

# Facets of Creation Care



Everglades National Park:

Are the alligators real?

Are the baby alligators for sale?

Where are all the rides?

What time does the two o'clock bus leave?

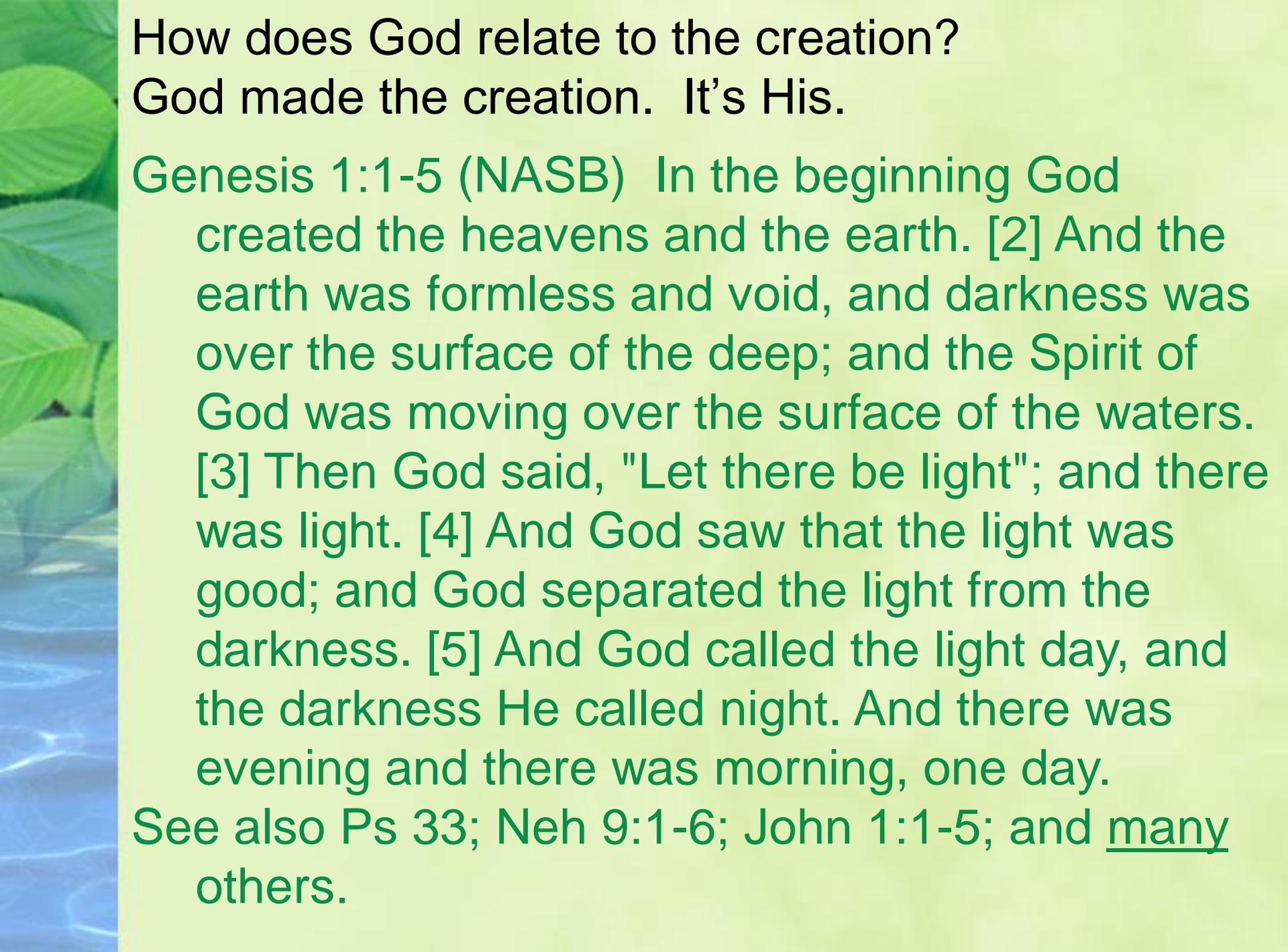


Nancy Sheppard looks through the broken window in the back of her Edison Neighborhood home, where burglars entered and ransacked her belongings. Her home has been burglarized several times and during the most recent, the invaders killed her dog by dousing the animal with household cleaners. (Julie Mack, Kalamazoo Gazette, May 17, 2009, 5:53AM)



Who owns it?





How does God relate to the creation?

God made the creation. It's His.

Genesis 1:1-5 (NASB) In the beginning God created the heavens and the earth. [2] And the earth was formless and void, and darkness was over the surface of the deep; and the Spirit of God was moving over the surface of the waters. [3] Then God said, "Let there be light"; and there was light. [4] And God saw that the light was good; and God separated the light from the darkness. [5] And God called the light day, and the darkness He called night. And there was evening and there was morning, one day.

See also Ps 33; Neh 9:1-6; John 1:1-5; and many others.



God made the creation good... very good.

Genesis 1:1-5 (NASB) In the beginning God created the heavens and the earth. [2] And the earth was formless and void, and darkness was over the surface of the deep; and the Spirit of God was moving over the surface of the waters. [3] Then God said, "Let there be light"; and there was light. [4] And God saw that the light was good; and God separated the light from the darkness. [5] And God called the light day, and the darkness He called night. And there was evening and there was morning, one day.

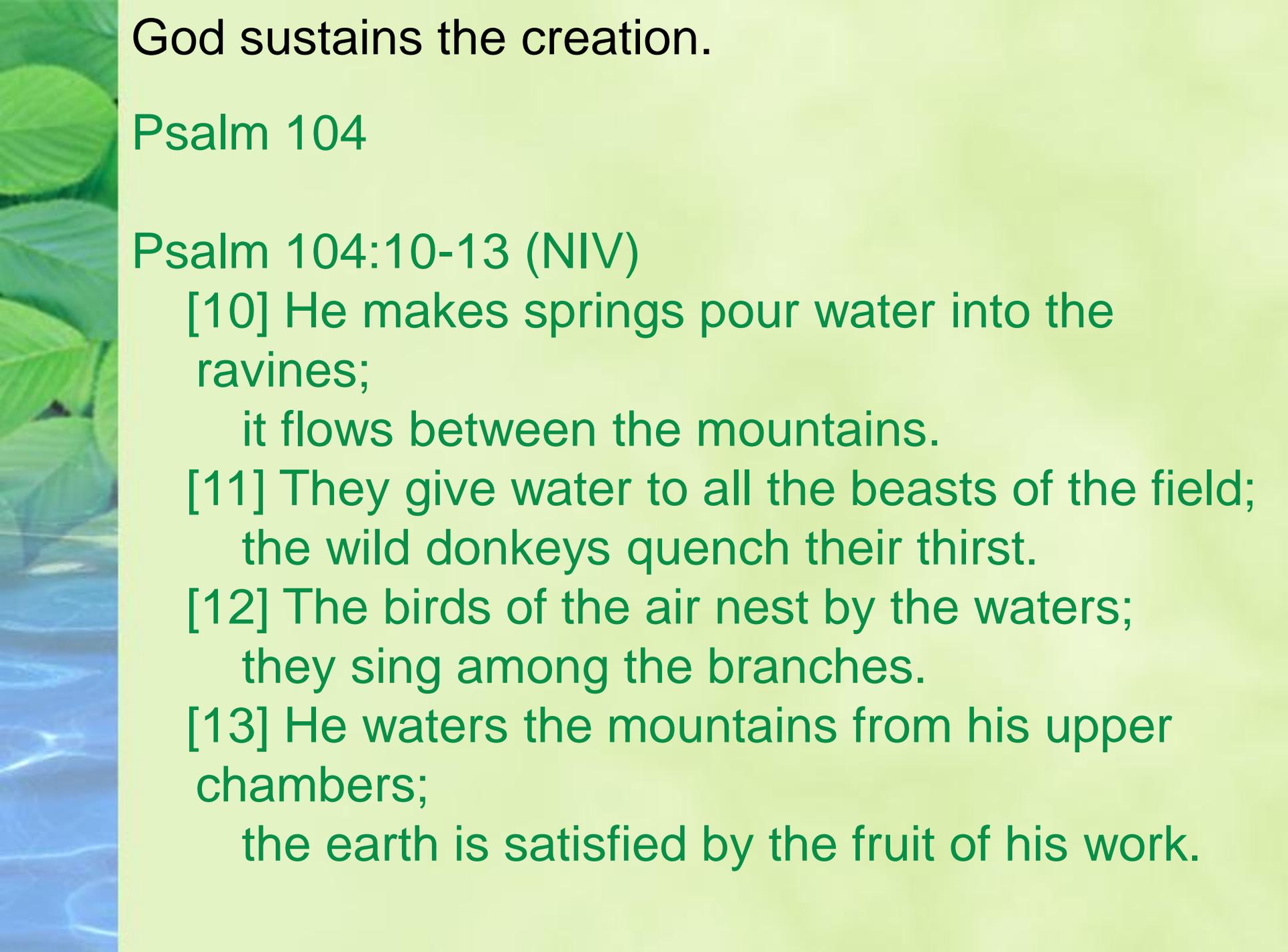
Genesis 1:10, 12, 18, 21, 25

Genesis 1:31 (NASB) And God saw all that He had made, and behold, it was very good. And there was evening and there was morning, the sixth day.

# God made the creation for Himself.

Col. 1:15-20 (NASB) And He is the image of the invisible God, the first-born of all creation. [16] For by Him all things were created, both in the heavens and on earth, visible and invisible, whether thrones or dominions or rulers or authorities-- all things have been created by Him and for Him. [17] And He is before all things, and in Him all things hold together. [18] He is also head of the body, the church; and He is the beginning, the first-born from the dead; so that He Himself might come to have first place in everything. [19] For it was the Father's good pleasure for all the fulness to dwell in Him, [20] and through Him to reconcile all things to Himself, having made peace through the blood of His cross; through Him, I say, whether things on earth or things in heaven.

See also Isa 42:1-8; Rom 11:33-36 and others.



God sustains the creation.

Psalm 104

Psalm 104:10-13 (NIV)

[10] He makes springs pour water into the ravines;

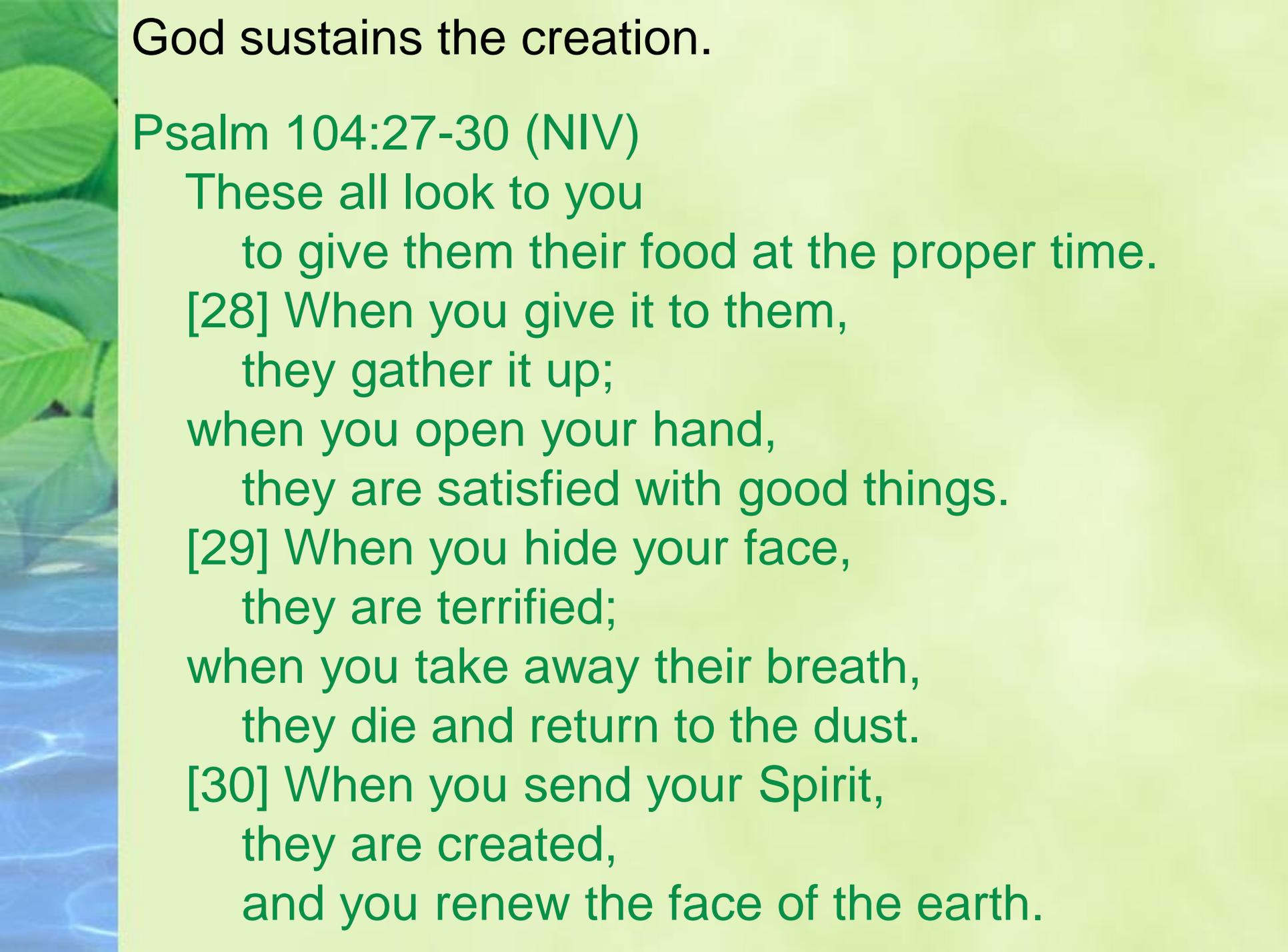
it flows between the mountains.

[11] They give water to all the beasts of the field; the wild donkeys quench their thirst.

[12] The birds of the air nest by the waters; they sing among the branches.

[13] He waters the mountains from his upper chambers;

the earth is satisfied by the fruit of his work.



God sustains the creation.

Psalm 104:27-30 (NIV)

These all look to you

to give them their food at the proper time.

[28] When you give it to them,

they gather it up;

when you open your hand,

they are satisfied with good things.

[29] When you hide your face,

they are terrified;

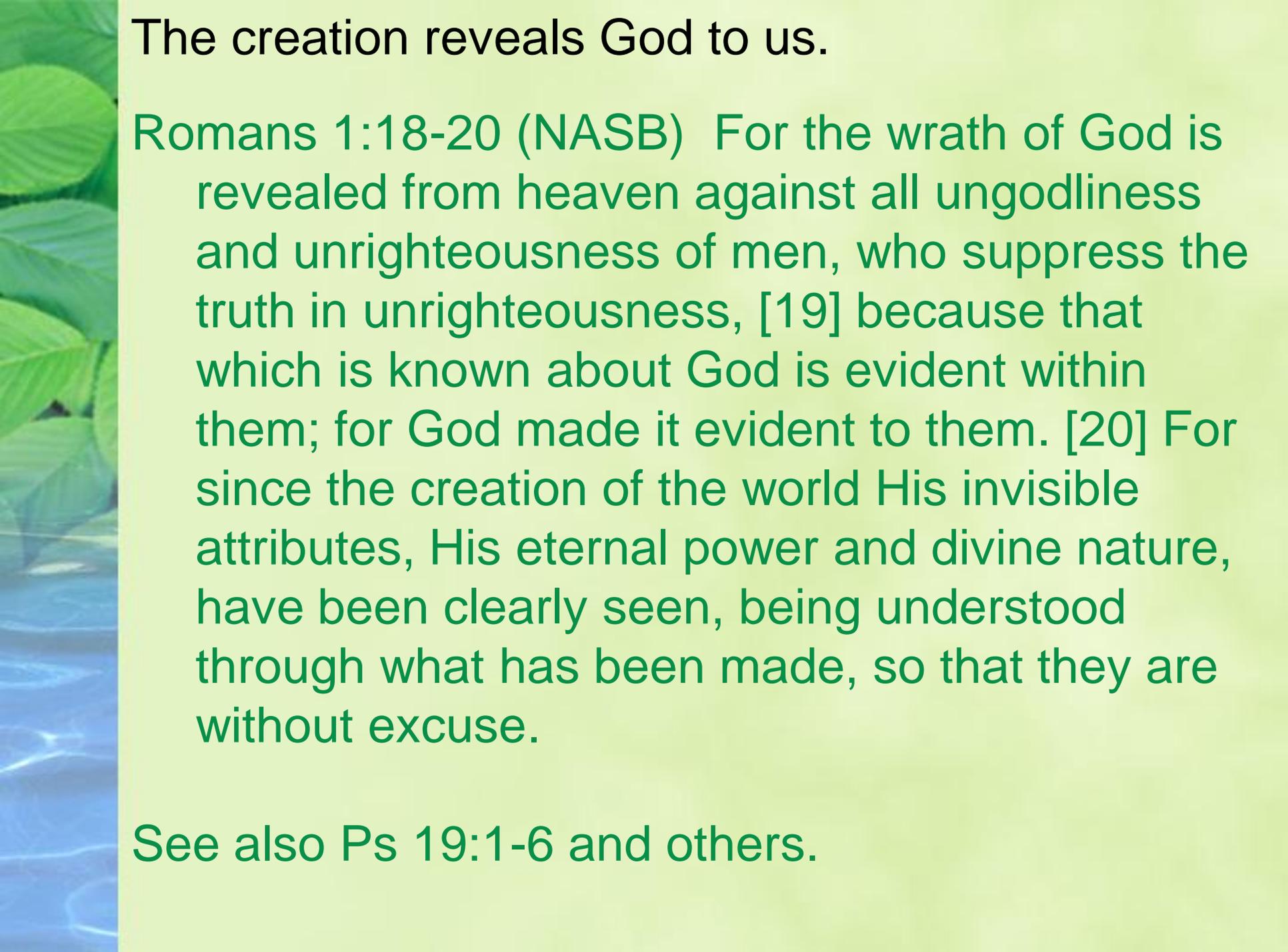
when you take away their breath,

they die and return to the dust.

[30] When you send your Spirit,

they are created,

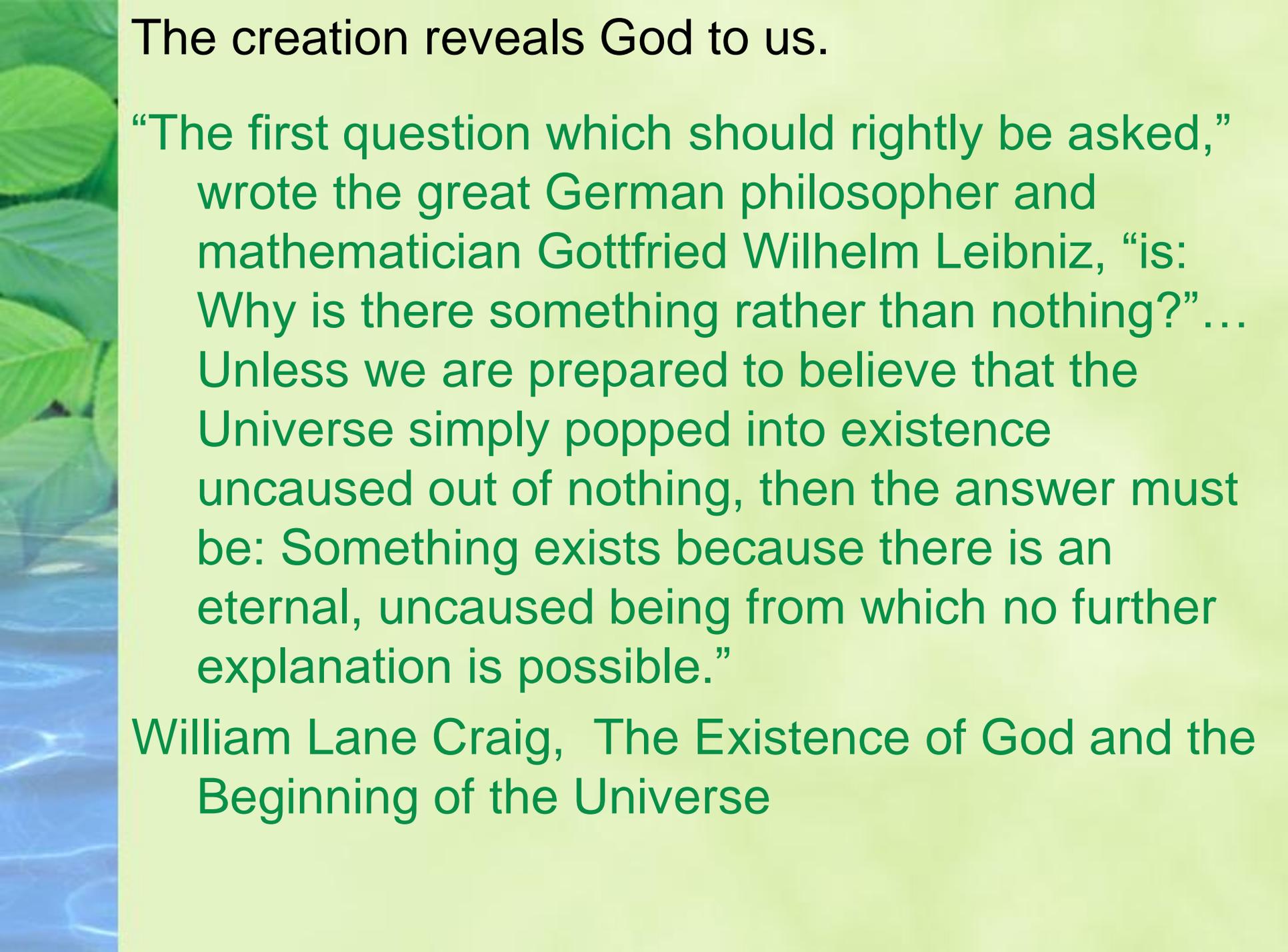
and you renew the face of the earth.



The creation reveals God to us.

Romans 1:18-20 (NASB) For the wrath of God is revealed from heaven against all ungodliness and unrighteousness of men, who suppress the truth in unrighteousness, [19] because that which is known about God is evident within them; for God made it evident to them. [20] For since the creation of the world His invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made, so that they are without excuse.

See also Ps 19:1-6 and others.



The creation reveals God to us.

“The first question which should rightly be asked,” wrote the great German philosopher and mathematician Gottfried Wilhelm Leibniz, “is: Why is there something rather than nothing?” ... Unless we are prepared to believe that the Universe simply popped into existence uncaused out of nothing, then the answer must be: Something exists because there is an eternal, uncaused being from which no further explanation is possible.”

William Lane Craig, *The Existence of God and the Beginning of the Universe*



The creation reveals God to us.

“God can say, ‘Do you want to know something of what I am like? Look at the creation as I made it.’ The universe is not an extension of the essence of God, but in all its parts it does speak of Him.”

Francis Schaeffer, *Genesis in Space and Time*



The creation reveals God to us.

"What value has wildlife from the standpoint of morals and religion? I heard of a boy once who was brought up an atheist. He changed his mind when he saw that there were a hundred-odd species of warblers, each bedecked like to the rainbow, and each performing yearly sundry thousands of miles of migration about which scientists wrote wisely but did not understand. No 'fortuitous concourse of elements' working blindly through any number of millions of years could quite account for why warblers are so beautiful. No mechanistic theory, even bolstered by mutations, has ever quite accounted for the colors of the cerulean warbler, or the vespers of the wood thrush, or the swansong, or -- goose music.



The creation reveals God to us.

I dare say this boy's convictions would be harder to shake than those of many inductive theologians. There are yet many boys to be born who, like Isaiah, 'may see, and know, and consider, and understand together, that the hand of the Lord hath done this.' But where shall they see, and know, and consider? In museums?"

Aldo Leopold, Round River

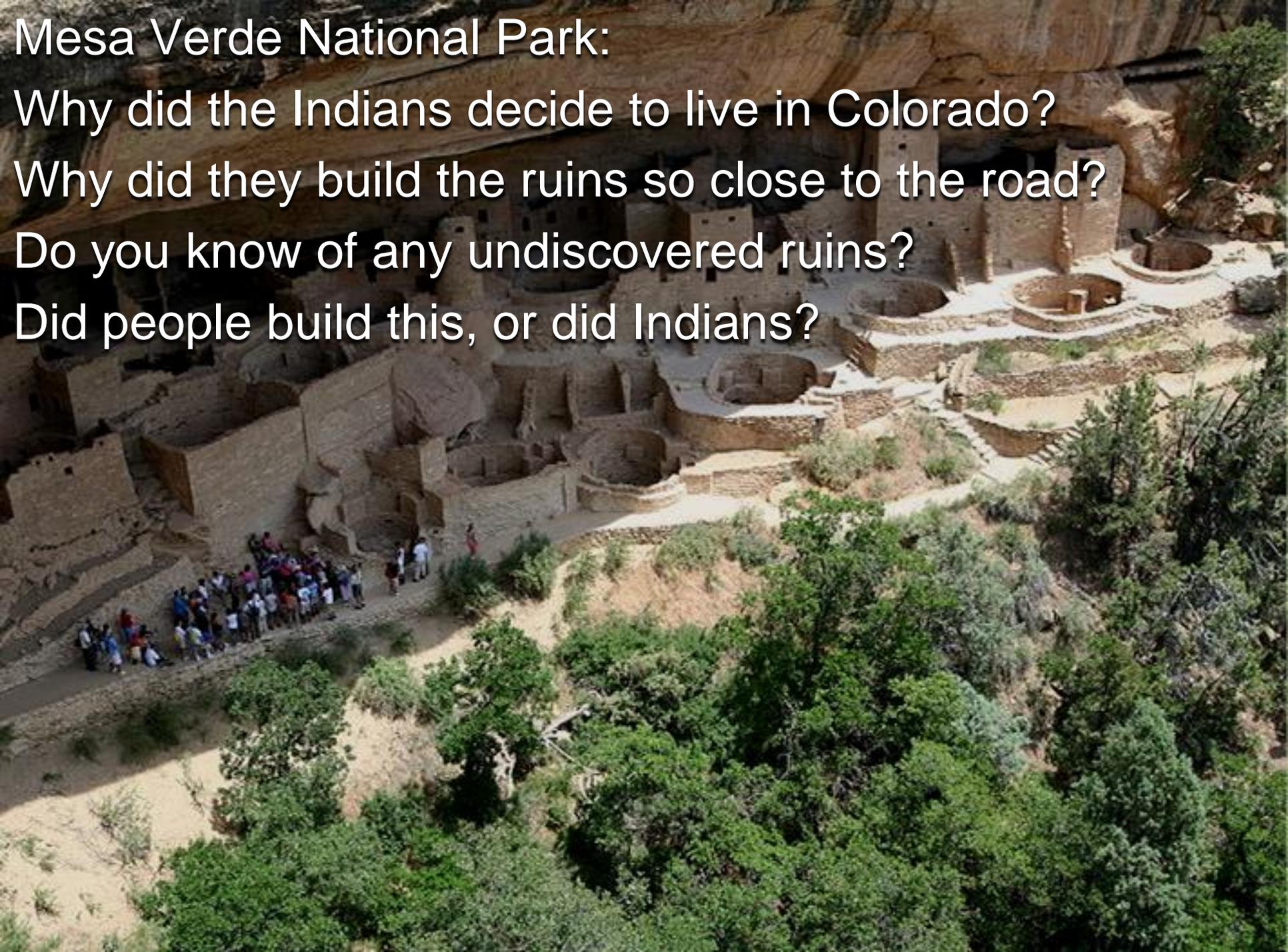
Mesa Verde National Park:

Why did the Indians decide to live in Colorado?

Why did they build the ruins so close to the road?

Do you know of any undiscovered ruins?

Did people build this, or did Indians?



# What have we done to communities/ecosystems?

## Examples of Ecosystem Loss in the U.S.:

1999 USGS survey:

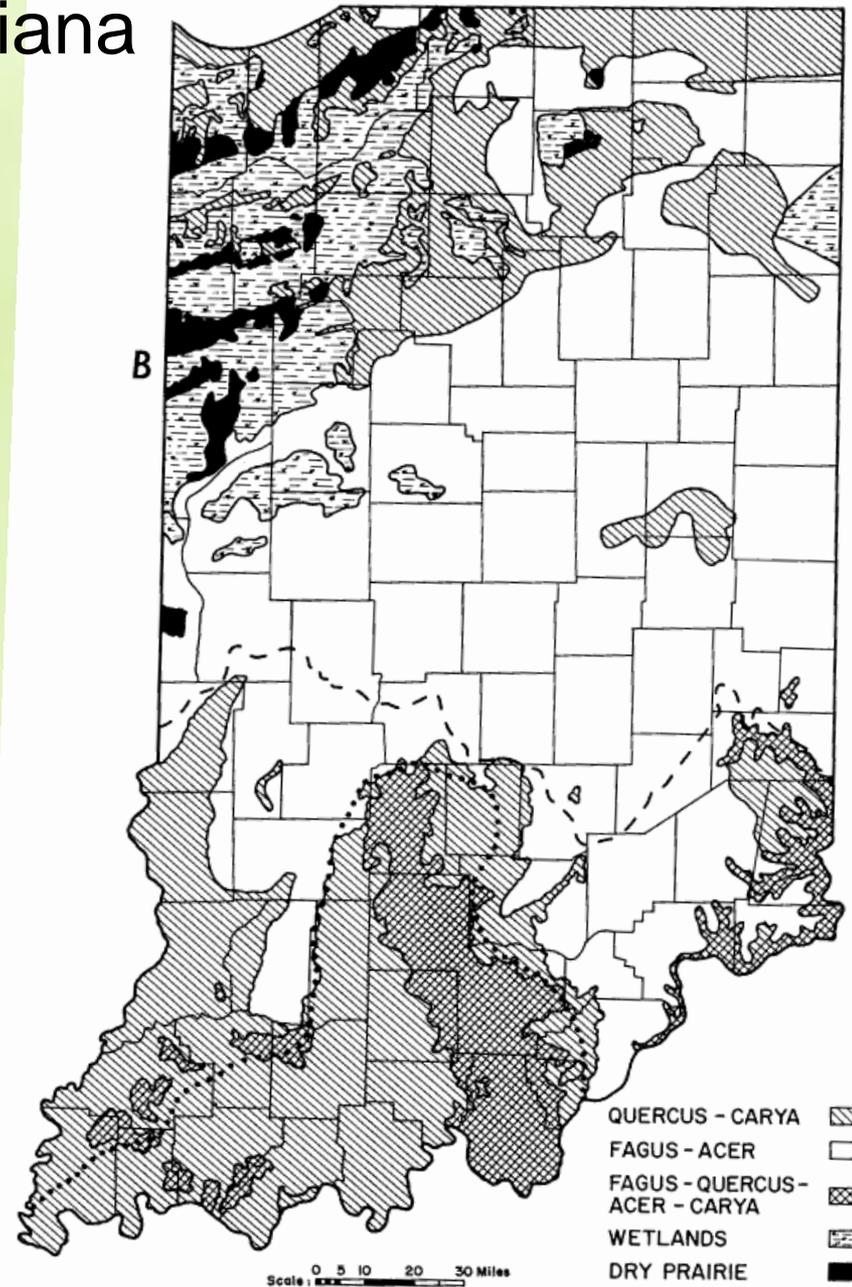
- Cut 95-98% of the virgin/old-growth forests in the lower 48 since 1620
- 98% of the tallgrass prairie
- 99% of California's grasslands, 91% of its wetlands, and 85% of its redwood forests.
- 90% of Hawaii's dry forests
- 81% of the nations fish communities
- more than 50% of our wetlands.



Pulling a big load in Ewen, Michigan 1893

# Plant Communities of Indiana

Dry	<u>Grass</u>	Prairie
	<u>Forest</u>	Oak-Hickory
		Mixed Mesophytic (Beech-Oak-Maple-Hickory)
Wet		Beech-Maple
		Wetland



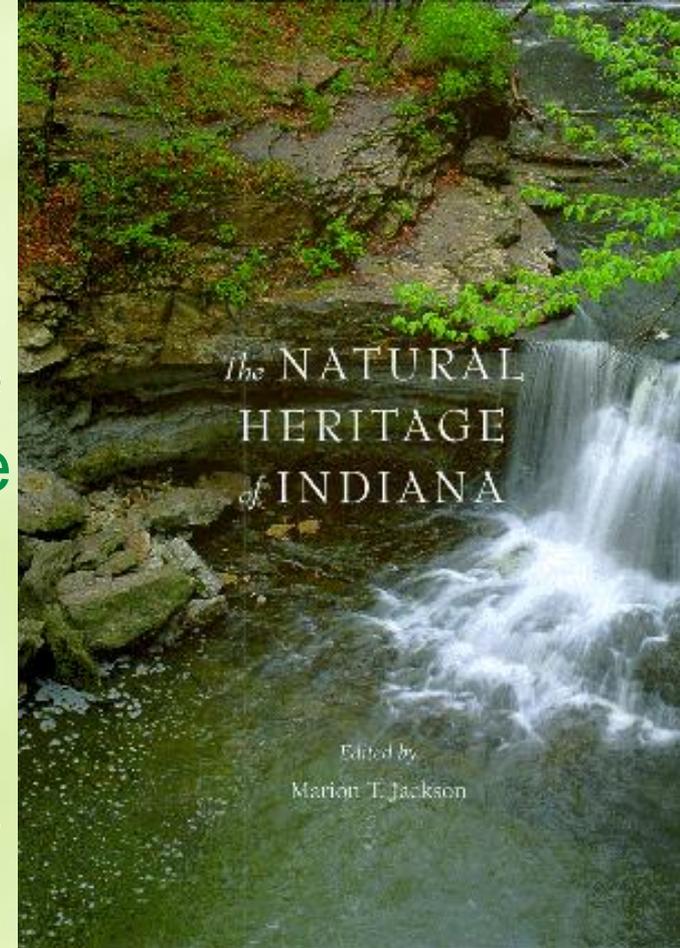
Lindsey, A. A., W. B. Crankshaw, and S. A. Qadir. 1965. **Soil Relations and Distribution Map of the Vegetation of Presettlement Indiana.** *Botanical Gazette*, 126(3): 155-163

# Indiana State Seal



# Plant Communities of Indiana

“Robert Ridgway, an eminent naturalist who studied and photographed the forests of the Lower Wabash River during the 1870s and 1880s, described the stands of timber of that region as ‘an exceedingly heavy virgin forest, some of the heaviest hardwood forest I have ever seen – as I have twice visited the Tropics (Central America) – covering almost the entire floodplain on the Indiana side.’”



Jackson, M. T. 2000. *The Natural Heritage of Indiana*. Indiana University Press, Bloomington.

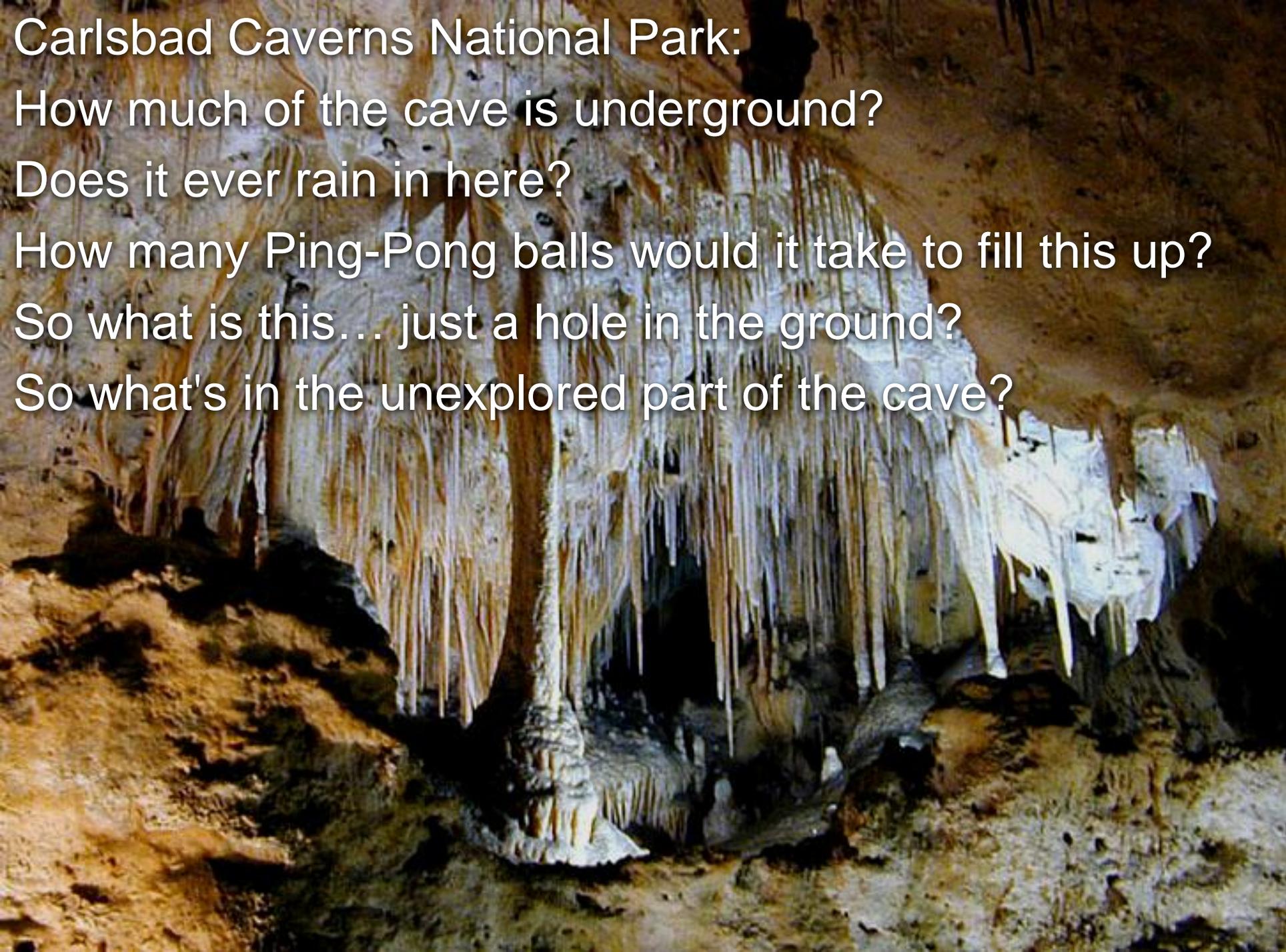
# Plant Communities of Indiana

“Ridgeway measured several sycamores at [8.0 to 9.5 feet in diameter] with overall heights of 160 to almost 200 feet. Several cypress stumps were measured in Knox County at 8 and 9 feet in diameter above their buttressed bases. He also measured a tuliptree, now rarely encountered on floodplains, that tapered [8 feet in diameter], 91 feet to the first limb, and 190 feet total height. The maximum diameter he recorded for a tuliptree was 11 feet; the average diameter of 18 measured specimens was 6.2 feet. Heights ranged from 110 to 168 feet, averaging 143.5.

Ridgeway’s measurements were of felled trees, so we can be confident of his data.”

# Plant Communities of Indiana

“Today, much less than 1 percent of the state remains in high-quality natural area. It is indeed sobering to realize that of the 20 million acres of original primeval forest that once occurred in Indiana – nearly enough to encircle the world one and a quarter times as a mile-wide band – today scarcely enough remains of high-quality old-growth forest in private ownership to encompass the Indianapolis Motor Speedway at the same one-mile width.”



Carlsbad Caverns National Park:

How much of the cave is underground?

Does it ever rain in here?

How many Ping-Pong balls would it take to fill this up?

So what is this... just a hole in the ground?

So what's in the unexplored part of the cave?

What have we  
done to species?

Psalm 104:24 (NIV)

How many are your  
works, O LORD!  
In wisdom you  
made them all;  
the earth is full of  
your creatures.

...until now...



Enter Red List search term(s)



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THREATENED

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**The IUCN Red List web site made easy: a users' guide is now available!**

03 April 2009 - In October 2008, the IUCN Red List web site was given a brand new look. The new site has more functionality than ever before. This also means that the site has more detailed search pages that... [more](#)



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22 March 2010 - Eighty five percent of sturgeon, one of the oldest families of fishes in existence, valued around the world for their precious roe, are at risk of extinction, making them the... [more](#)



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**Year of the Tiger**

23 February 2010 - 2010 is the Year of the Tiger in the Chinese calendar, a zodiac sign associated with power, passion and courage, yet these majestic animals remain under threat from human... [more](#)



**SHIP STURGEON**  
*Acipenser nudiventris*

© International Sturgeon Research Institute

# What have we done to the world's vertebrates?

	Estimated Number of described species <sup>1</sup>	Number of species evaluated by 2010 (IUCN Red List version 2010.1)	Number of threatened species <sup>2,3</sup> in 2010 (IUCN Red List version 2010.1)	Number threatened in 2010, as % of species described <sup>2,3</sup>	Number threatened in 2010, as % of species evaluated <sup>2,3,4</sup>
<b>Vertebrates</b>					
Mammals <sup>5</sup>	5,490	5,490	1,143	21%	21%
Birds	9,998	9,998	1,223	12%	12%
Reptiles	9,084	1,672	467	5%	28%
Amphibians <sup>6</sup>	6,433	6,284	1,895	29%	30%
Fishes	31,300	4,446	1,414	5%	32%
<b>Subtotal</b>	<b>62,305</b>	<b>27,890</b>	<b>6,142</b>	<b>10%</b>	<b>22%</b>

## NOTES (for rows and columns as indicated by the superscripted numbers):

1. The sources used for the numbers described species in each taxonomic group are listed below.

2. Threatened species are those listed as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU).

3. The numbers and percentages of species threatened in each group **DO NOT** mean that the remainder are all not threatened (i.e., are Least Concern). There are a number of species in many of the groups listed as Near Threatened or Data Deficient (see Tables 3a and 3b). These figures also need to be considered in relation to the number of species evaluated as shown in column two (see note 4).

## Sources for Numbers of Described Species:

### Vertebrates

**Mammals** – From Wilson and Reeder (2005; see <http://www.bucknell.edu/msw3/>), with deviations based on new revisions and published papers that have appeared since the accounts in Wilson and Reeder (2005) were compiled and largely up until 31 December 2007, but there are a few exceptions where new species published in 2008 and 2009 have been included, while others are currently under review. In cases where there are alternative taxonomic treatments, the Global Mammal Assessment coordinating team working with the relevant IUCN SSC Specialist Group has advised on which treatment to follow.

**Birds** – BirdLife International. 2009. The BirdLife checklist of the birds of the world, with conservation status and taxonomic sources. Version 2. Available from [http://www.birdlife.info/docs/Spochecklist/Checklist\\_v2\\_June09.zip](http://www.birdlife.info/docs/Spochecklist/Checklist_v2_June09.zip) [xls zipped 1 MB]. Accessed: 31 October 2009.

**Amphibians** – From Frost, D.R. 2009. *Amphibian Species of the World: an Online Reference*. Version 5.3 (12 February, 2009). Available at: <http://research.amnh.org/herpetology/amphibia/index.php>. Accessed: 31 October 2009.

**Reptiles** – Based on the figures (as of October 2009) provided by *The TIGR Reptile Database* compiled by Peter Uetz and Jakob Hallermann. Available at: <http://www.reptile-database.org>. Accessed: 31 October 2009.

**Fishes** – Based on Froese, R. and Pauly, D. (eds). 2009. *FishBase*. World Wide Web electronic publication. [www.fishbase.org](http://www.fishbase.org). version (09/2009). Accessed: 31 October 2009.

# What have we done to plant species in Indiana?

35 species are listed on this page.

This is page 1 of 18.

<u>Species Name</u>	<u>Common Name</u>	<u>GRANK</u>	<u>SRANK</u>	<u>FEDERAL</u>	<u>STATE</u>
Acalypha deamii	Mercury	G4?	S2		SR
Aconitum uncinatum	Blue Monkshood	G4	S1		SE
Actaea rubra	Red Baneberry	G5	S2		SR
Adlumia fungosa	Climbing Fumatory	G4	SX		SX
Aesculus octandra	Yellow Buckeye	G5	S3		WL
Agalinis auriculata	Earleaf Foxglove	G3	S1		ST
Agalinis fasciculata	Clustered Foxglove	G5	S3		WL
Agalinis gattereri	Roundstem Foxglove	G4	S3		WL
Agalinis skinneriana	Pale False Foxglove	G3G4	S1		ST
Agave virginica	Virginia Tube-rose	G5	S3		WL
Alnus rugosa	Speckled Alder	G5T5	S3		WL
Amelanchier humilis	Running Serviceberry	G5	S1		SE
Ammophila breviligulata	Marram Grass	G5	S3		WL
Andromeda glaucophylla	Bog Rosemary	G5	S2		SR
Andropogon ternarius	Silver Bluestem	G5	S3		WL
Androsace occidentalis	Western Rockjasmine	G5	S2		ST
Anemone caroliniana	Carolina Anemone	G5	SX		SX
Antennaria solitaria	Single-head Pussytoes	G5	S3		WL
Arabis drummondii	Drummond Rockcress	G5	S1		SE
Arabis glabra	Tower-mustard	G5	S2		WL
Arabis missouriensis var. deamii	Missouri Rockcress	G5T3?Q	S1		SE
Arabis patens	Spreading Rockcress	G3	S1		SE
Aralia hispida	Bristly Sarsaparilla	G5	S1		SE
Arctostaphylos uva-ursi	Bearberry	G5	S2		SR
Arenaria patula	Pitcher's Stitchwort	G4	S1		SE
Arenaria stricta	Michaux's Stitchwort	G5	S2		SR
Arethusa bulbosa	Swamp-pink	G4	SX		SX
Aristida intermedia	Slim-spike Three-awn Grass	GNR	S2		SR
Aristida tuberculosa	Seabeach Needlegrass	G5	S2		SR
Aristolochia tomentosa	Woolly Dutchman's-pipe	G5	S3		WL
Armoracia aquatica	Lake Cress	G4?	S1		SE
Asclepias meadii	Mead's Milkweed	G2	SX	LT	SRE
Asclepias variegata	White Milkweed	G5	S3		WL
Asclepias viridis	Green Milkweed	G4G5	S1		SE
Asplenium bradleyi	Bradley's Spleenwort	G4	S1		SE

GRANK: G1=critically imperiled globally, G2=imperiled globally, G3=rare or uncommon, G4= widespread but with long term concerns, G5=widespread and secure, T ranks indicate taxonomic subunit rank, ? or Q=questionable rank, NR=not ranked or uncertain rank  
 SRANK: S1=critically imperiled in state, S2=imperiled in state, SX=extirpated,  
 STATE: SX=extirpated, SE=endangered, ST=threatened, SR=rare, SRE = reintroduced, WL = watch list  
 FEDERAL: LE=endangered, LT=threatened, C=candidate species



# Endangered and Special Concern Animals of Indiana

## MAMMALS

### State Endangered

Gray Myotis (FE)	<i>Myotis grisescens</i>
Indiana Myotis (FE)	<i>Myotis sodalis</i>
Evening Bat	<i>Nycticeius humeralis</i>
Swamp Rabbit	<i>Sylvilagus aquaticus</i>
Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>
Allegheny Woodrat	<i>Neotoma magister</i>



### Special Concern

Smoky Shrew	<i>Sorex fumeus</i>
Pygmy Shrew	<i>Sorex hoyi</i>
Star-nosed Mole	<i>Condylura cristata</i>
Southeastern Myotis	<i>Myotis austroriparius</i>
Little Brown Myotis	<i>Myotis lucifugus</i>
Northern Myotis	<i>Myotis septentrionalis</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Eastern Pipistrelle	<i>Perimyotis subflavus</i>
Red Bat	<i>Lasiurus borealis</i>
Hoary Bat	<i>Lasiurus cinereus</i>
Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>
Plains Pocket Gopher	<i>Geomys bursarius</i>
River Otter	<i>Lontra canadensis</i>
Least Weasel	<i>Mustela nivalis</i>
Badger	<i>Taxidea taxus</i>
Bobcat	<i>Lynx rufus</i>

## BIRDS

### State Endangered

Trumpeter Swan	<i>Cygnus buccinator</i>
American Bittern	<i>Botaurus lentiginosus</i>
Least Bittern	<i>Ixobrychus exilis</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
Yellow-crowned Night-Heron	<i>Nyctanassa violacea</i>
Osprey	<i>Pandion haliaetus</i>
Northern Harrier	<i>Circus cyaneus</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Black Rail	<i>Lateralus jamaicensis</i>
King Rail	<i>Rallus elegans</i>
Virginia Rail	<i>Rallus limicola</i>
Common Moorhen	<i>Gallinula chloropus</i>
Whooping Crane (FE)	<i>Grus americana</i>
Piping Plover (FE)	<i>Charadrius melodius</i>
Upland Sandpiper	<i>Bartramia longicauda</i>
Least Tern (FE)	<i>Sterna antillarum</i>
Black Tern	<i>Chlidonias niger</i>
Barn Owl	<i>Tyto alba</i>
Short-eared Owl	<i>Asio flammeus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Sedge Wren	<i>Cistothorus platensis</i>
Marsh Wren	<i>Cistothorus palustris</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>
Kirtland's Warbler (FE)	<i>Dendroica kirtlandii</i>
Cerulean Warbler	<i>Dendroica cerulea</i>
Henslow's Sparrow	<i>Ammodramus henslowii</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>

### Special Concern

Great Egret	<i>Ardea alba</i>
Mississippi Kite	<i>Ictinia mississippiensis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>
Red-shouldered Hawk	<i>Buteo lineatus</i>
Broad-winged Hawk	<i>Buteo platypterus</i>
Sandhill Crane	<i>Grus canadensis</i>
American Golden-Plover	<i>Pluvialis dominica</i>
Solitary Sandpiper	<i>Tringa solitaria</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Ruddy Turnstone	<i>Arenaria interpres</i>
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>
Short-billed Dowitcher	<i>Limnodromus griseus</i>
Wilson's Phalarope	<i>Phalaropus tricolor</i>
Common Nighthawk	<i>Chordeiles minor</i>
Whip-poor-will	<i>Caprimulgus vociferus</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
Worm-eating Warbler	<i>Helmitheros vermivorum</i>
Hooded Warbler	<i>Wilsonia citrina</i>
Western Meadowlark	<i>Sturnella neglecta</i>



# Endangered and Special Concern Animals of Indiana

## AMPHIBIANS

### State Endangered

- |                      |                                     |
|----------------------|-------------------------------------|
| Hellbender           | <i>Cryptobranchus alleganiensis</i> |
| Green Salamander     | <i>Aneides aeneus</i>               |
| Four-toed Salamander | <i>Hemidactylium scutatum</i>       |
| Red Salamander       | <i>Pseudotriton ruber</i>           |
| Crawfish Frog        | <i>Lithobates areolatus</i>         |



### Special Concern

- |                         |                           |
|-------------------------|---------------------------|
| Common Mudpuppy         | <i>Necturus maculosus</i> |
| Streamside Salamander   | <i>Ambystoma barbouri</i> |
| Blue-spotted Salamander | <i>Ambystoma laterale</i> |
| Northern Cricket Frog   | <i>Acris crepitans</i>    |
| Plains Leopard Frog     | <i>Lithobates blairi</i>  |
| Northern Leopard Frog   | <i>Lithobates pipiens</i> |

## REPTILES

### State Endangered

- |                               |                               |
|-------------------------------|-------------------------------|
| Alligator Snapping Turtle     | <i>Macrochelys temminckii</i> |
| Eastern Mud Turtle            | <i>Kinosternon subrubrum</i>  |
| Spotted Turtle                | <i>Clemmys guttata</i>        |
| Blanding's Turtle             | <i>Emydoidea blandingii</i>   |
| Hieroglyphic River Cooter     | <i>Pseudemys concinna</i>     |
| Ornate Box Turtle             | <i>Terrapene ornate</i>       |
| Scarlet Snake                 | <i>Cemophora coccinea</i>     |
| Kirtland's Snake              | <i>Clonophis kirtlandii</i>   |
| Copperbelly Water Snake (FT†) | <i>Nerodia erythrogaster</i>  |
| Smooth Green Snake            | <i>Opheodrys vernalis</i>     |
| Southeastern Crowned Snake    | <i>Tantilla coronata</i>      |
| Butler's Garter Snake         | <i>Thamnophis butleri</i>     |
| Cottonmouth                   | <i>Agkistrodon piscivorus</i> |
| Timber Rattlesnake            | <i>Crotalus horridus</i>      |
| Massasauga (FC)               | <i>Sistrurus catenatus</i>    |



### Special Concern

- |                      |                            |
|----------------------|----------------------------|
| Eastern Box Turtle   | <i>Terrapene carolina</i>  |
| Mud Snake            | <i>Farancia abacura</i>    |
| Rough Green Snake    | <i>Opheodrys aestivus</i>  |
| Western Ribbon Snake | <i>Thamnophis proximus</i> |

† Only the northern population of copperbelly water snake is federally threatened.

Support the conservation of Indiana's nongame and endangered species by donating to the Nongame Fund. The money you donate goes directly to the protection and management of more than 750 wildlife species in Indiana. Look for the eagle logo on your Indiana state tax form to donate all or part of your refund. Or to donate directly write to:

Nongame Fund, 402 W. Washington St. Rm W273, Indianapolis, IN 46204.



# Endangered and Special Concern Animals of Indiana

## FISH

### State Endangered

- Northern Brook Lamprey *Ichthyomyzon fossor*
- Lake Sturgeon *Acipenser fulvescens*
- Redside Dace *Clinostomus elongatus*
- Pallid Shiner *Hybopsis amnis*
- Greater Redhorse *Moxostoma valenciennesi*
- Northern Cavefish *Amblyopsis spelaea*
- Bantam Sunfish *Lepomis symmetricus*
- Variagate Darter *Etheostoma variatum*
- Channel Darter *Percina copelandi*
- Gilt Darter *Percina evides*



### Special Concern

- Pugnose Shiner *Notropis anogenus*
- Bigmouth Shiner *Notropis dorsalis*
- Longnose Dace *Rhinichthys cataractae*
- Longnose Sucker *Catostomus catostomus*
- Northern Madtom *Noturus stigmosus*
- Ohio River Muskellunge *Esox masquinongy ohioensis*
- Cisco *Coregonus artedii*
- Lake Whitefish *Coregonus clupeaformis*
- Trout-perch *Percopsis omiscomaycus*
- Slimy Sculpin *Cottus cognatus*
- Western Sand Darter *Ammocrypta clara*
- Spotted Darter *Etheostoma maculatum*
- Cypress Darter *Etheostoma proeliare*
- Tippecanoe Darter *Etheostoma tippecanoe*
- Banded Pygmy Sunfish *Elassoma zonatum*

## MOLLUSKS\*

### State Endangered

- Fanshell (FE) *Cyprogenia stegaria*
- White Catspaw (FE) *Epioblasma obliquata perobliqua*
- Northern Riffleshell (FE) *Epioblasma torulosa rangiana*
- Tubercled Blossom (FE) *Epioblasma torulosa torulosa*
- Snuffbox *Epioblasma triquetra*
- Longsolid *Fusconaia subrotunda*
- Pink Mucket (FE) *Lampsilis abrupta*
- White Wartyback (FE) *Plethobasus cicatricosus*
- Orangefoot Pimpleback (FE) *Plethobasus cooperianus*
- Sheepnose (FC) *Plethobasus cyphus*
- Clubshell (FE) *Pleurobema clava*
- Rough Pigtoe (FE) *Pleurobema plenum*
- Pyramid Pigtoe *Pleurobema rubrum*
- Fat Pocketbook (FE) *Potamilus capax*
- Rabbitsfoot *Quadrula cylindrica cylindrica*

### Special Concern

- Wavyrayed Lampmussel *Lampsilis fasciola*
- Round Hickorynut *Obovaria subrotunda*
- Ohio Pigtoe *Pleurobema cordatum*
- Kidneyshell *Ptychobranthus fasciolaris*
- Salamander Mussel *Simpsoniias ambigua*
- Purple Lilliput *Toxolasma lividus*
- Ellipse *Venustaconcha ellipsiformis*
- Rayed Bean (FC) *Villosa fabalis*
- Little Spectaclecase *Villosa lienosa*
- Pointed Campeloma *Campeloma decisum*
- Swamp Lymnaea *Lymnaea stagnalis*

\* It is illegal to take or possess live mussels and mussel shells of any species of native mussel from the waters of Indiana.

STATE

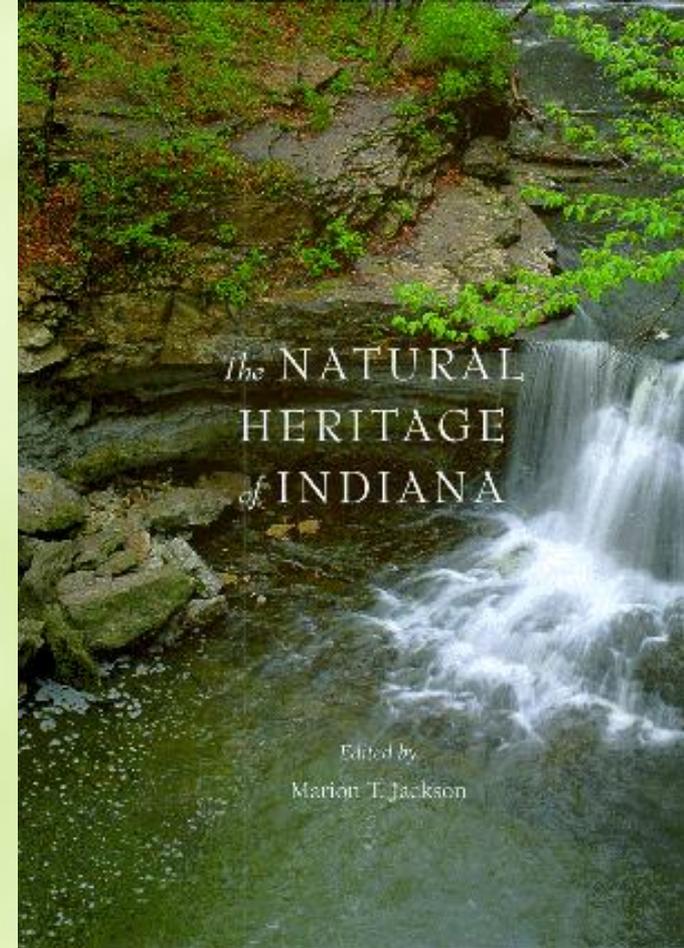
**STATE ENDANGERED:** Any animal species whose prospects for survival or recruitment within the state are in immediate jeopardy and are in danger of disappearing from the state. This includes all species classified as endangered by the federal government that occur in Indiana.

**SPECIAL CONCERN:** Any animal species requiring monitoring because of known/suspected limited abundance or distribution or because of a recent change in legal status or required habitat.

These are just the groups that have been studied...

## Extinct mammals of Indiana

“For millennia, thousands of these huge, shaggy beasts {bison} had periodically moved southeastward from the Illinois and western Indiana prairies, crossed the Wabash River near Vincennes, and stolidly sauntered along the famed Buffalo Trace ... to the Falls of the Ohio at Louisville, on their journey to Big Bone Lick and the barrens of Kentucky to obtain minerals and salt.”



Jackson, M. T. 2000. *The Natural Heritage of Indiana*. Indiana University Press, Bloomington.

## Extinct mammals of Indiana

“In densely wooded regions the bison were primarily transients, but in meadows and prairies they abounded. From the summit of a hill near Ouiatenon, a report of 1718 stated, ‘Nothing is visible to the eye but prairies full of buffaloes.’”

## Extinct mammals of Indiana

“But as prevalent as they once were, the bison were essentially wiped out in a score of years and were gone from the state by 1830. Elk, panther, black bear, fischer, and beaver disappeared with almost equal rapidity; all nearly gone from Indiana by 1850. Even the tenacious timber wolf, the white-tailed deer, and the bald eagle had been extirpated by the beginning of the twentieth century.”

Yosemite National Park:

Where are the cages for the animals?

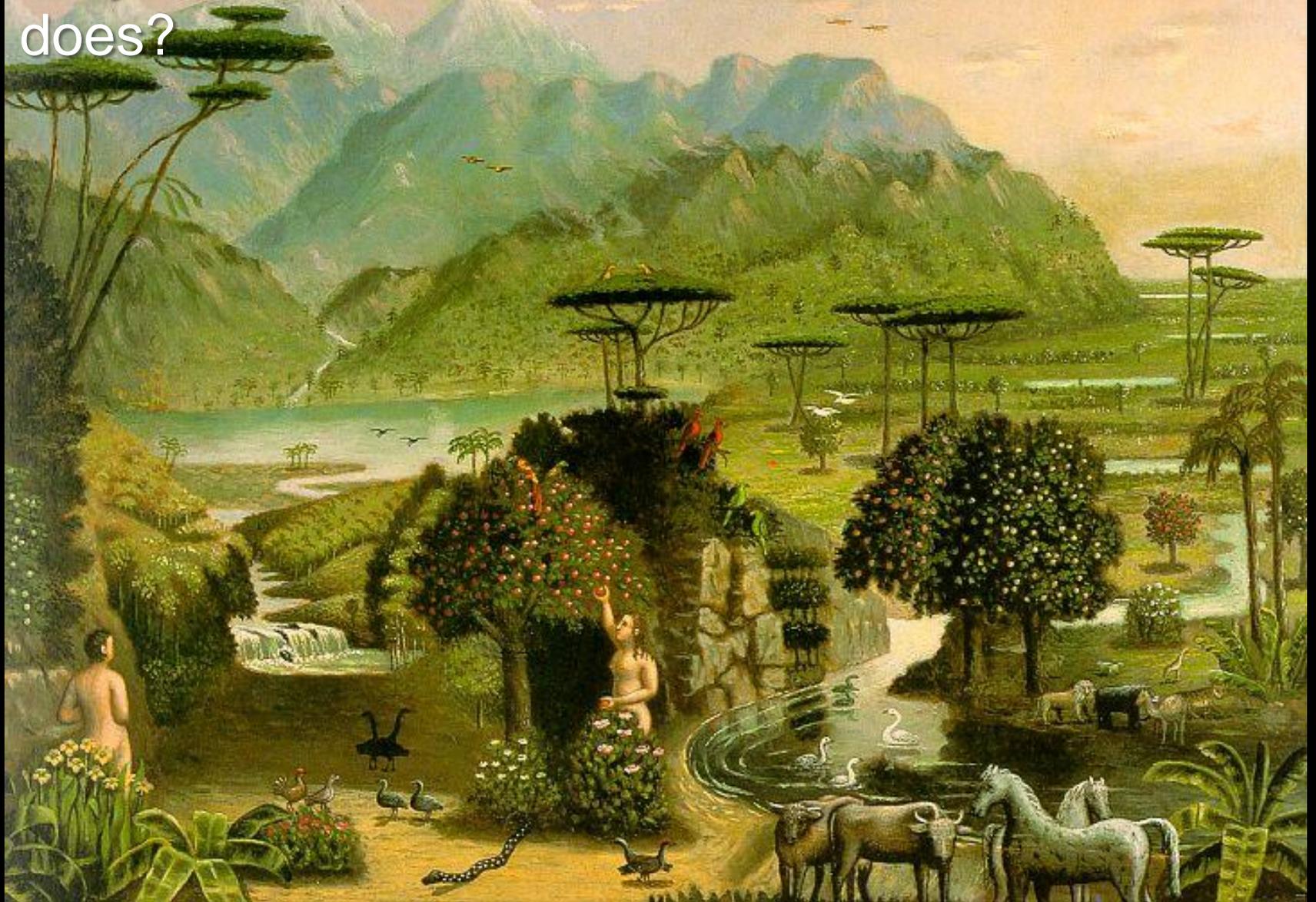
What time of year do you turn on Yosemite Falls?

What happened to the other half of Half Dome?

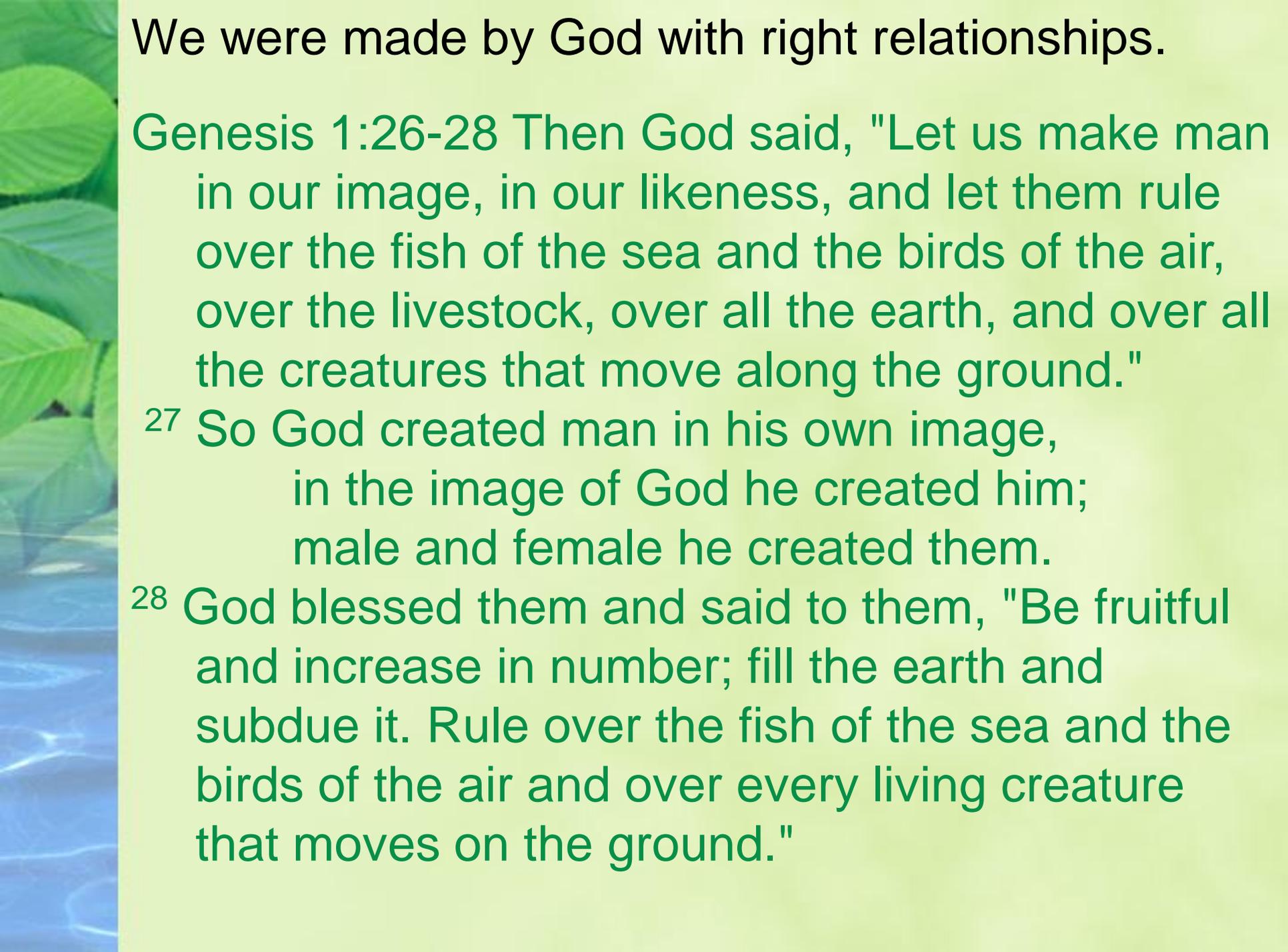
Can I get my picture taken with the carving of President Clinton?



God made the creation good.  
Why don't we care about the creation as God  
does?



Erastus Salisbury Field, The Garden of Eden, about 1860

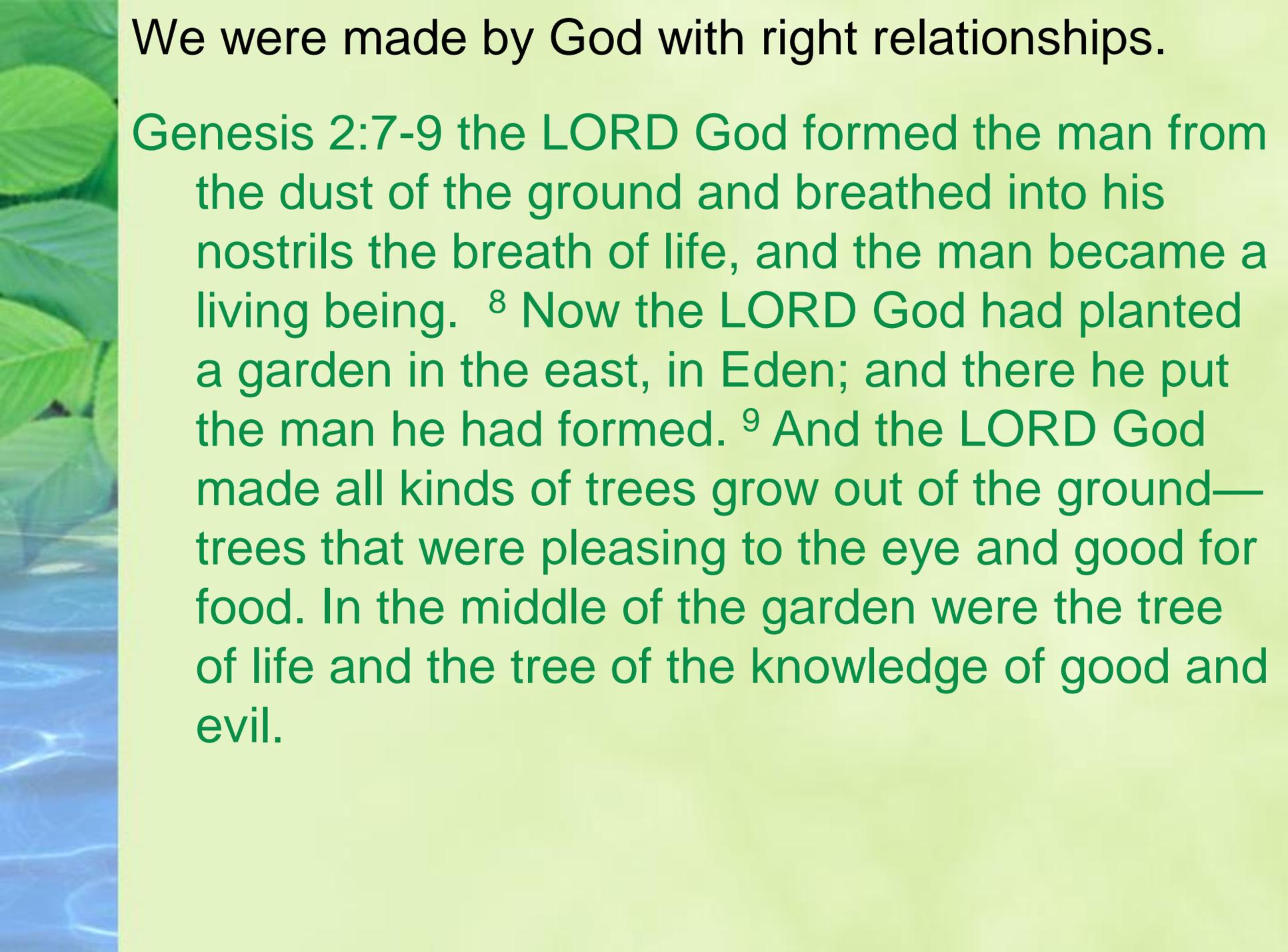


We were made by God with right relationships.

Genesis 1:26-28 Then God said, "Let us make man in our image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground."

<sup>27</sup> So God created man in his own image, in the image of God he created him; male and female he created them.

<sup>28</sup> God blessed them and said to them, "Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground."



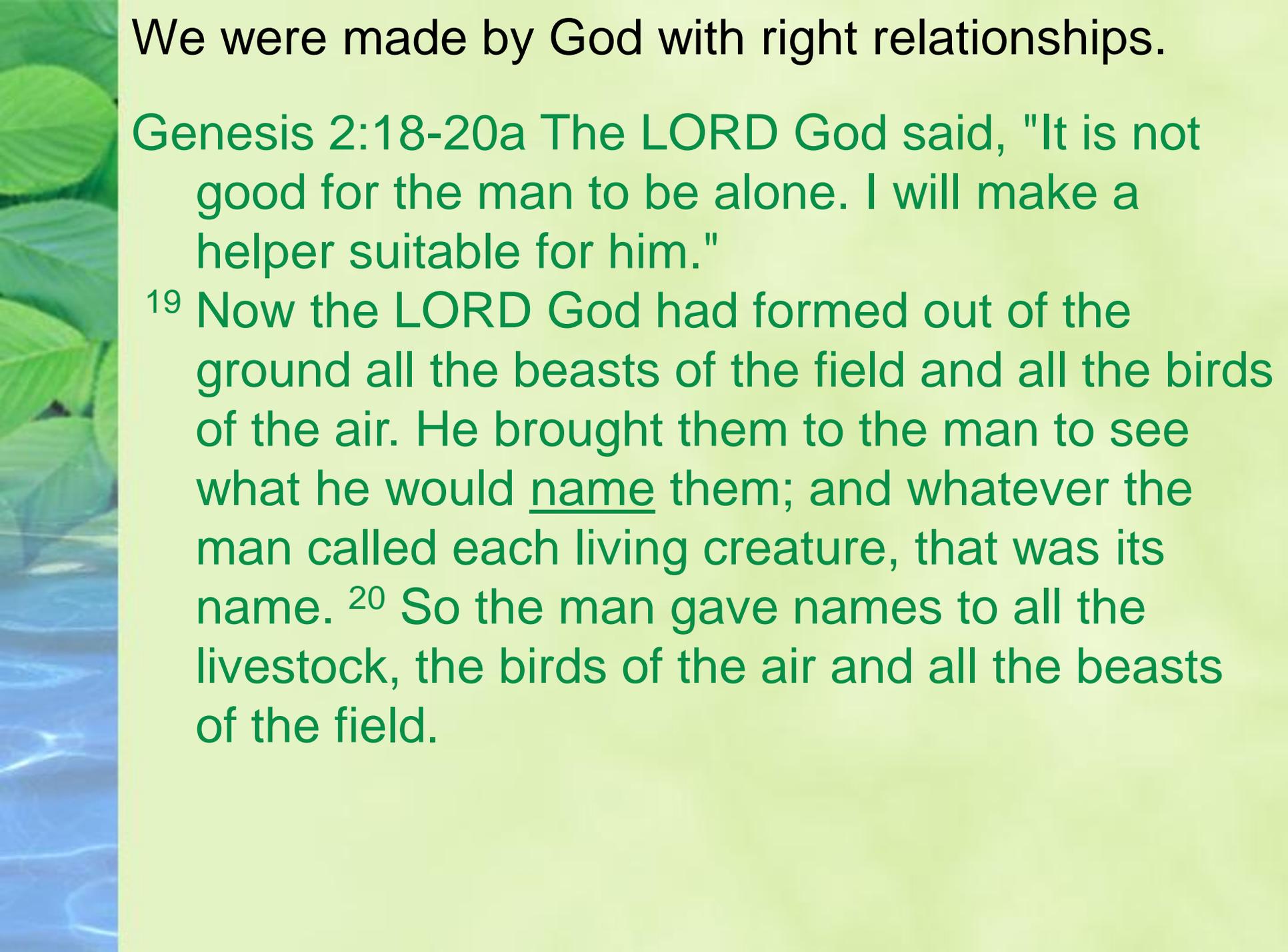
We were made by God with right relationships.

Genesis 2:7-9 the LORD God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being. <sup>8</sup> Now the LORD God had planted a garden in the east, in Eden; and there he put the man he had formed. <sup>9</sup> And the LORD God made all kinds of trees grow out of the ground—trees that were pleasing to the eye and good for food. In the middle of the garden were the tree of life and the tree of the knowledge of good and evil.



We were made by God with right relationships.

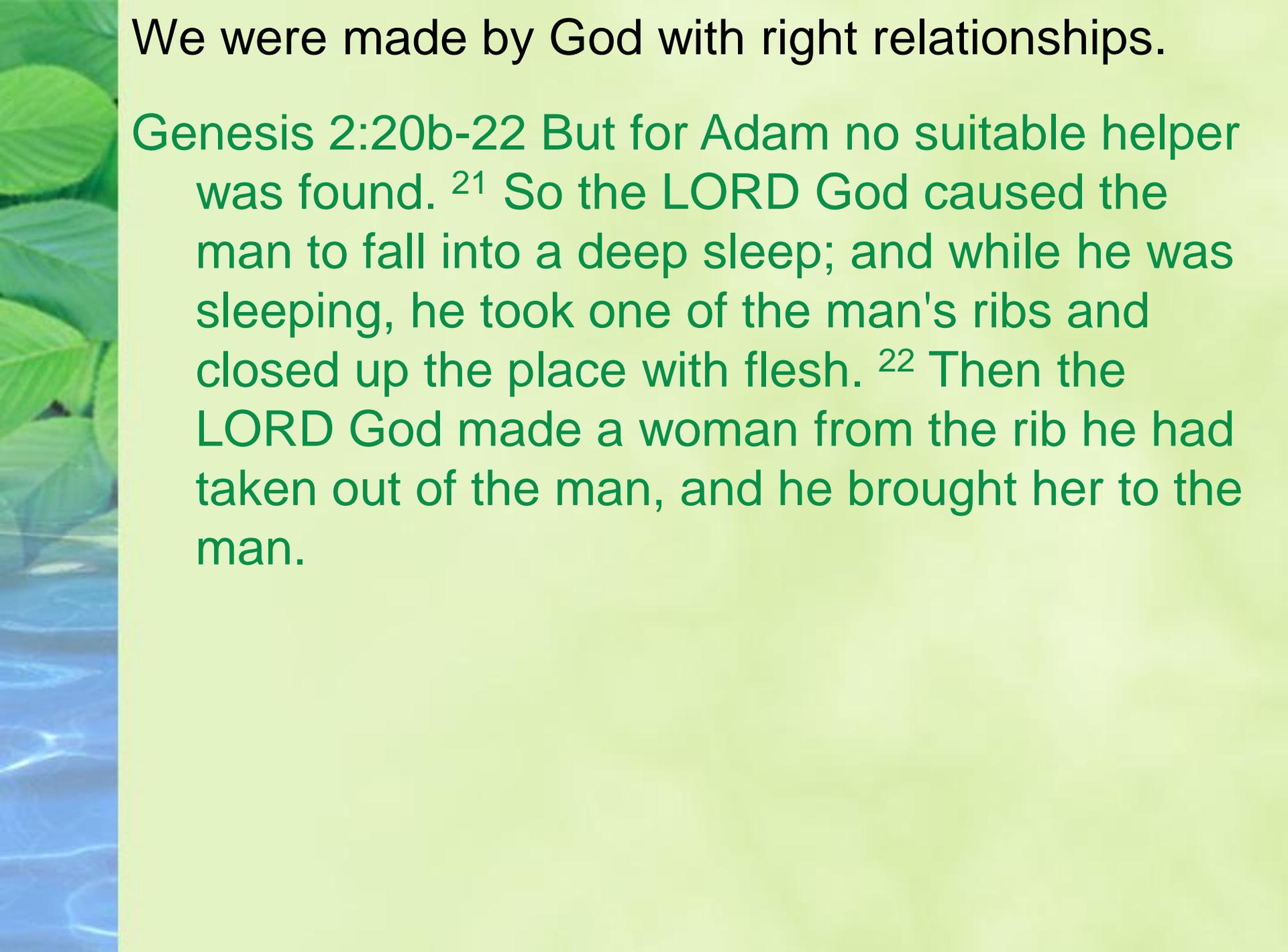
Genesis 2:15-17 The LORD God took the man and put him in the Garden of Eden to work it and take care of it. <sup>16</sup> And the LORD God commanded the man, "You are free to eat from any tree in the garden; <sup>17</sup> but you must not eat from the tree of the knowledge of good and evil, for when you eat of it you will surely die."



We were made by God with right relationships.

Genesis 2:18-20a The LORD God said, "It is not good for the man to be alone. I will make a helper suitable for him."

<sup>19</sup> Now the LORD God had formed out of the ground all the beasts of the field and all the birds of the air. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name. <sup>20</sup> So the man gave names to all the livestock, the birds of the air and all the beasts of the field.



We were made by God with right relationships.

Genesis 2:20b-22 But for Adam no suitable helper was found. <sup>21</sup> So the LORD God caused the man to fall into a deep sleep; and while he was sleeping, he took one of the man's ribs and closed up the place with flesh. <sup>22</sup> Then the LORD God made a woman from the rib he had taken out of the man, and he brought her to the man.



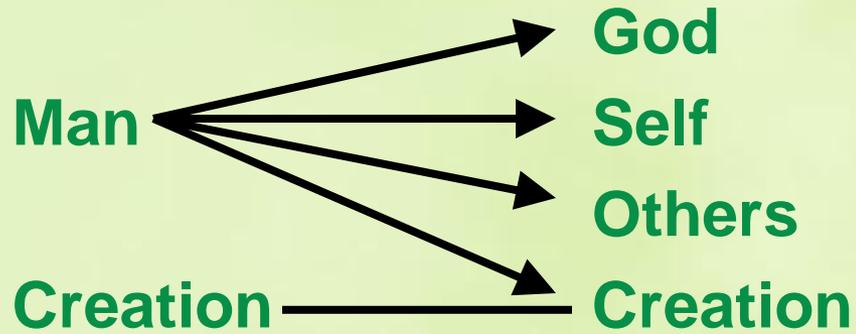
We were made by God with right relationships.

Genesis 2:23-25 The man said,  
"This is now bone of my bones  
and flesh of my flesh;  
she shall be called 'woman,'  
for she was taken out of man."

<sup>24</sup> For this reason a man will leave his father and mother and be united to his wife, and they will become one flesh.

<sup>25</sup> The man and his wife were both naked, and they felt no shame.

We were made by God with right relationships.



Denali National Park:

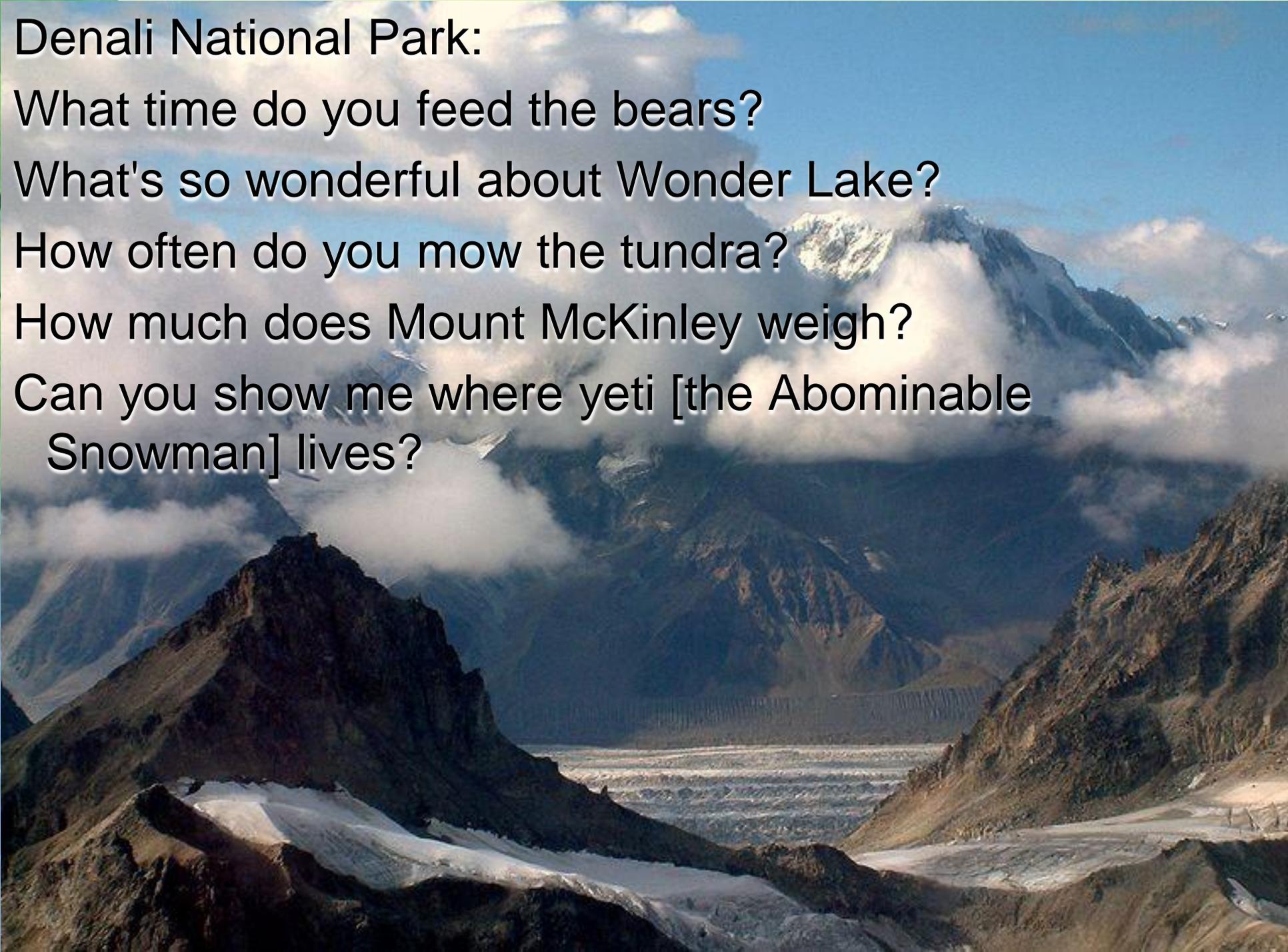
What time do you feed the bears?

What's so wonderful about Wonder Lake?

How often do you mow the tundra?

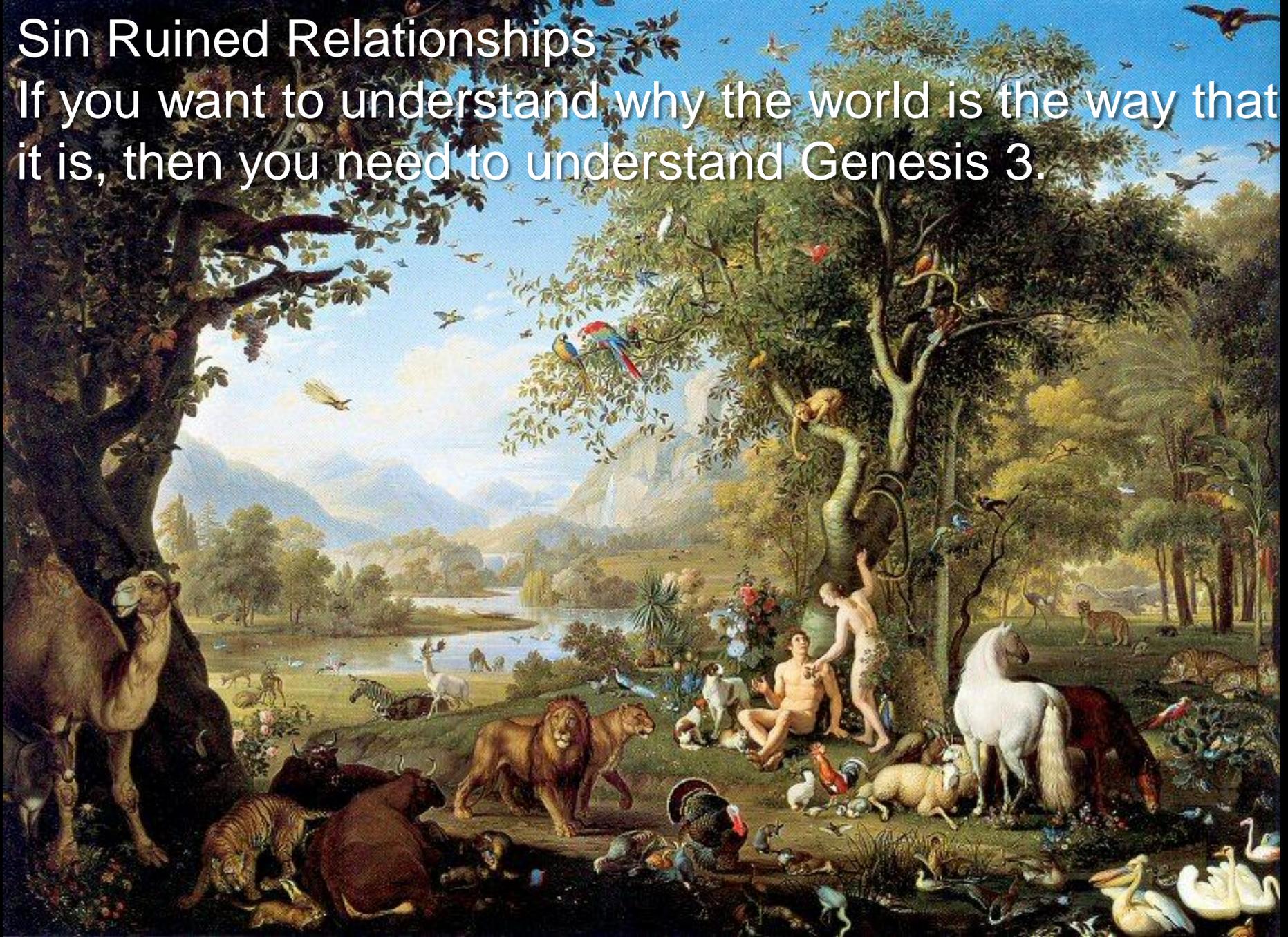
How much does Mount McKinley weigh?

Can you show me where yeti [the Abominable  
Snowman] lives?



# Sin Ruined Relationships

If you want to understand why the world is the way that it is, then you need to understand Genesis 3.



Wenzel Peter, Adam and Eve in the Garden of Eden

# Sin Ruined Relationships

Genesis 3:1-5 Now the serpent was more crafty than any of the wild animals the LORD God had made. He said to the woman, "Did God really say, 'You must not eat from any tree in the garden'?"<sup>2</sup> The woman said to the serpent, "We may eat fruit from the trees in the garden,<sup>3</sup> but God did say, 'You must not eat fruit from the tree that is in the middle of the garden, and you must not touch it, or you will die.' "

<sup>4</sup> "You will not surely die," the serpent said to the woman. <sup>5</sup> "For God knows that when you eat of it your eyes will be opened, and you will be like God, knowing good and evil."

# Sin Ruined Relationships

Genesis 3:6-7 <sup>6</sup> When the woman saw that the fruit of the tree was good for food and pleasing to the eye, and also desirable for gaining wisdom, she took some and ate it. She also gave some to her husband, who was with her, and he ate it. <sup>7</sup> Then the eyes of both of them were opened, and they realized they were naked; so they sewed fig leaves together and made coverings for themselves.

# Sin Ruined Relationships

Genesis 3:8-12 Then the man and his wife heard the sound of the LORD God as he was walking in the garden in the cool of the day, and they hid from the LORD God among the trees of the garden. <sup>9</sup> But the LORD God called to the man, "Where are you?"

<sup>10</sup> He answered, "I heard you in the garden, and I was afraid because I was naked; so I hid."

<sup>11</sup> And he said, "Who told you that you were naked? Have you eaten from the tree that I commanded you not to eat from?"

<sup>12</sup> The man said, "The woman you put here with me—she gave me some fruit from the tree, and I ate it

# Sin Ruined Relationships

Genesis 3:13 Then the LORD God said to the woman, "What is this you have done?"

The woman said, "The serpent deceived me, and I ate."

# Sin Ruined Relationships

Genesis 3:14-15 So the LORD God said to the serpent, "Because you have done this,

"Cursed are you above all the livestock and all the wild animals!

You will crawl on your belly and you will eat dust all the days of your life.

<sup>15</sup> And I will put enmity between you and the woman, and between your offspring and hers; he will crush your head, and you will strike his heel."

# Sin Ruined Relationships

Genesis 3:16 To the woman he said,  
"I will greatly increase your pains in  
childbearing;  
with pain you will give birth to children.  
Your desire will be for your husband,  
and he will rule over you."

# Sin Ruined Relationships

Genesis 3:17-19 To Adam he said, "Because you listened to your wife and ate from the tree about which I commanded you, 'You must not eat of it,'  
"Cursed is the ground because of you;  
through painful toil you will eat of it  
all the days of your life.

<sup>18</sup> It will produce thorns and thistles for you,  
and you will eat the plants of the field.

<sup>19</sup> By the sweat of your brow  
you will eat your food  
until you return to the ground,  
since from it you were taken;  
for dust you are  
and to dust you will return."

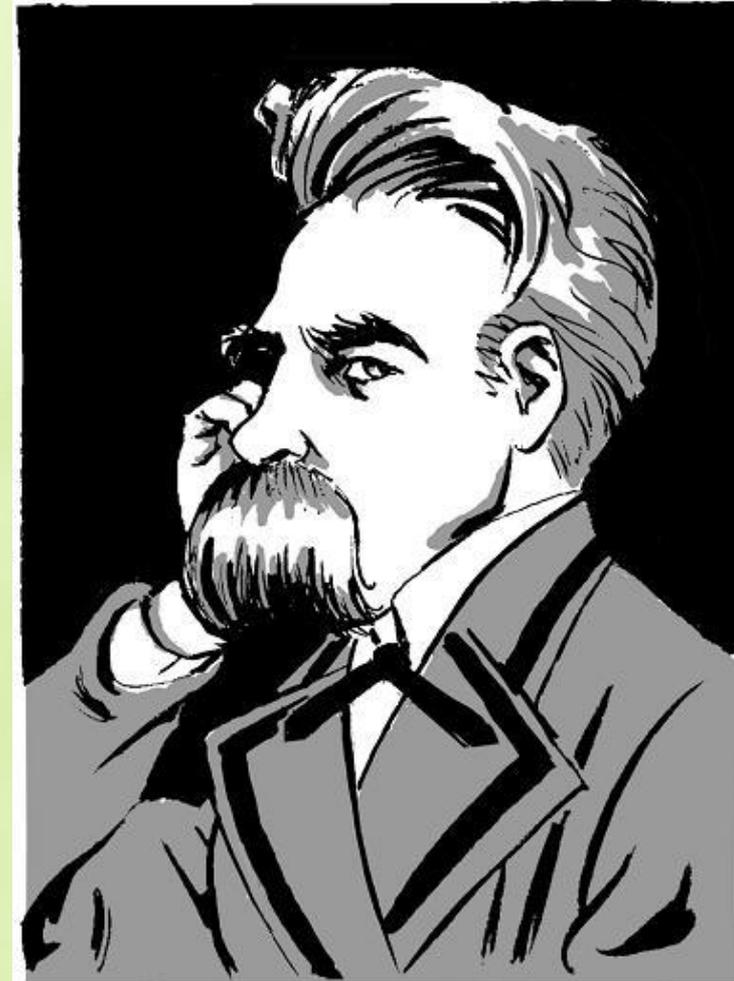
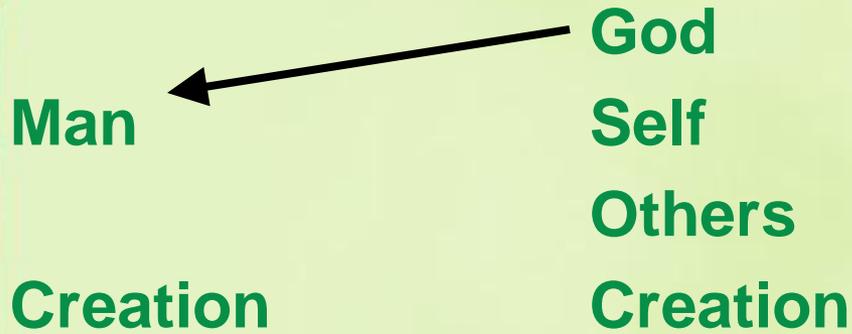
# Sin Ruined Relationships

Genesis 3:20 Adam named his wife Eve, because she would become the mother of all the living.

# Sin Ruined Relationships

Genesis 3:21-24 The LORD God made garments of skin for Adam and his wife and clothed them. <sup>22</sup> And the LORD God said, "The man has now become like one of us, knowing good and evil. He must not be allowed to reach out his hand and take also from the tree of life and eat, and live forever." <sup>23</sup> So the LORD God banished him from the Garden of Eden to work the ground from which he had been taken. <sup>24</sup> After he drove the man out, he placed on the east side of the Garden of Eden cherubim and a flaming sword flashing back and forth to guard the way to the tree of life.

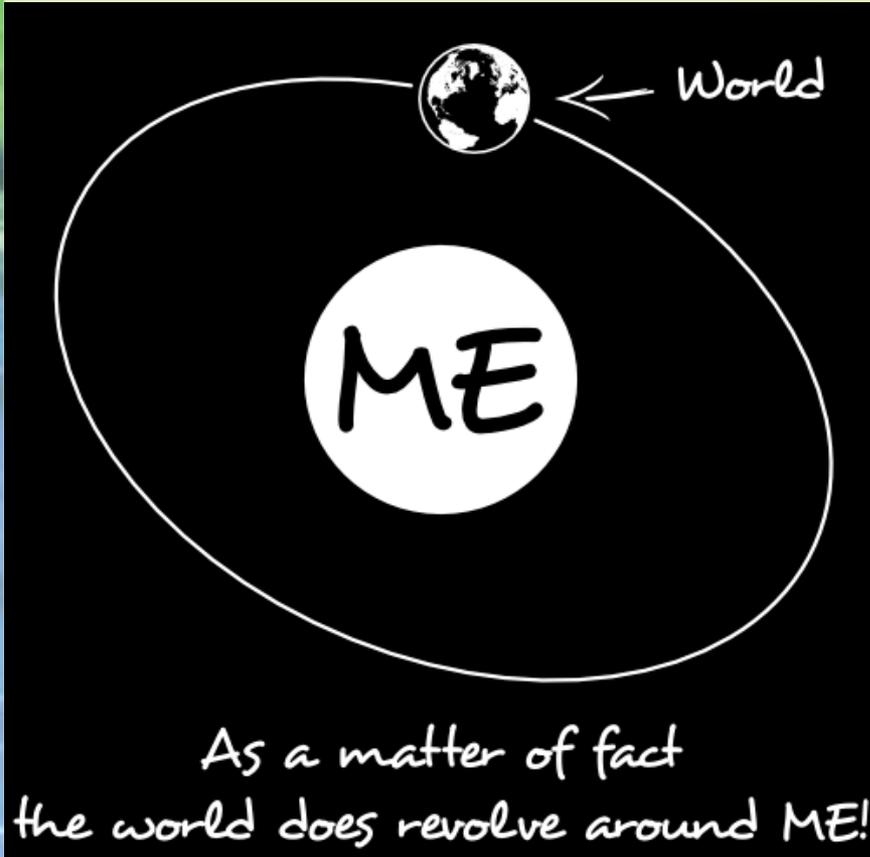
Sin ruined our relationship with God.



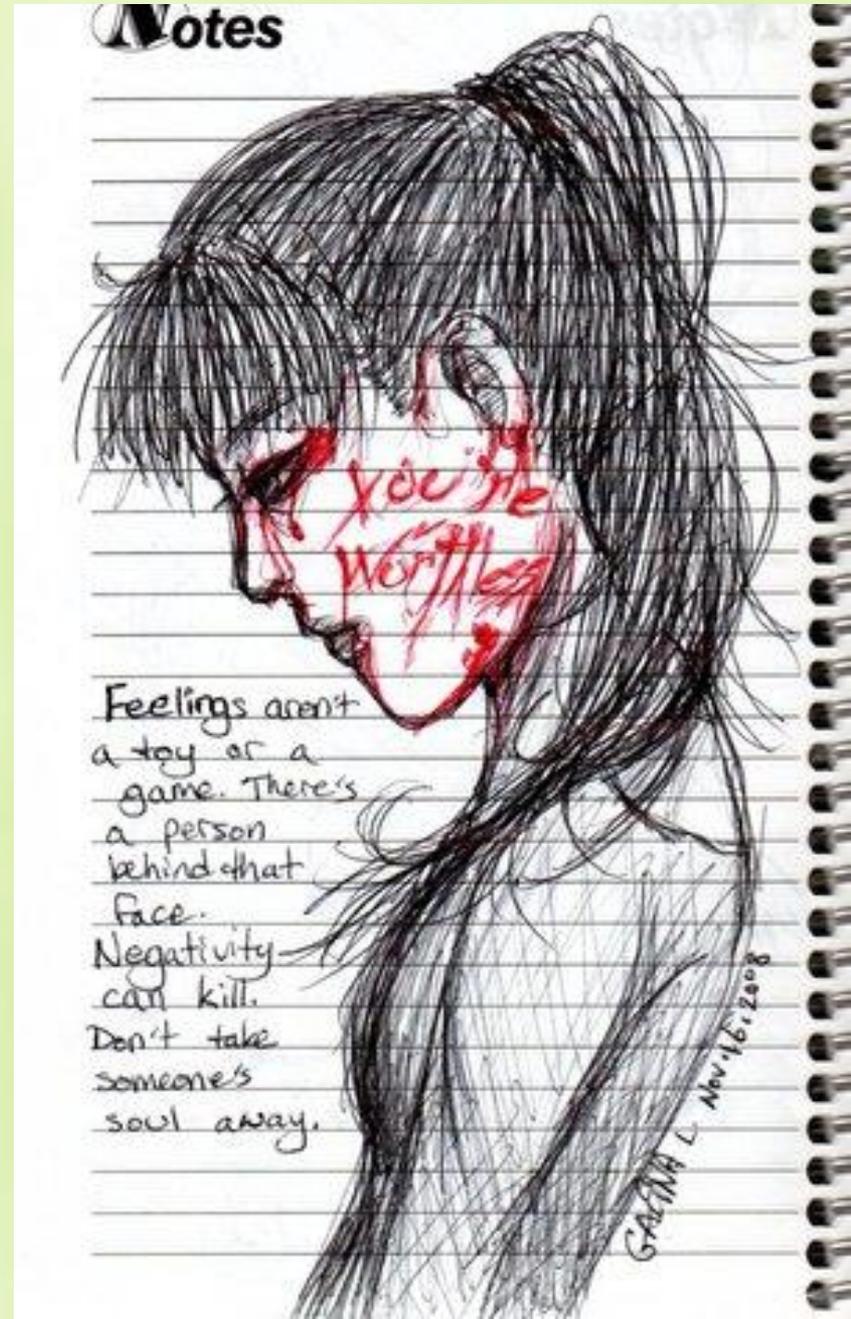
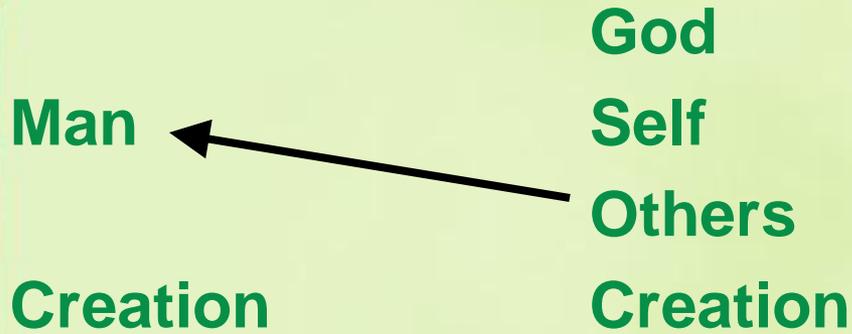
God is dead...  
And we have  
killed him.

-Friedrich Nietzsche

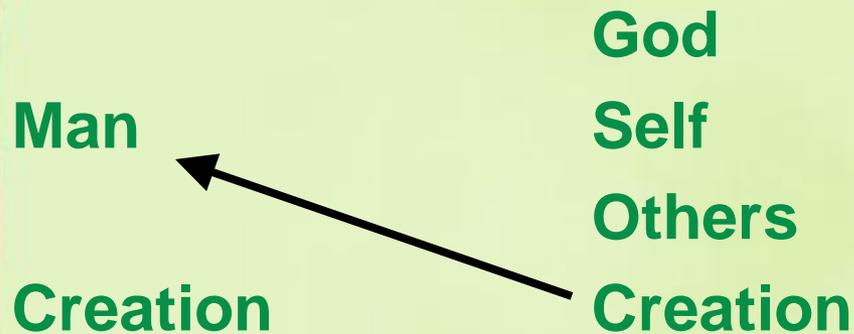
Sin ruined our relationship with ourselves.



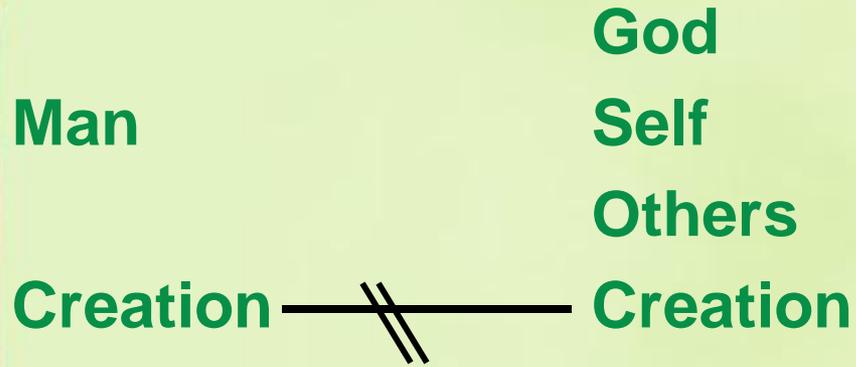
# Sin ruined relationships between people.



Sin ruined our relationship to the creation.



Sin ruined the creation's relationship to itself.





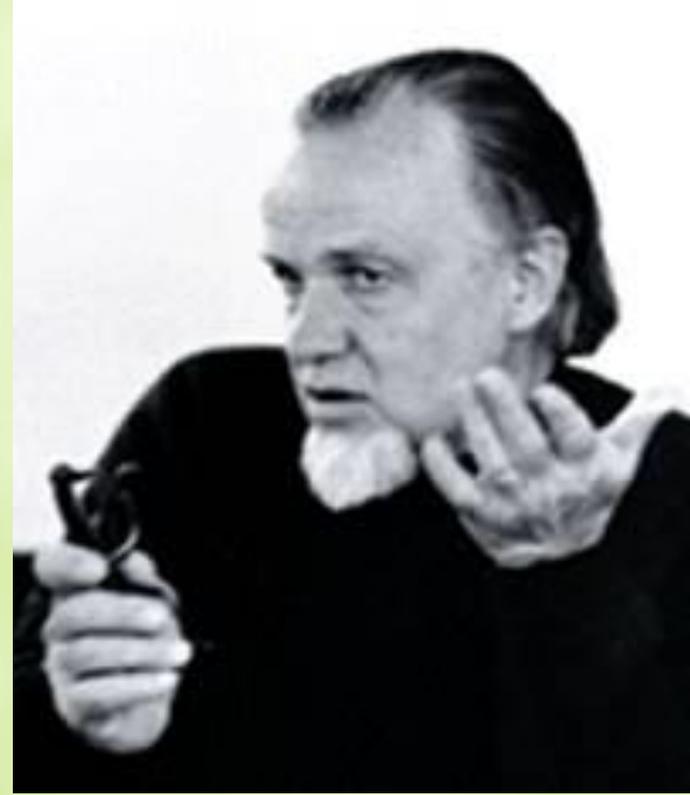
Our Fall made us self centered.

"Humanity loses its harmony with the natural order and our God-given stewardship of the environment gives place to sinful plundering. This is manifest as *exploitation*, the needless destruction of the world without thought for its created beauty or intrinsic worth. It is also manifest as *pollution*, the selfish and rapacious use of raw materials, contaminating the oceans and the very atmosphere, all too often in the interests of economic profit, luxury and self-indulgence."

Bruce Milne, Know the Truth

"...the hippies of the 1960s did understand something. They were right in fighting the plastic culture, and the church should have been fighting it too... More than this, they were right in the fact that the plastic culture - modern man, the mechanistic worldview in university textbooks and in practice, the total threat of the machine, the establishment technology, the bourgeois upper middle class - is poor in its sensitivity to nature... As a utopian group, the counterculture understands something very real, both as to the culture as a culture, but also as to the poverty of modern man's concept of nature and the way the machine is eating up nature on every side."

Francis Schaeffer, *Pollution and the Death of Man*



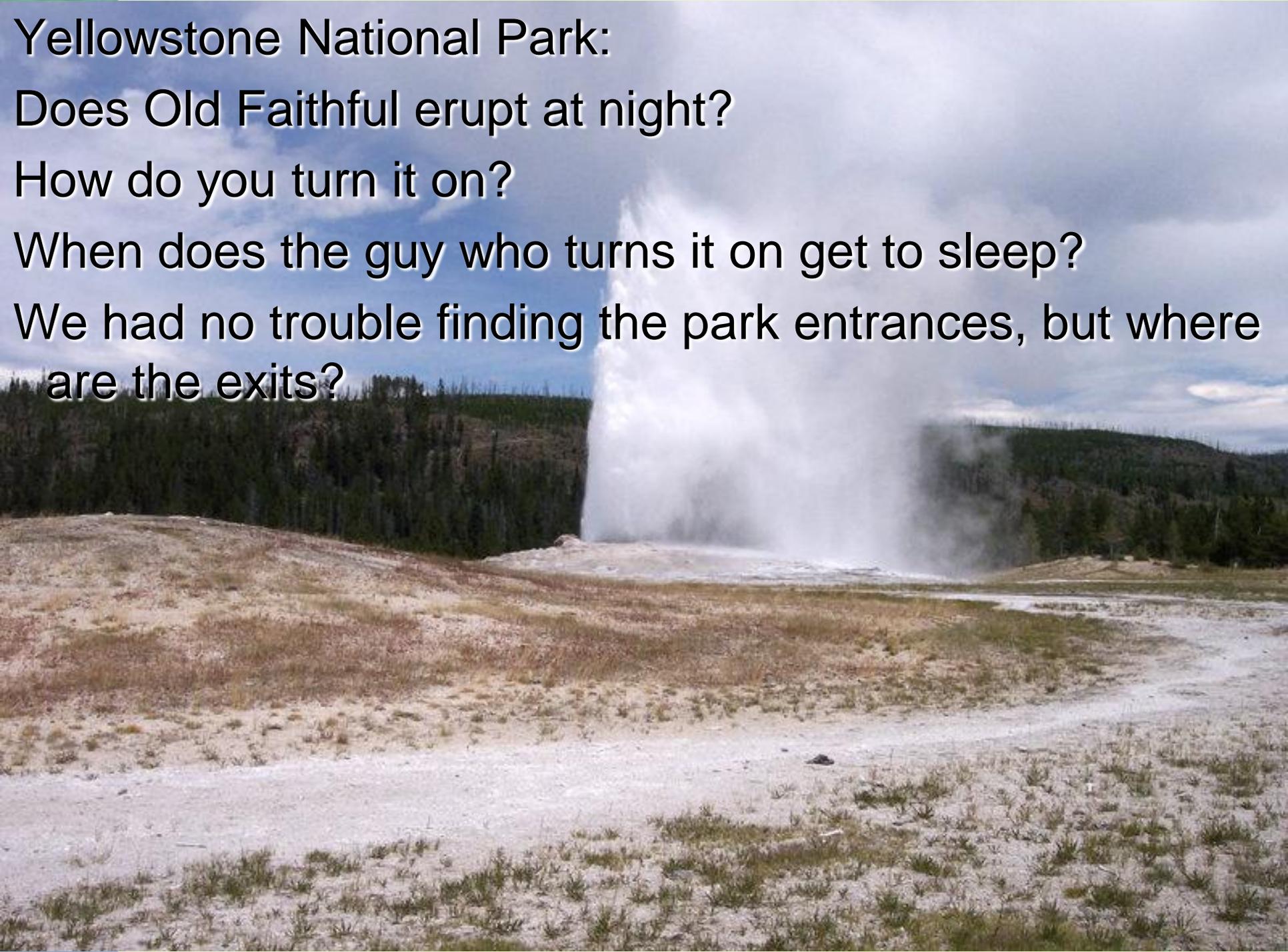
Yellowstone National Park:

Does Old Faithful erupt at night?

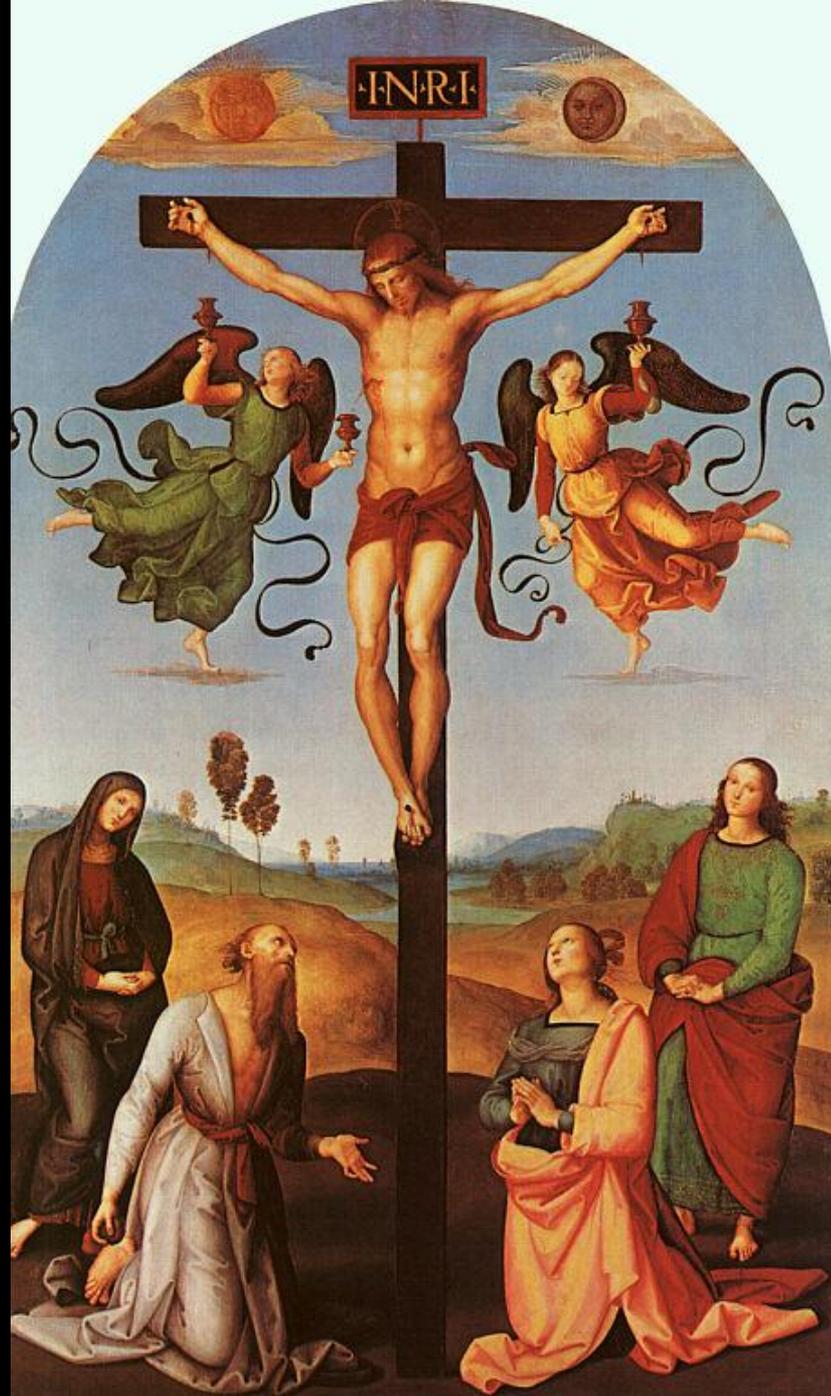
How do you turn it on?

When does the guy who turns it on get to sleep?

We had no trouble finding the park entrances, but where are the exits?

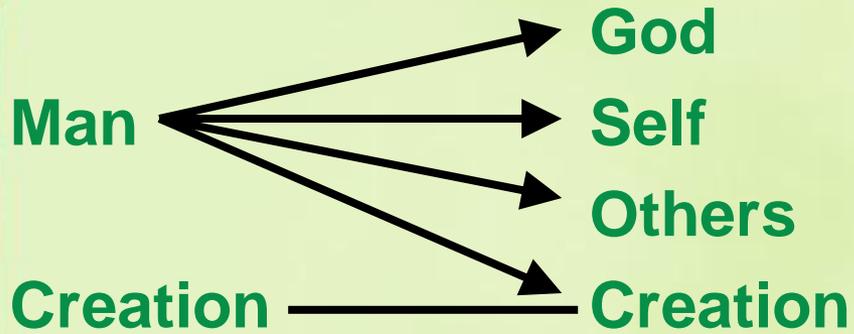


# The Solution: Redeemed Relationships



Raphael, Christ on  
the Cross, 1502

# Redeemed Relationships after the Cross



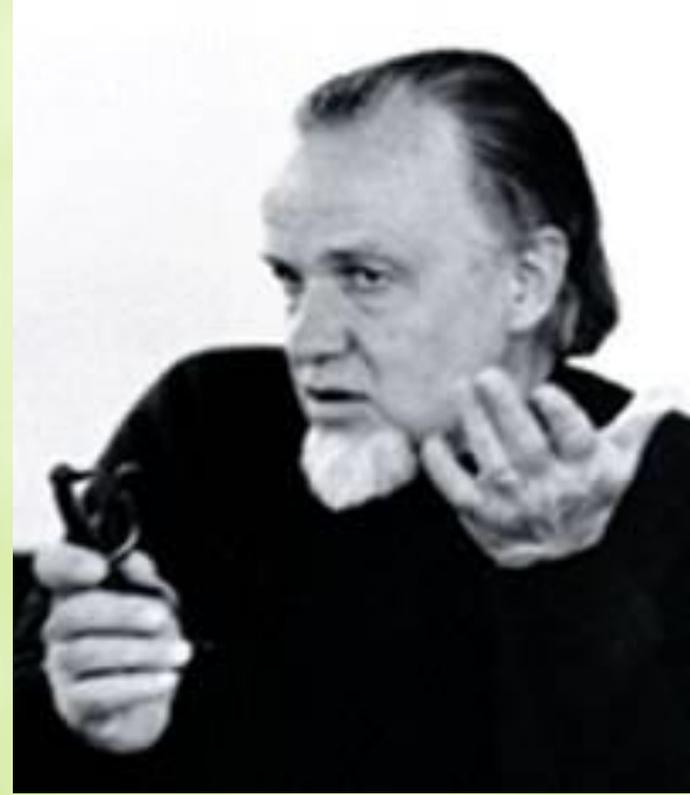
# Solutions?

There are many. A (very) few are:

- It starts with our heart and attitude.
- Know your ecological footprint.
- Be aware that every one of our actions has consequences.
- Get involved.
- Read.
- Learn.

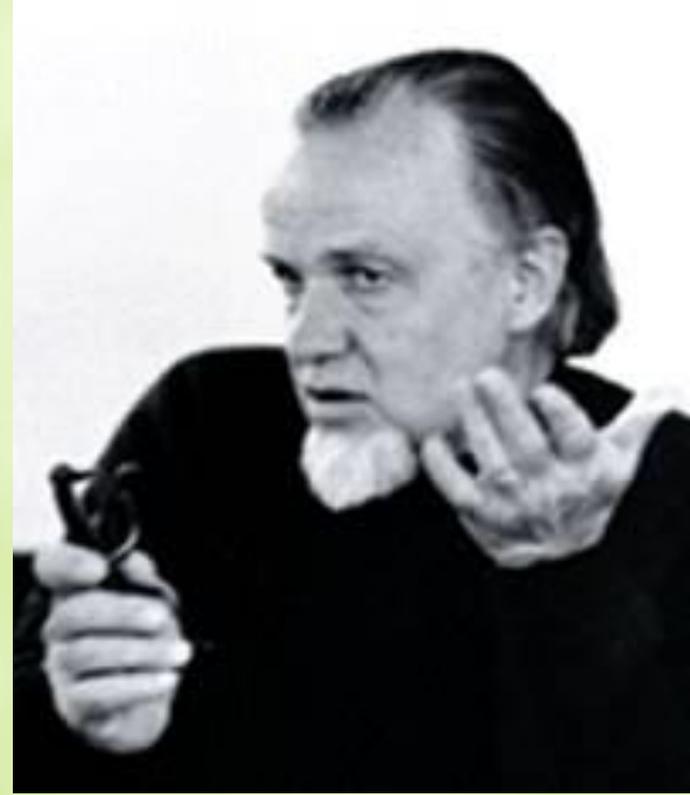
"If God treats the tree like a tree, the machine like a machine, the man like a man, shouldn't I, as a fellow-creature, do the same - treating each thing in integrity in its own order? And for the highest reason: because I love God - I love the One who has made it! Loving the Lover who has made it, I have respect for the thing He has made."

Francis Schaeffer, Pollution  
and the Death of Man



"The man who believes things are there only by chance cannot give things a real intrinsic value. But for the Christian, there is an intrinsic value. The value of a thing is not in itself autonomously, but because God made it. It deserves this respect as something which was created by God, as man himself has been created by God."

Francis Schaeffer, Pollution and the Death of Man



There are many solutions. One that I have done is to try to get rid of much of my grass and to replace it with native plants.





# Birds that I have seen or heard in or from my yard:

- Great Blue Heron
- Turkey Vulture
- Canada Goose
- Mallard
- Cooper's Hawk
- Red-tailed Hawk
- Killdeer
- Ring-billed Gull
- Mourning Dove
- Barred Owl
- Common Nighthawk
- Whip-poor-will
- Chimney Swift
- Ruby-throated Hummingbird
- Belted Kingfisher
- Red-bellied Woodpecker
- Yellow-bellied Sapsucker
- Downy Woodpecker
- Hairy Woodpecker
- Northern Flicker
- Eastern Wood-Pewee
- Great Crested Flycatcher
- Blue Jay
- American Crow
- Carolina Chickadee
- Tufted Titmouse
- Red-breasted Nuthatch
- White-breasted Nuthatch
- Brown Creeper
- Carolina Wren
- House Wren
- Golden-crowned Kinglet
- Ruby-crowned Kinglet
- Blue-gray Gnatcatcher
- Swainson's Thrush
- American Robin
- European Starling
- Gray Catbird Northern Mockingbird Brown Thrasher
- Cedar Waxwing
- Blue-winged Warbler
- Nashville Warbler
- Yellow Warbler
- Magnolia Warbler
- Black-throated Blue Warbler
- Yellow-rumped Warbler
- Blackburnian Warbler
- Black-and-White Warbler
- American Redstart
- Common Yellowthroat
- Wilson's Warbler
- Eastern Towhee
- Chipping Sparrow
- Song Sparrow
- White-throated Sparrow
- White-crowned Sparrow
- Dark-eyed Junco
- Northern Cardinal
- Rose-breasted Grosbeak
- Indigo Bunting
- Red-winged Blackbird
- Common Grackle
- Brown-headed Cowbird ☹️
- House Finch
- American Goldfinch
- House Sparrow ☹️

66 species so far...

# Native Plant Gardening

- [Grow Native!](#)
- [National Wildflower Research Center](#)
- [Sustainable Urban Landscape Information Series](#)
- [United States Environmental Protection Agency, Green Acres Green Landscaping with Native Plants](#)
- [Prairie Nursery: Clay Busters & Plants for Medium Soils](#)
- [Indiana Native Plant and Wildflower Society \(INPAWS\)](#)
- [INPAWS – Landscaping with Plants Native to Indiana](#)
- [INPAWS – Landscaping with Plants Native to Indiana - Photos](#)

# Summary

God made the creation good.

We rebelled against God in the Fall.

Our sin makes us self-centered.

Christ came to redeem all of creation from the effects of the fall.

Our job is to do His work until He returns to make it right again.

Part of that work is to renew our relationship with God's creation.

What can you do?

What will you do?