesus] found the Temple teeming with people selling cattle and sheep and doves . . . Jesus put together a whip of strips of leather and chased them out of the Temple, stampeding the sheep and cattle, upending the tables of the loan sharks, spilling coins left and right. He told the dove merchants, "Get your things out of here! Stop turning my Father's house into a shopping mall!

Apply the Gospel story to God's larger house: local, regional, national, and global.

II. Information
Jesus knew that people engaged in commerce. It only riled him when it was done inappropriately, without respect for sacred life and the good of all. This week we'll consider a few ways that species and their homes are misused leading to their endangerment or extinction. **Remember that each creature reflects divinity, each is interconnected with the whole, and each is part of the continuing evolution of creation.** Just as aborting humans deprives us of precious life and what each individual could contribute, so killing other species deprives us and them of a richer future. Elizabeth Johnson, CSJ, writes in *Ask the Beasts*: “. . . the ongoing destruction of life on Earth by human action, intended or not, has the character of deep moral failure. To speak theologically, it is profoundly sinful.”

Cows, pigs, poultry, and domestic animals on factory farms and places like puppy mills are kept in very close quarters and, for cows, fed with food their systems have not evolved to consume. They stand in their excrement, deprived of their natural habitats. This also threatens biodiversity, so needed for thriving ecosystems.

Honey bees pollinate 90 kinds of crops. Their wax is required for the Easter candle and those used at Mass. They have been disappearing in the U.S. since 1995. Among the causes of their decline are use of pesticides and insecticides for industrial agriculture that make their habitats poisonous.

Fish of many types are becoming extinct and threatened by over-fishing, by destruction of coral reefs, and by plastics. Oceans have absorbed about 20% of our carbon dioxide emissions, forming carbonic acid. The increased acidity makes it more difficult for some shellfish and coral to form shells. Corals are animals that provide habitat for algae that do the photosynthesis that makes food. Warming oceans cause coral bleaching, which causes algae to die. This reduces habitat for fish dependent on them. Warming also forces fish to leave accustomed habitats; they cannot always adapt to new
conditions. Fish and ocean-feeding birds die of consuming indigestible pieces of plastic and other trash that accumulates in their stomachs or traps body parts. (Brita estimates that 35 billion water bottles are thrown away in the US every year.) Pope Francis asks: “Who has turned the wonderworld of the seas into underwater cemeteries bereft of color and life?”

Dolphins, whales, porpoises, and turtles are threatened or endangered by climate change; illegal dynamite fishing; being caught in fishing nets or deliberately captured; collisions with boats or propellers; oil, chemical, and heavy metal pollution; beaching due to sonar interference; invasion of tourists. Over 95% of deaths, illness and high infant mortality rates for these species are caused by humans.

Gorillas are intelligent and peaceful unless attacked; 98% of their DNA is identical to humans' DNA. Half or more of the world's primate species and subspecies are threatened with extinction by loss of forest habitat (for agriculture, mining, and logging), trade in bushmeat, war, disease, and illegal poaching and sale as pets and for body parts (e.g., hands, that are sometimes sold as ashtrays!).

Coastal waterbirds, such as brown pelicans, suffered a major kill-off in 2010 by the BP Deepwater Horizon oil spill. A new study estimates that between 600,000 - 800,000 birds were killed in the first three months, plus the deaths that have followed from the devastation of this ecosystem.

Elephants, a species that is intelligent and relational, are killed and mutilated solely for their ivory tusks. Watch this 2 min. clip in an Antiques Roadshow format that tells about elephant poachers: http://www.youtube.com/watch?v=kdf6v6qOTrU

III. What is God saying to us?
Remember that our Creator lives and acts in all life. Using your imagination, listen to the fears and hopes for any one of the species mentioned above. It is unable to speak for itself; how might Jesus want us to speak for it?

IV. This week
Look up “Endangered Species” and learn one fact.

V. Closing

Socialize.
Excerpts from Pope Francis’ *Laudato Si’* (unless otherwise noted)

… our common home is like a sister with whom we share our life and a beautiful mother who opens her arms to embrace us. (par. 1)

We have forgotten that we ourselves are dust of the earth (cf. Gn 2:7); our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters. (par. 2)

Authentic human development has a moral character. It presumes full respect for the human person, but it must also be concerned for the world around us and ‘take into accounted nature of each being and of its mutual connection in an ordered system.’ (St. John Paul II; par. 5)

As Christians we are also called ‘to accept the world as a sacrament of communion, as a way or sharing with God and our neighbors on a global scale. It is our humble conviction that the divine and the human meet in in the slightest detail in the seamless garment of God’s creation, in the last speck of dust on our planet.’ (Patriarch Bartholomew; par. 9)

[St. Francis] shows us just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace. (par. 10)

If we approach nature and the environment without openness to awe and wonder, if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs. (par. 11)

The urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development, for we know that things can change. … I want to recognize, encourage and thank all those striving in countless ways to guarantee the protection of the home which we share. (par. 13)

God has joined us so closely to the world around us that we can feel . . . the extinction of a species as a painful disfigurement. Let us not leave in our wake a swath of destruction and death which will affect our own lives and those of future generations. *Evangelii Gaudium*

(As soon as possible, read or reread *Laudato Si’,* Chapter One, III, Loss of Biodiversity. par. 32 - 42.)
Three Recommended Measures: Human-caused changes in the composition of the air and air quality result in more than 2 million premature deaths worldwide every year and threaten water and food security —especially among those “bottom 3 billion” people who are too poor to avail of the protections made possible by fossil fuel use and industrialization. Since a sustainable future based on the continued extraction of coal, oil and gas in the “business-as-usual mode” will not be possible because of both resource depletion and environmental damages (as caused, e.g., by dangerous sea level rise) we urge our societies to:

I. Reduce worldwide carbon dioxide emissions without delay, using all means possible to meet ambitious international global warming targets and ensure the long-term stability of the climate system. All nations must focus on a rapid transition to renewable energy sources and other strategies to reduce CO2 emissions. Nations should also avoid removal of carbon sinks by stopping deforestation, and should strengthen carbon sinks by reforestation of degraded lands. They also need to develop and deploy technologies that draw down excess carbon dioxide in the atmosphere. These actions must be accomplished within a few decades.

II. Reduce the concentrations of warming air pollutants (dark soot, methane, lower atmosphere ozone, and hydrofluorocarbons) by as much as 50%, to slow down climate change during this century while preventing millions of premature deaths from respiratory disease and millions of tons of crop damages every year.

III. Prepare to adapt to the climatic changes, both chronic and abrupt, that society will be unable to mitigate. In particular, we call for a global capacity-building initiative to assess the natural and social impacts of climate change in mountain systems and related watersheds.
Week Four: Take These Away

I. Introduction
Read silently the excerpts on pp. 9 - 10. When all have finished, share any quote that touched your heart or mind and tell why.

Allow time for silence or music to prepare for Week Four. Then read this excerpt from Sunday's liturgy:

Numbers 21: 6- 7: So God sent poisonous snakes among the people; they bit them and many in Israel died . . . . Pray to God; ask him to take these snakes from us.
Describe how the Israelites, thousands of years ago, pictured God in this story. How do you picture God? How can you answer people who think only God can save species?

II. Input
Not all species are cuddly! 1200 species of fish are venomous. Gypsy moths can damage millions of acres of forests and urban landscapes by rapidly defoliating trees, leaving them vulnerable to disease. Invasive species are responsible for the extinction of other species and cause havoc to ecosystems by their aggressive growth, biological pollution, and catastrophic impact on global habitats. Do we expect the Transcendent Mystery to take problems from us?

Centuries ago St. Teresa of Avila wrote: “Christ has no body but yours, no hands, no feet on Earth but yours. Yours are the eyes with which he looks out his compassion on this world, yours are the feet with which he walks to do good . . . .” In out time, Pope Francis writes: "Small yet strong in the love of God, like St. Francis of Assisi, all of us, as Christians, are called to watch over and protect the fragile world in which we live, and all its people."

People are acting to protect ecosystems and their flora and fauna. Groups have created statements and laws; TV programs alert us to the marvel of species and what threatens them; profit and non-profit groups are active in many ways; individuals use lobbying and lifestyle changes to reduce climate change and live with other species in a mutually beneficial manner.

Share any local, national, or international groups you know about that work to save species. Share any experience you have had with these or other groups. Share actions you and others have taken to protect ecosystems and their inhabitants.

III. What is God saying to us?
How might God be asking us to help fulfill the divine covenant with Creation this Lent? Why is it important to stay informed about all the positive things happening in the world?
IV. This Week
Consider taking one of more of the following actions:
- Transition to renewable energy sources to reduce use of fossil fuels.
- Reduce your intake of industrially-raised beef and chicken.
- Reduce your use of plastic, especially bottled water.
- Contact legislators to increase renewable energy production.
- Click these sites that provide benefits to species at no cost to you: therainforestsite.greatergood.com and theanimalrescuesite.greatergood.com/
- Consider joining a conservation group to support their work and participate in their campaigns.

V. Closing
Watch one of these videos showing individual responses:
- 2 min. video telling of eco-activists who won the 2017 Goldman Environmental Prize.
- 11 minute video about Helen Slottje's work to stop fracking: http://earthjustice.org/fracking

Socialize.
Week Five: Ritual

Liturgically, we are approaching Palm Sunday and Holy Week, when our focus will be on Jesus. But Jesus, too, was not himself without everything else; Jesus, too, is part of the whole interconnected creation. Keep this awareness in heart and mind as we conclude these reflections.

The following prayer service replaces the format used in Weeks 1 - 4. The Scripture excerpts are from Sunday's readings. Divide into sections A and B.

~

Call to Prayer: From Pope Francis: “Openness to the transcendent can bring about a new political and economic mindset which would help to break down the wall of separation between the economy and the common good . . . .” Let us pray for that openness to the transcendent so we can break down walls, and for the common good of every being on Earth.

Silent prayer.

Consider that we have participated, no doubt unconsciously, in the damage to ecosystems when our purchases, lifestyle, apathy, or willful ignorance contributed to habitat loss and climate change. Respond alternately with excerpts from Psalm 51:

A. Generous in love, . . . . God, give grace!
   Huge in mercy, . . . . wipe out my bad record.
   Scrub away my guilt . . . soak out my sins in your laundry.
   I know how bad I've been, . . my sins are staring me down.
   You're the One I've violated . . and you've seen it all,
   You have all the facts, . . whatever you decide about me is fair.
   You're after truth from the inside out. . Enter me, then; conceive a new, true life.
   God, make a fresh start in me, . shape a Genesis week from the chaos of my heart.

B. Reader from Group A. Hebrews 5: 7-10: While he lived on Earth, anticipating death, Jesus cried out in pain and wept in sorrow as he offered up priestly prayers to God. … Though he was God's Son, he learned trusting obedience by what he suffered, just as we do.

Discuss:
Briefly share any change in your attitude towards ecosystems and animals from childhood till now.

How does — or doesn't — habitat destruction affect/effect you?
Reader from Group B. **John 12: 24-25:** Listen carefully: *Unless a grain of wheat is buried in the ground, dead to the world, it is never any more than a grain of wheat. But if it is buried, it sprouts and reproduces itself many times over. In the same way, anyone who holds on to life just as it is, destroys that life. But if you let it go, reckless in your love, you'll have it forever, real and eternal.*

All respond: *Help us to be reckless in our love:*  
A. Jesus, you loved us till death on the cross, *help us to be reckless in our love.*  
B. Mary, you gave of yourself in total love, *help us . . . .*  
A. For the gift of joy as we praise the Creator living and acting among us, *help us . . . .*  
B. For the wisdom to realize our interconnection with fish, birds, insects, and mammals, *help us . . . .*  
A. For the compassion to make sacrifices for our interconnected well-being, *help us . . . .*  
B. For deeper awareness of our role in God's Covenant with Creation, *help us . . . .*

Take a few minutes for each to decide one thing to do this Holy Week to protect animals, their habitats, and their place in the on-going evolution of Mother Earth. Then pray together:

*May the Spirit acting in our world/ and in each of us/ empower us to fulfill these promises./ May we remember our role/ in fulfilling God's covenant with all Creation./ May we be blessed with tears/ for species that are threatened and extinguished./ May God bless us with anger/ at injustice, oppression, and exploitation/ so that we may work for justice, equity, and peace./ And may God bless us with the foolishness/ to think that we can make a difference/ in this world,/ so we will do the things/ which others say cannot be done./ Amen!*

(Adapted from a traditional Franciscan Meditation)

Share one word that summarizes for you the experience of this Lenten group.

Share the gift of Christ's peace with one another.

Socialize.

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