A VERY SPECIAL CHRISTMAS

The story of the Snoqualmie Indian Tribe and the Christmas Tree Cluster

A Very Special Christmas

By Christopher Scott Rawley

This book is written for children and adults to read together.

All material presented is family friendly, life affirming and interdenominational.

It was written in the spirit of the Declaration of Independence - mindful that all men are created equal, and that Life, Liberty and the pursuit of Happiness are human rights.

Overview

This book describes a single chain of legitimate physical evidence that suggests:

1) There is a direct connection between the Snoqualmie Indian Tribe of Washington State, and a cluster of stars that NASA calls The Christmas Tree Cluster, which is part of the constellation Monoceros (The Unicorn).

2) A greater hand may have been involved in modifying or even building our world.

3) It is possible that all major religions are rooted in the physical science presented.

When observation of the heavens is considered alongside hard physical evidence, the biblical phrase "On Earth as it is in heaven" takes on new meaning, as you will see.

The evidence is not vague or inferred- it is straightforward and easily understood.

Why do this?

Because I believe that by validating all major religions using a common chain of legitimate physical evidence, that it may be possible to reduce conflict, and unite people around the globe in an effort to learn more about how this might have happened.

I call this The Federation.

What This Is, And What It Is Not

This book represents 16 years of self funded research, analysis and archeological work. The work and the ideas presented are mine and mine alone. This book and another more technical version which will be released online in the first quarter of 2026, are free and will always be free.

This is not a work of fiction, a promotional vehicle, or a publicity stunt. I will never monetize Native American culture or relics. The archeological objects described, which were recovered legally on private property in Washington State, are in a safe deposit box. They will go to the National Museum Of The American Indian within 90 days of publication of this book, in order to allow time to make arrangements for safe transfer.

The Federation

I have founded a nonprofit in Austin, Texas called The Federation.

The Federation will develop an open source curriculum focused on science, the natural world, space, and space exploration. This curriculum will be available free of charge to any teacher in the world.

We will create community programs on Native American and Native Canadian Indian reservations that will treat each reservation as a model space colony – enabling all reservation residents to participate in an international effort to understand the challenges involved in organizing, provisioning, and feeding off world colonies.

We will not place teachers or address students directly, because teachers must come from the communities in which they teach and be accredited by those communities.

Our work will be based entirely on private donations.

We will never take even a single penny from taxpayers – federal, state or local.

We flatly reject civil unrest in favor of education.

We are not part of government, and while we will work to keep public officials informed of our progress, we will neither endorse nor malign political candidates, or seek a role in politics.

We will not produce materials about gender identity or race identity, because those topics are the responsibility of individual school districts – not The Federation.

Our medium term goal is to establish a distributed network of digital schools (The Academy) on every large Indian reservation in the United States and Canada.

The Academy will build on MIT's exceptional Open Courseware program so that we may offer not only primary educational resources, but a university level curriculum as well – on the reservation so that students can stay with their culture, and their people.

Our ultimate goal is **Universal Free Education** on a global scale**.**

Please Donate

The Federation is a nonprofit based in Austin, Texas.

The Federation will develop an open source curriculum focused on science, the natural world, space, and space exploration. This curriculum will be available to any teacher in the world to download, free of charge.

The Federation today is a one man show, an effort which has taken sixteen years to imagine and create. It started with the discovery of a single Native American object in 2011 - the Jade Horse. With the release of this book I am making my findings public for the first time. Prior to this release I am the only person who has ever seen the archeological objects described, or the subsequent research and analysis.

I will make a more technical version of the story available in the first quarter of 2026.

Like any fledgeling nonprofit with an ambitious plan, I need donations to begin creating educational programs and to take measured steps toward implementing my ultimate vision - **Universal Free Education**.

Universal Free Education is defined as an assisted open source digital cirriculum that spans Pre-K through graduation from University, available in every language possible.

I will seek to establish a network of digitally assisted schools (The Academy) on all large Indian reservations in the United States and Canada to serve both recent high school graduates and adults in the community. Students will be have access to a self paced, enhanced digital cirriculum based on MIT's Open Courseware program.

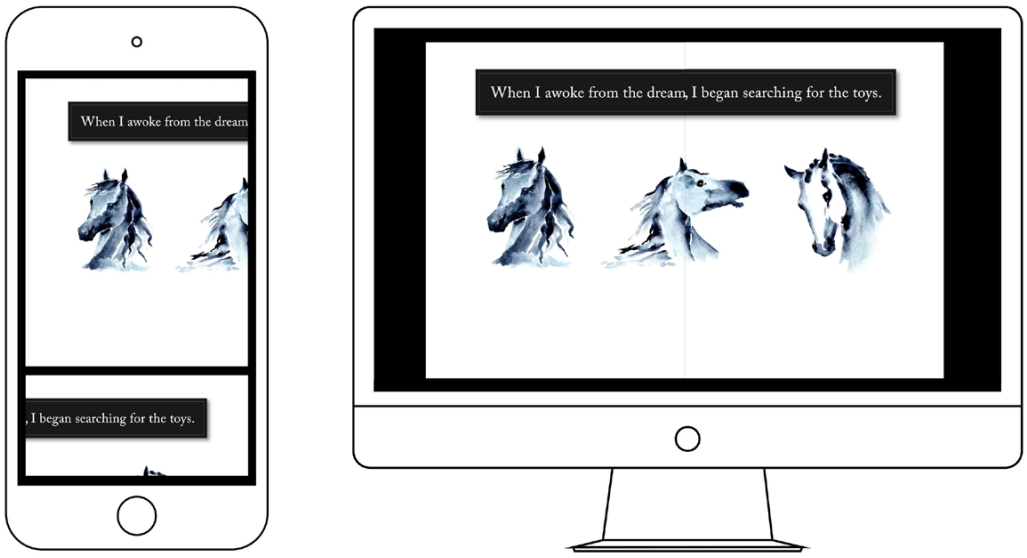
Please help bring this vision to life by donating today on the Federation website:

https://www.federationatx.com/donate

Thank you.

Christopher Scott Rawley
The Federation

The Best Way To View This Document



Viewing this document as 2-page spreads on a large monitor is the best option.

macOS Safari On Desktop
Click to download the PDF in your browser. Once you see the PDF, right click to see your options, including seeing two pages side by side, or opening the PDF in Preview. Once in Preview, you can view this document as two page spreads.

macOS Chrome On Desktop
Click to download the PDF in your browser. Once you see the PDF, click the three dots at the upper right corner of the browser window and select Two Page View. You can also save the PDF to your computer, and open it in Preview.

iPhone Or iPad
Click the download link**.** This will open the PDF in your browser on your mobile device. You will see one page at a time - instead view in landscape mode.

Android Or Windows Devices
Google "View PDF" and the name of your browser and your device to review options. Given the large number of devices and PDF viewers for these platforms, we're unable to provide meaningful instructions here.

We set sail on this new sea because there is new knowledge to be gained, and new rights to be won, and they must be won and used for the progress of all people.

President John F. Kennedy

Table Of Contents

THE DREAM

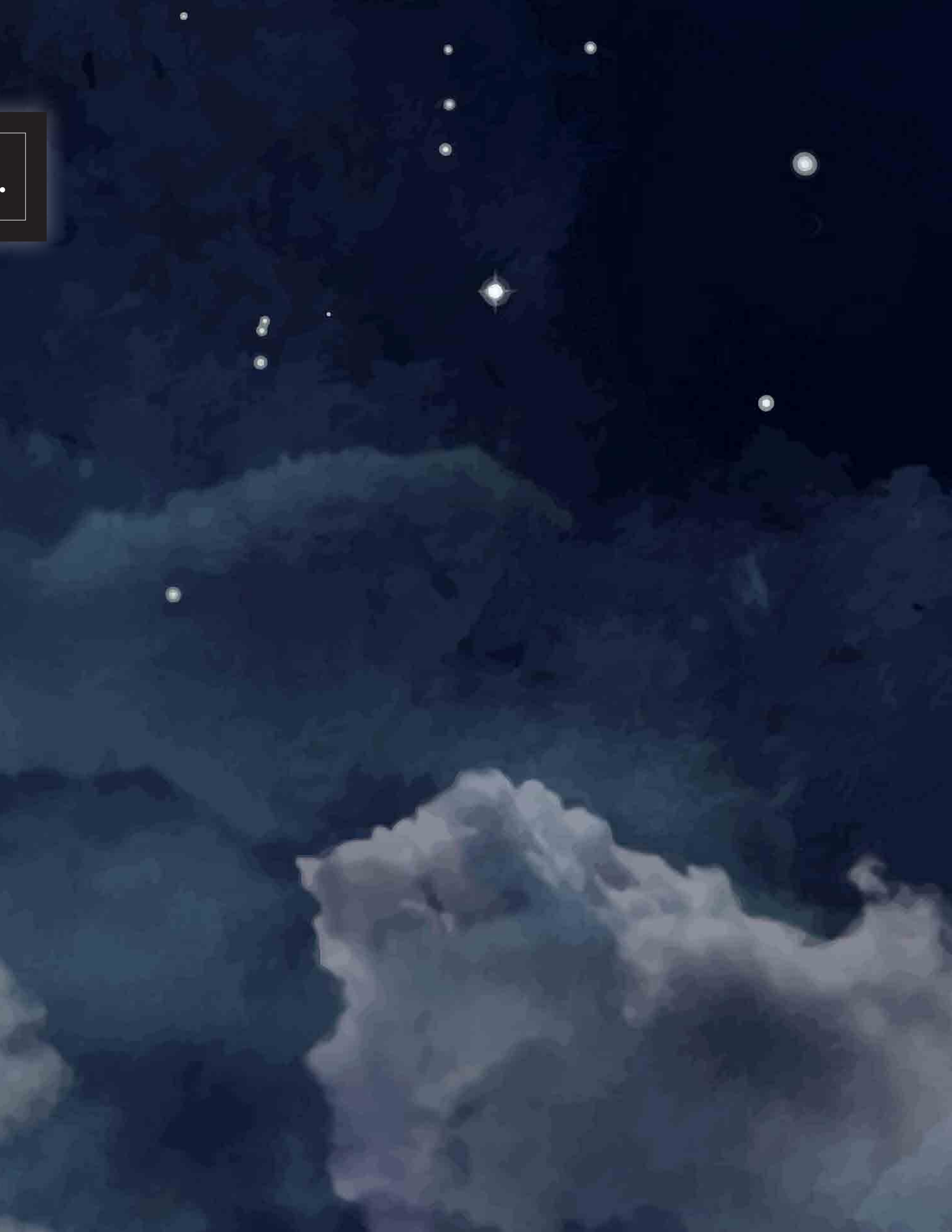
01

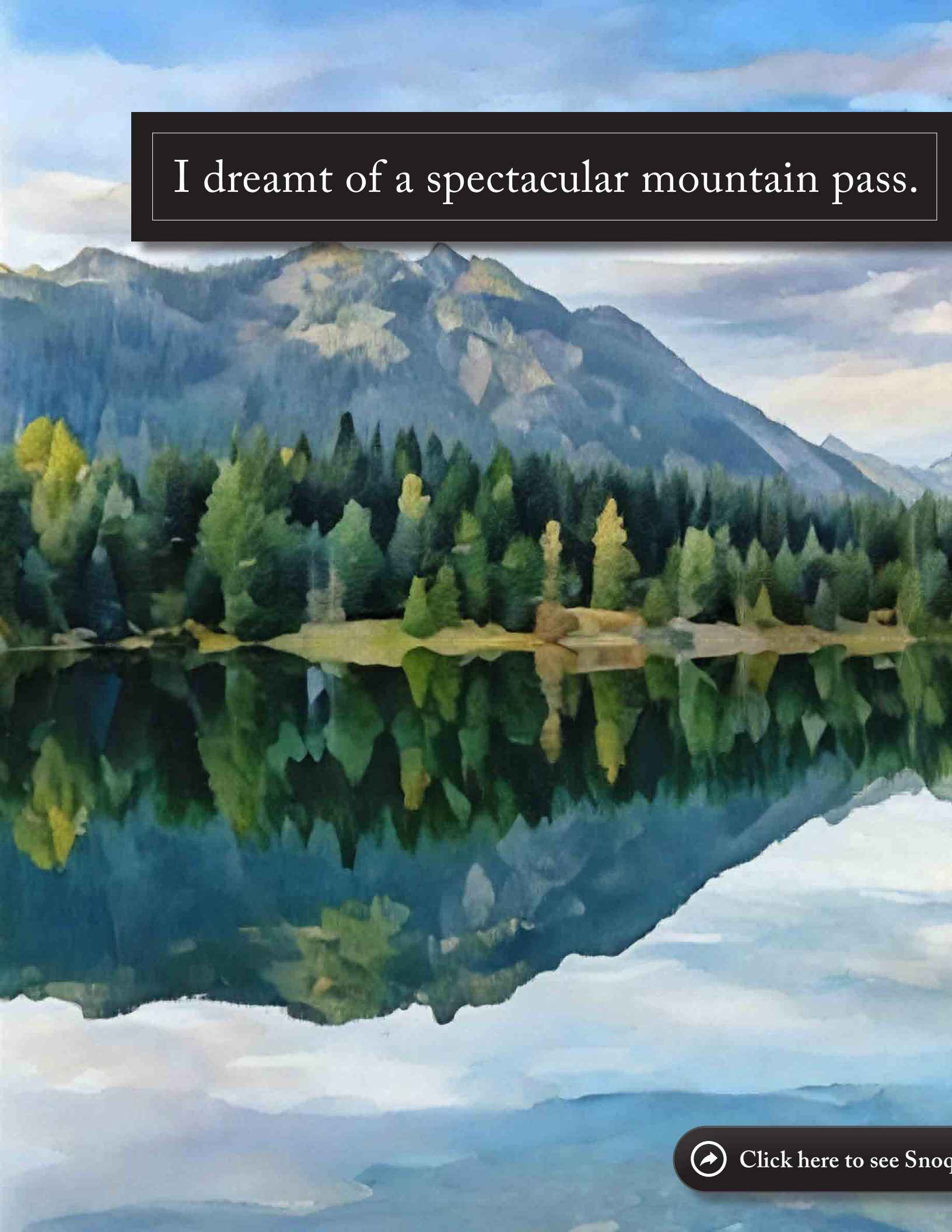
This is a story about a dream I had
that led me to The Valley Of The Moon
in Snoqualmie, Washington.

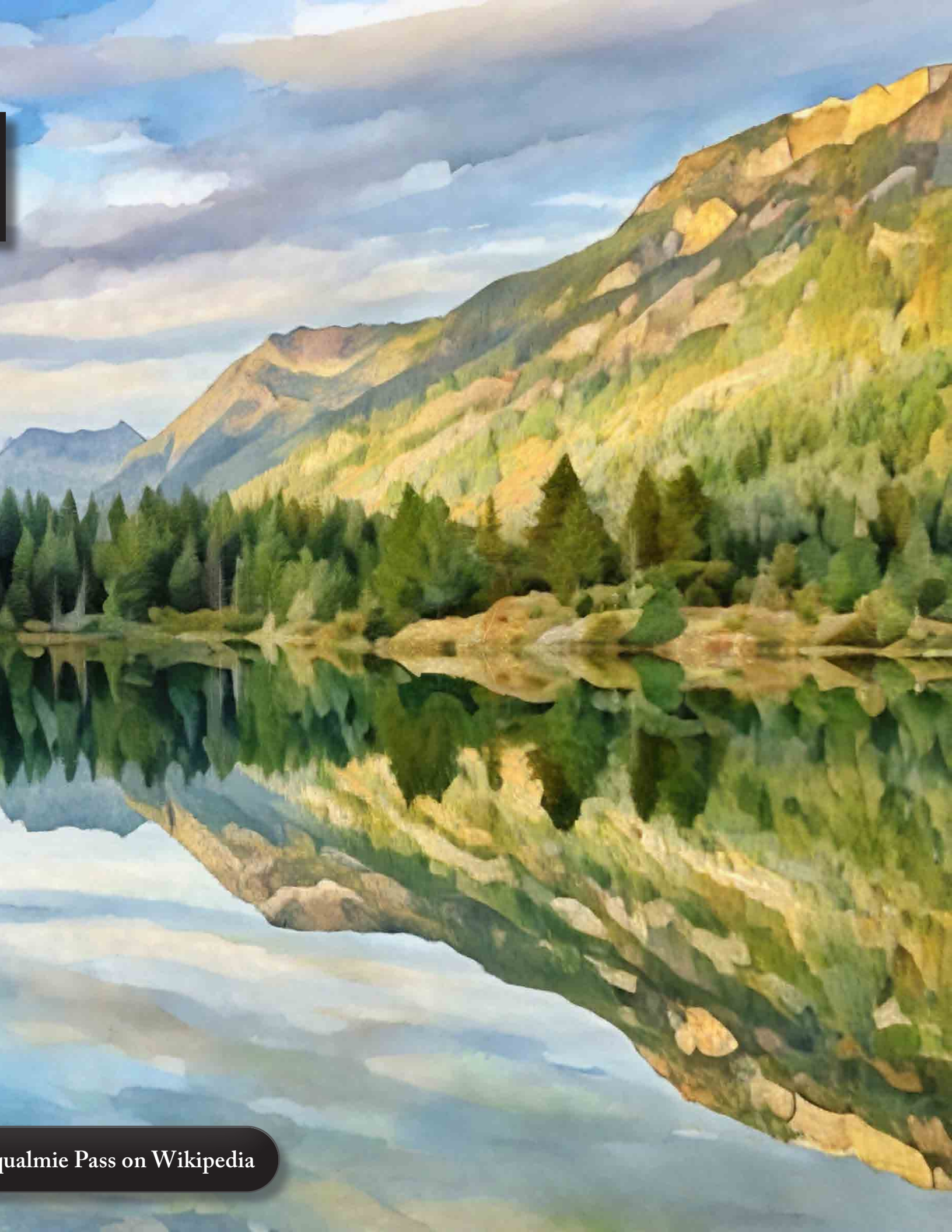
After two years of searching, I found
some very old, very special toys.

The toys link the Snoqualmie Indian
Tribe to a group of stars that NASA
calls The Christmas Tree Cluster, in the
constellation Monoceros, which is also
known as The Unicorn.


On a cold Christmas night, I had a dream

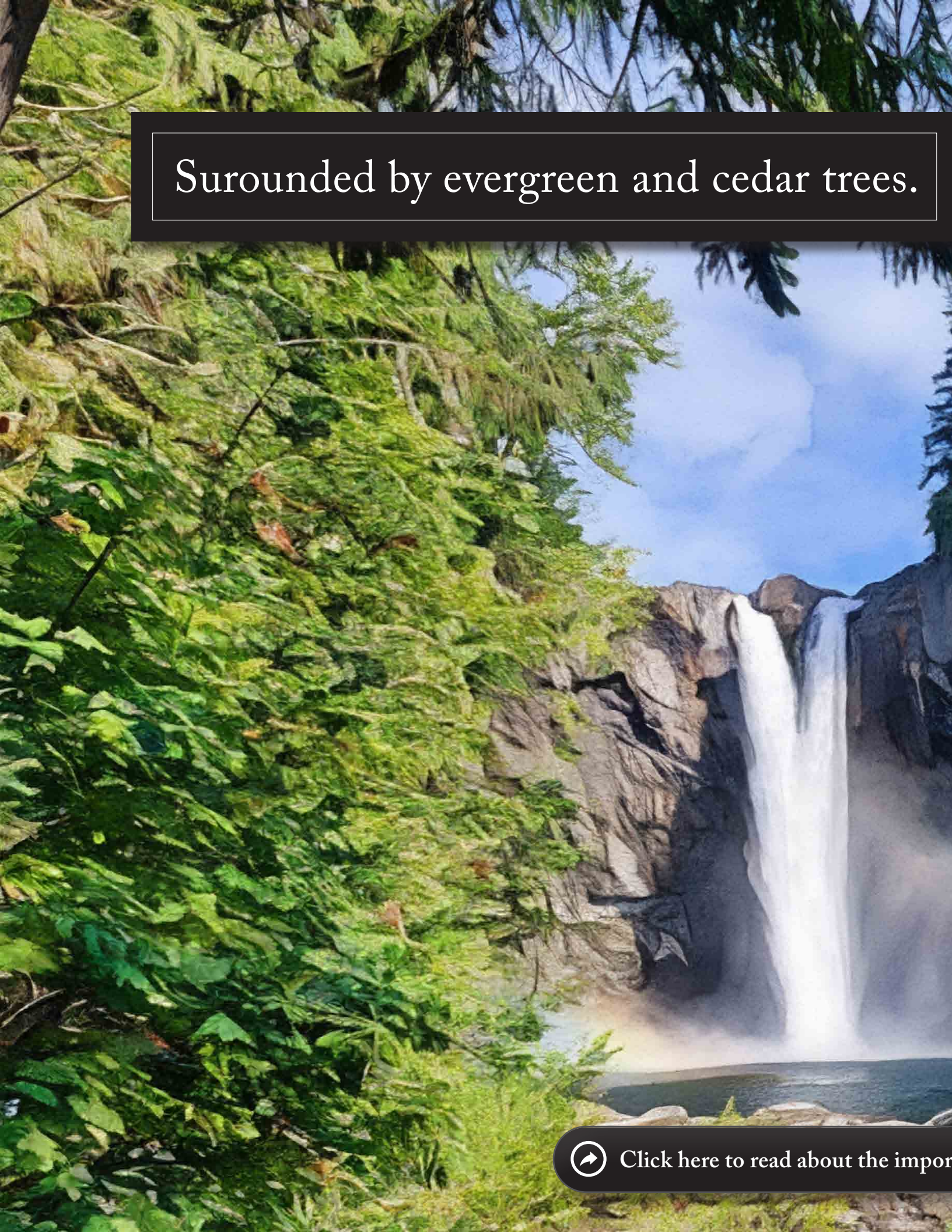



I dreamt of a spectacular mountain pass.
Click here to see Snoq

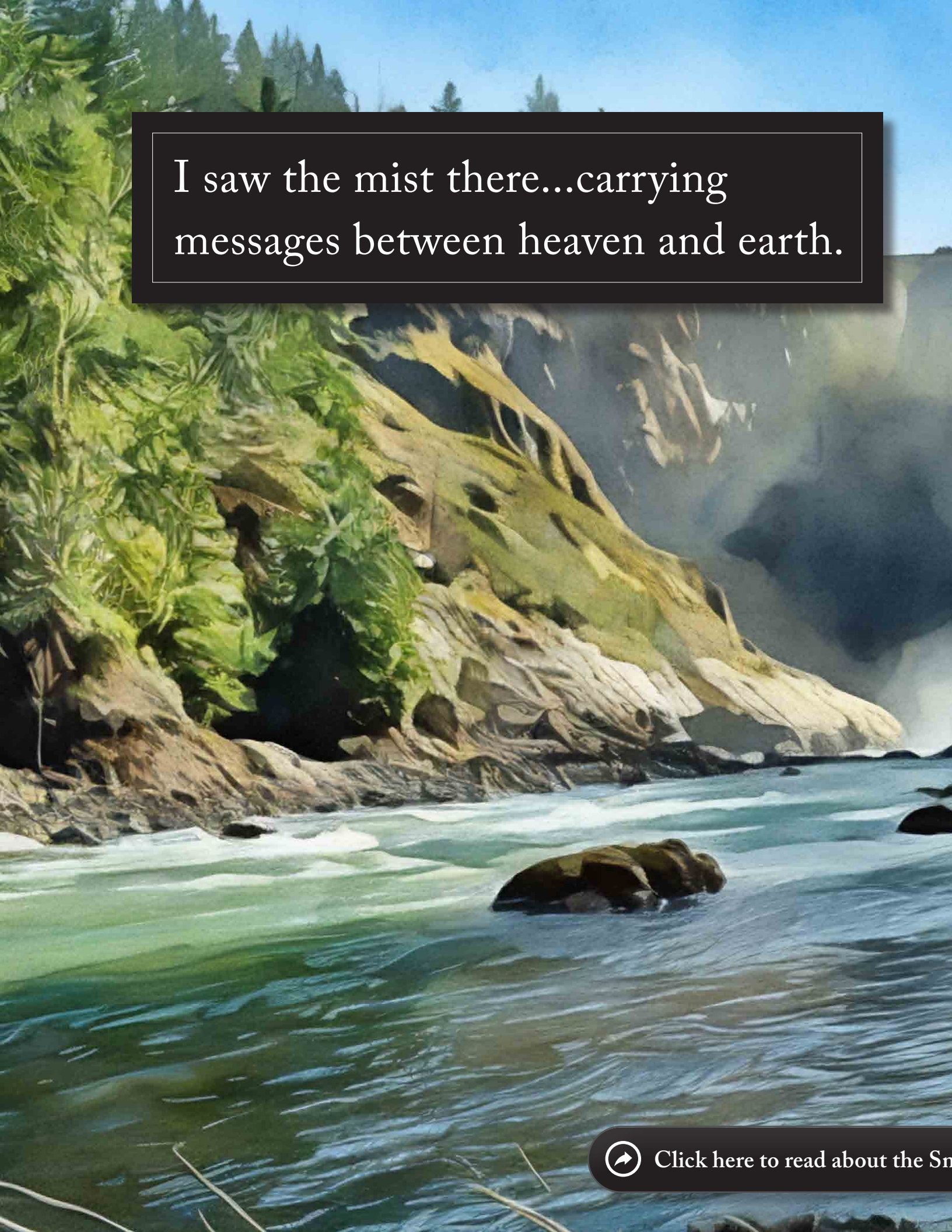

qualmie Pass on Wikipedia


And a special waterfall in a magical hidde
Click here to see Snoq

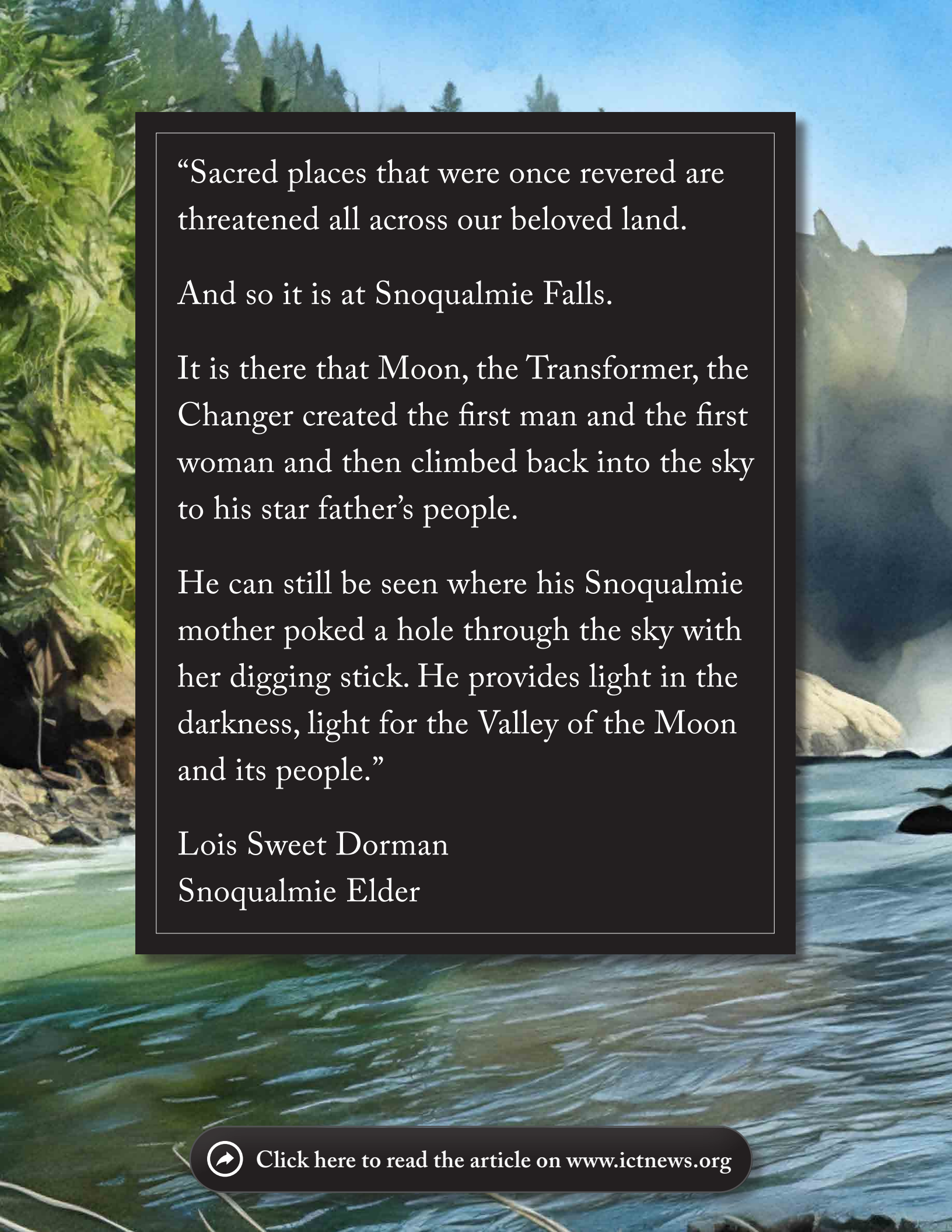

n valley.
qualmie Falls on Wikipedia


Surounded by evergreen and cedar trees.
Click here to read about the impor

rtance of cedar to the Snoqualmie Tribe


I saw the mist there...carrying
messages between heaven and earth.
Click here to read about the Sn

noqualmie Tribe on their website



"Sacred places that were once revered are threatened all across our beloved land.

And so it is at Snoqualmie Falls.

It is there that Moon, the Transformer, the Changer created the first man and the first woman and then climbed back into the sky to his star father's people.

He can still be seen where his Snoqualmie mother poked a hole through the sky with her digging stick. He provides light in the darkness, light for the Valley of the Moon and its people."

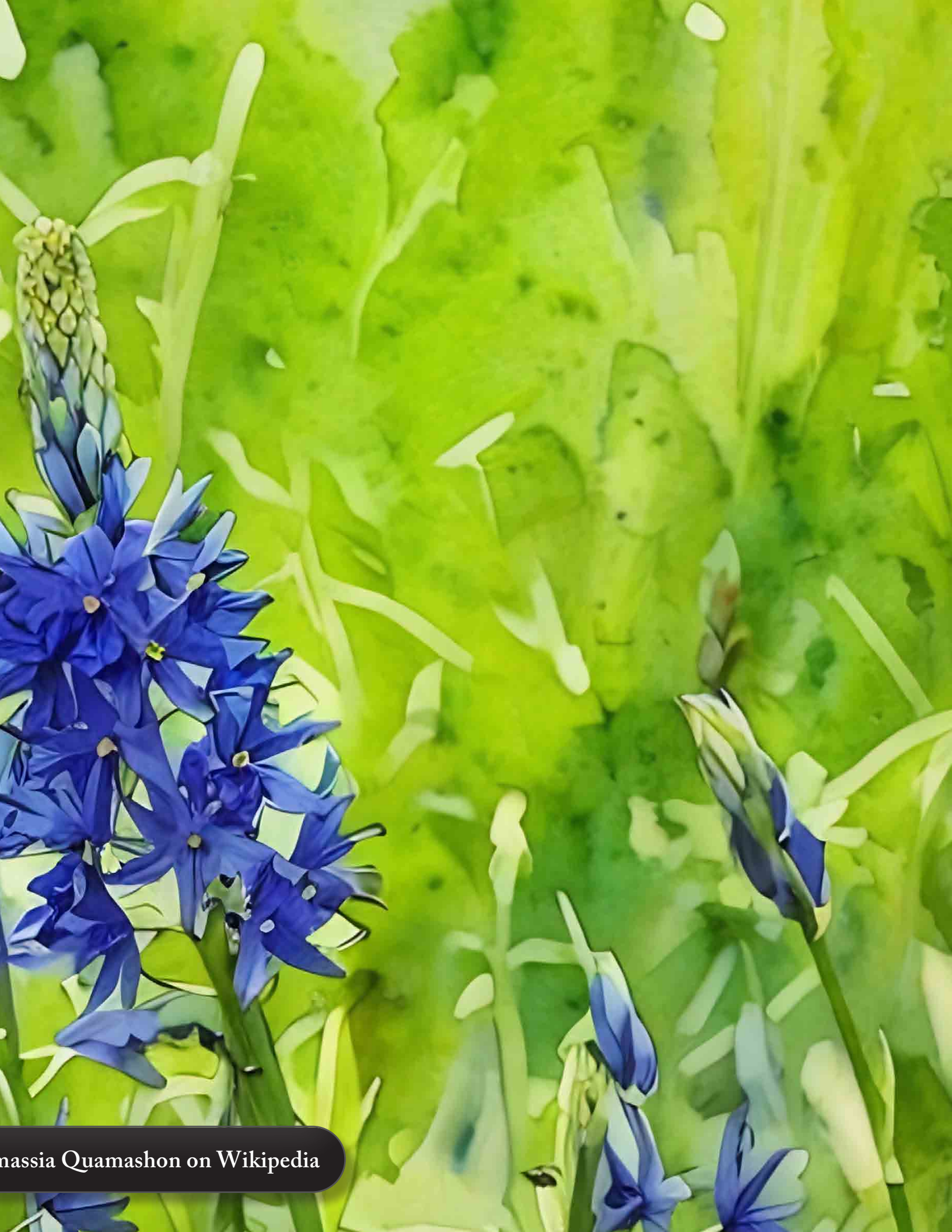
Lois Sweet Dorman
Snoqualmie Elder

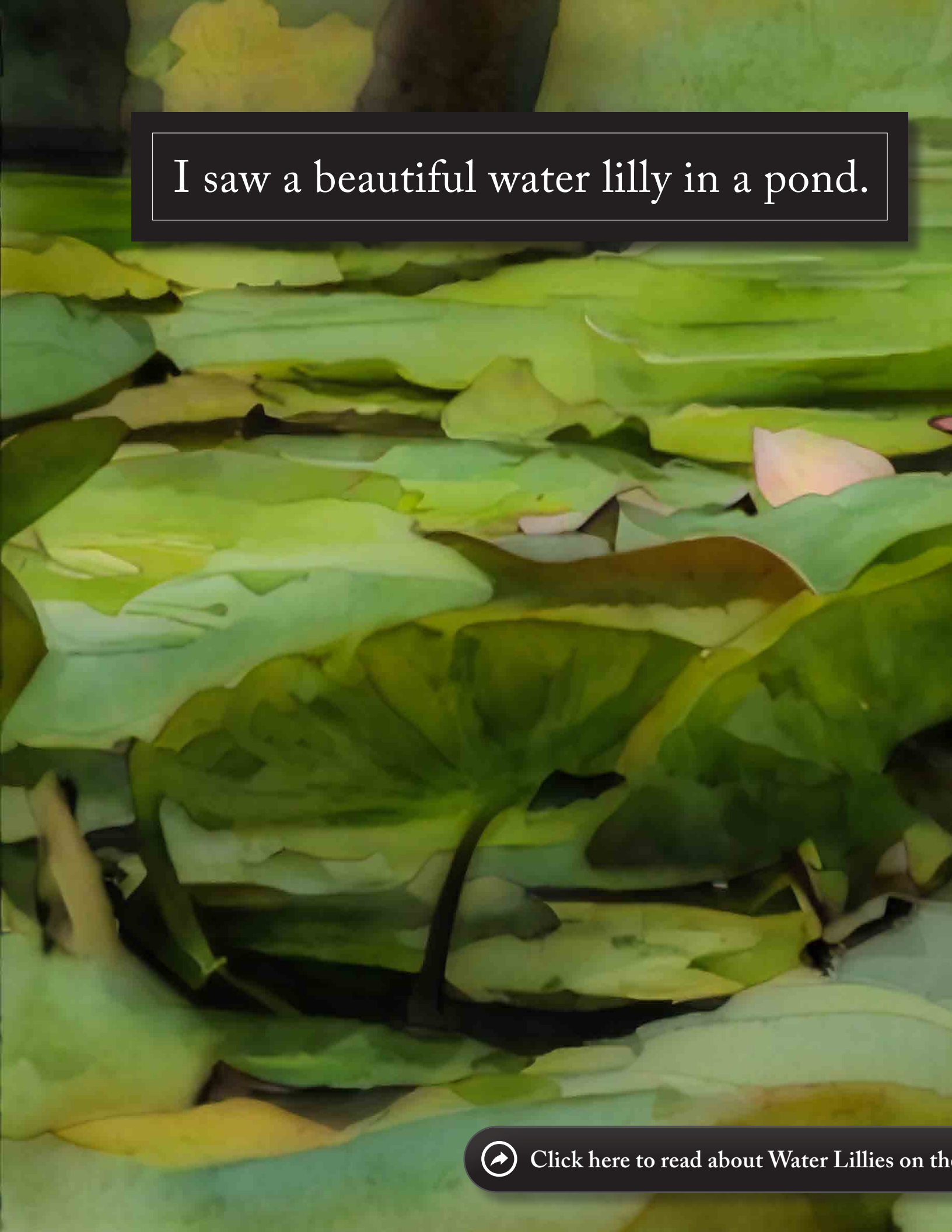
Click here to read the article on www.ictnews.org


I dreamt of big yellow flowers.
Click here to read about Lysi

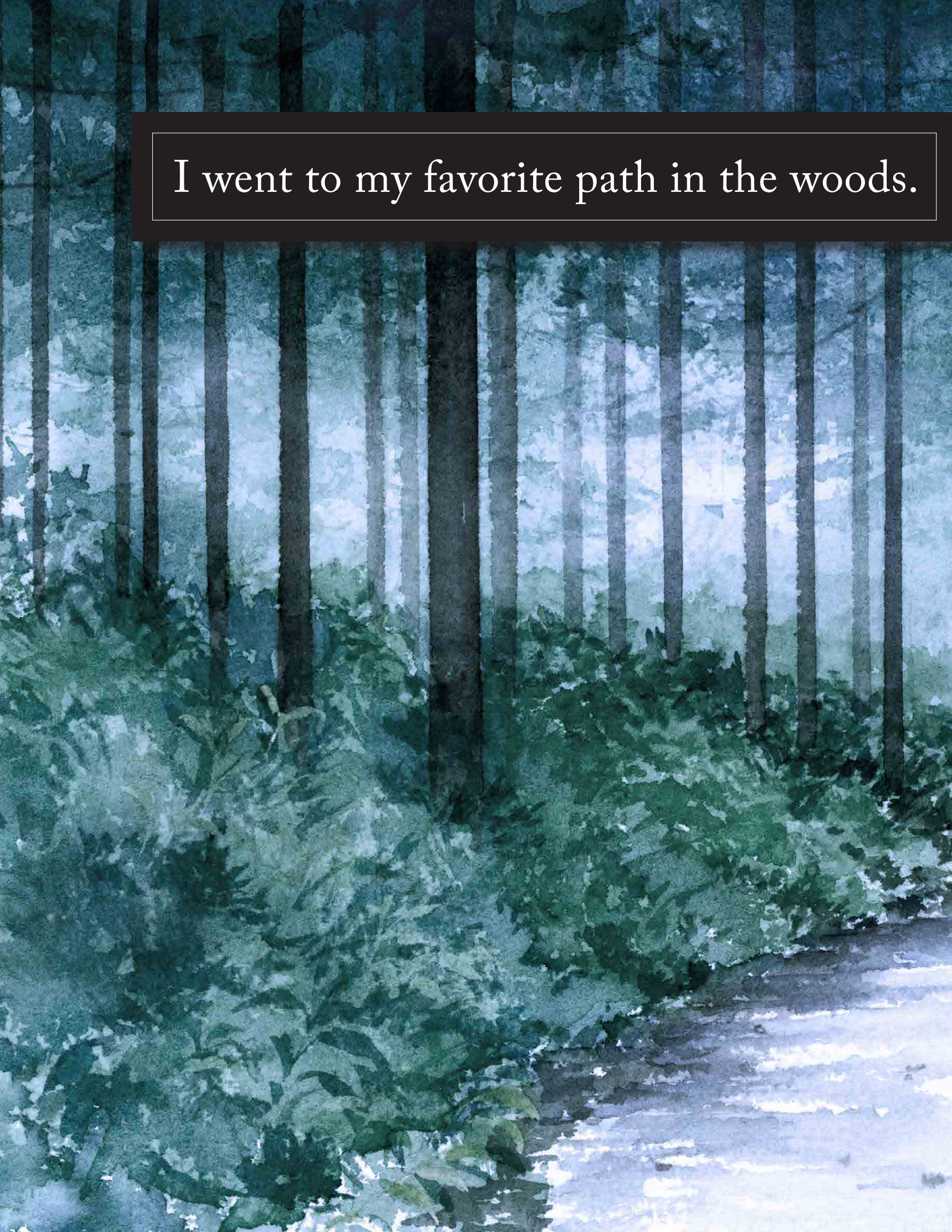
chiton Americanus on Wikipedia


And special purple flowers.
Click here to read about Can

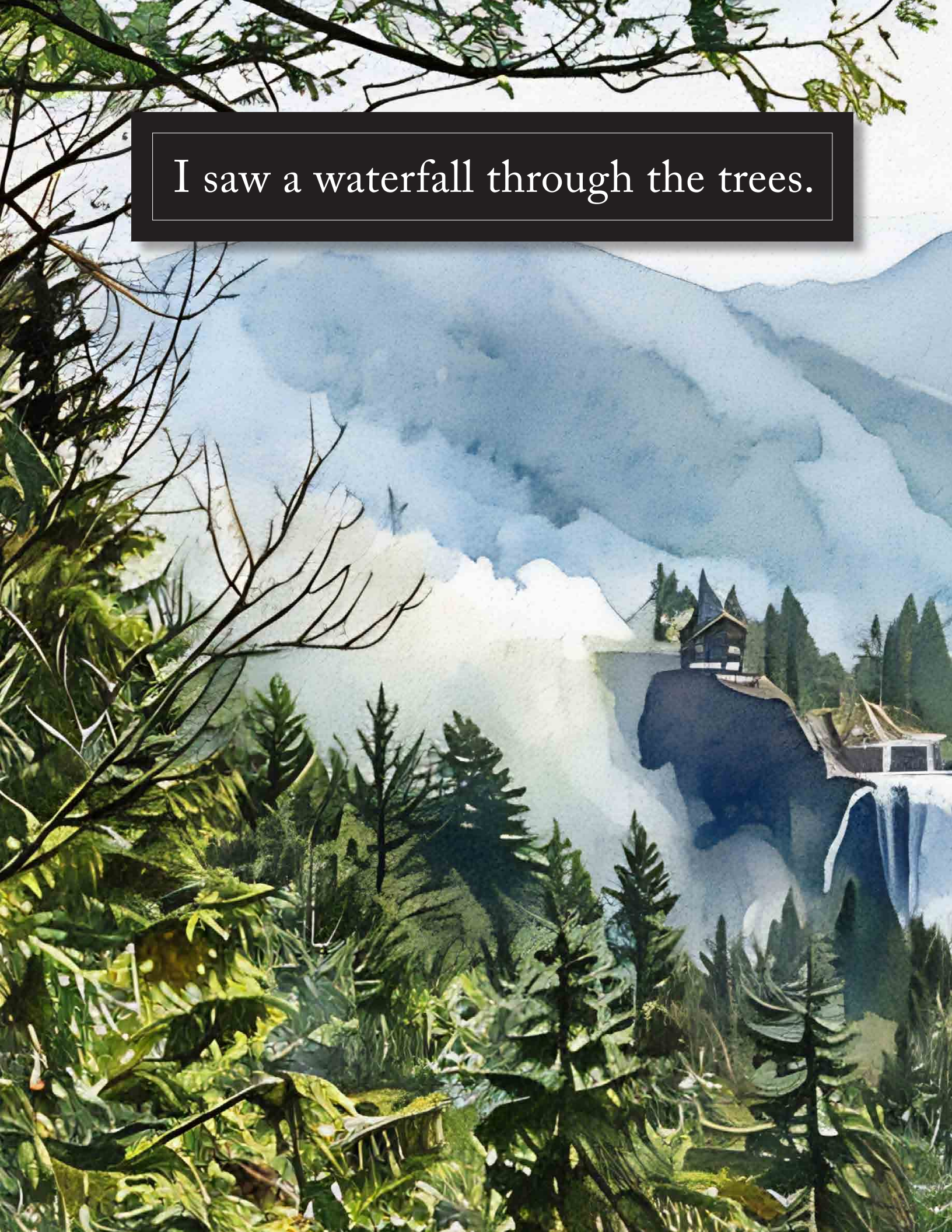

massia Quamashon on Wikipedia

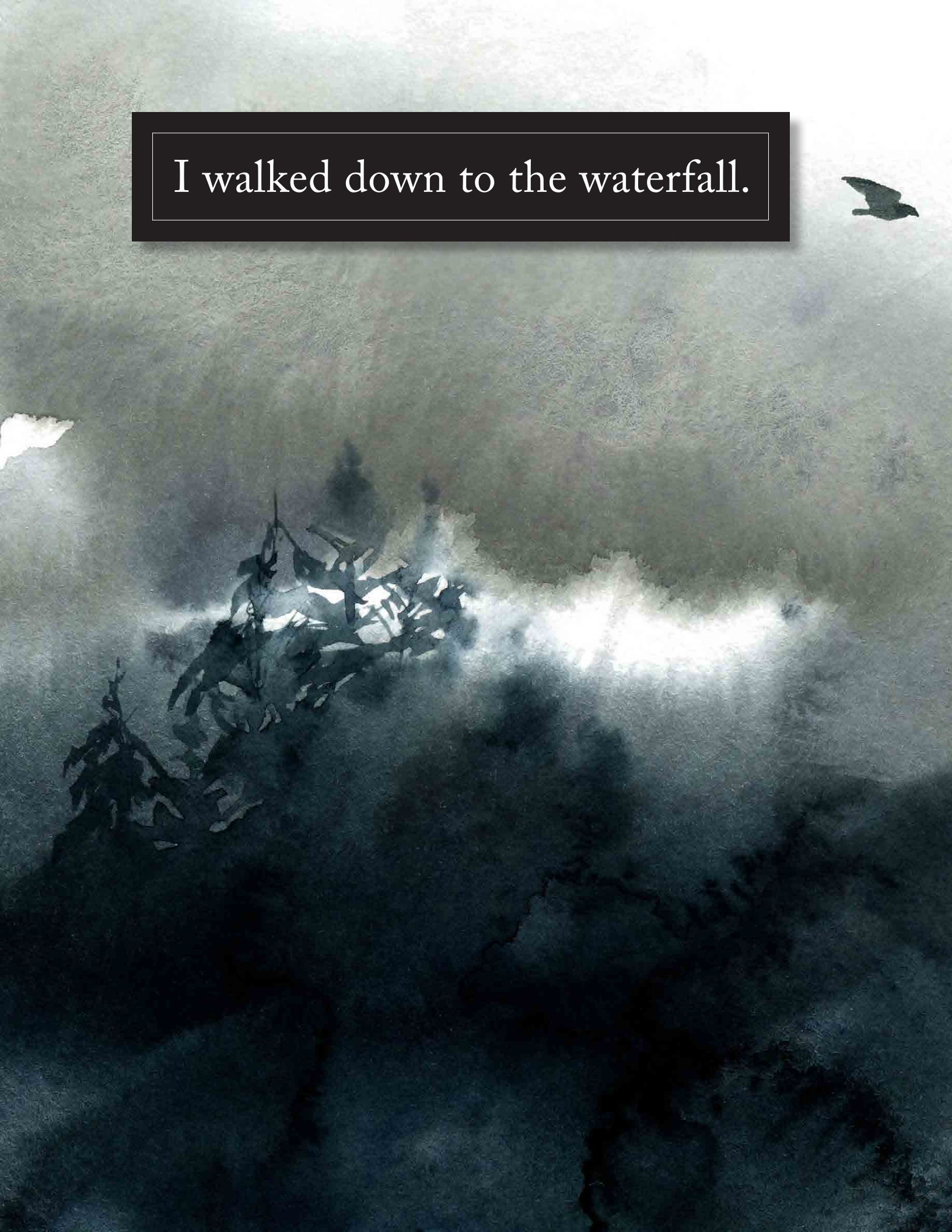

I saw a beautiful water lilly in a pond.
Click here to read about Water Lillies on th

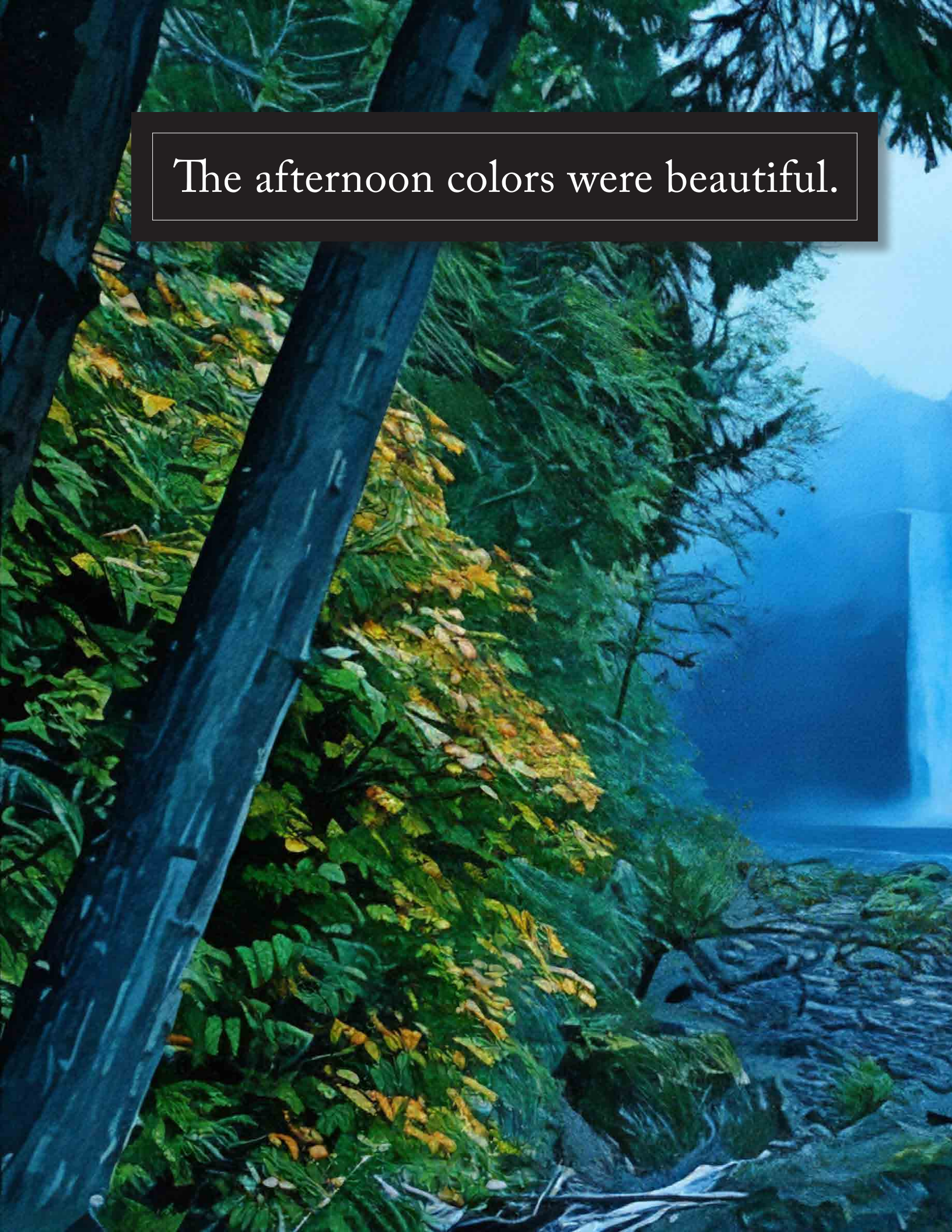
e Lady Bird Johnson Wildflower Center website


I went to my favorite path in the woods.

I began to walk through the woods.

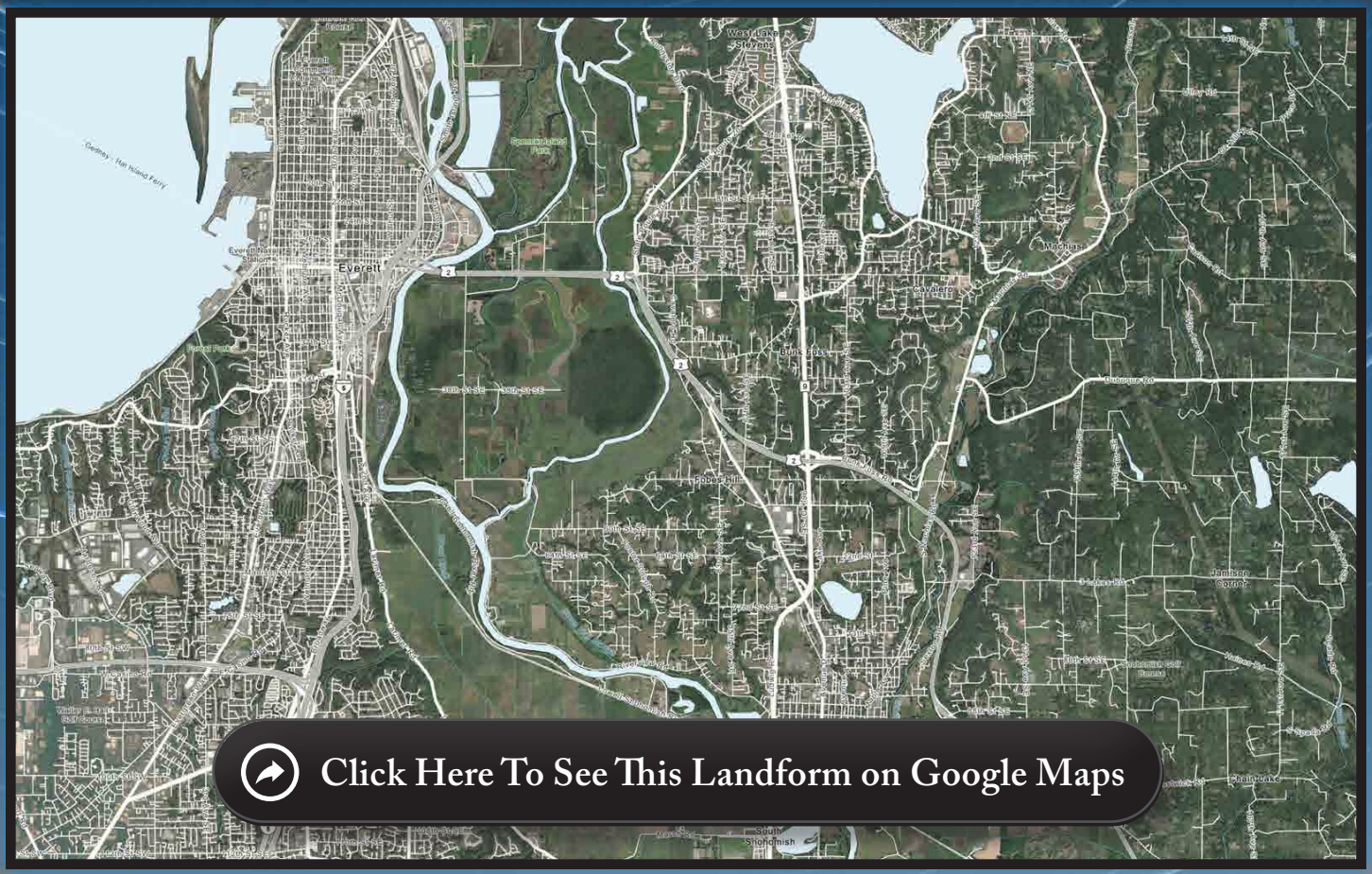

I saw a waterfall through the trees.

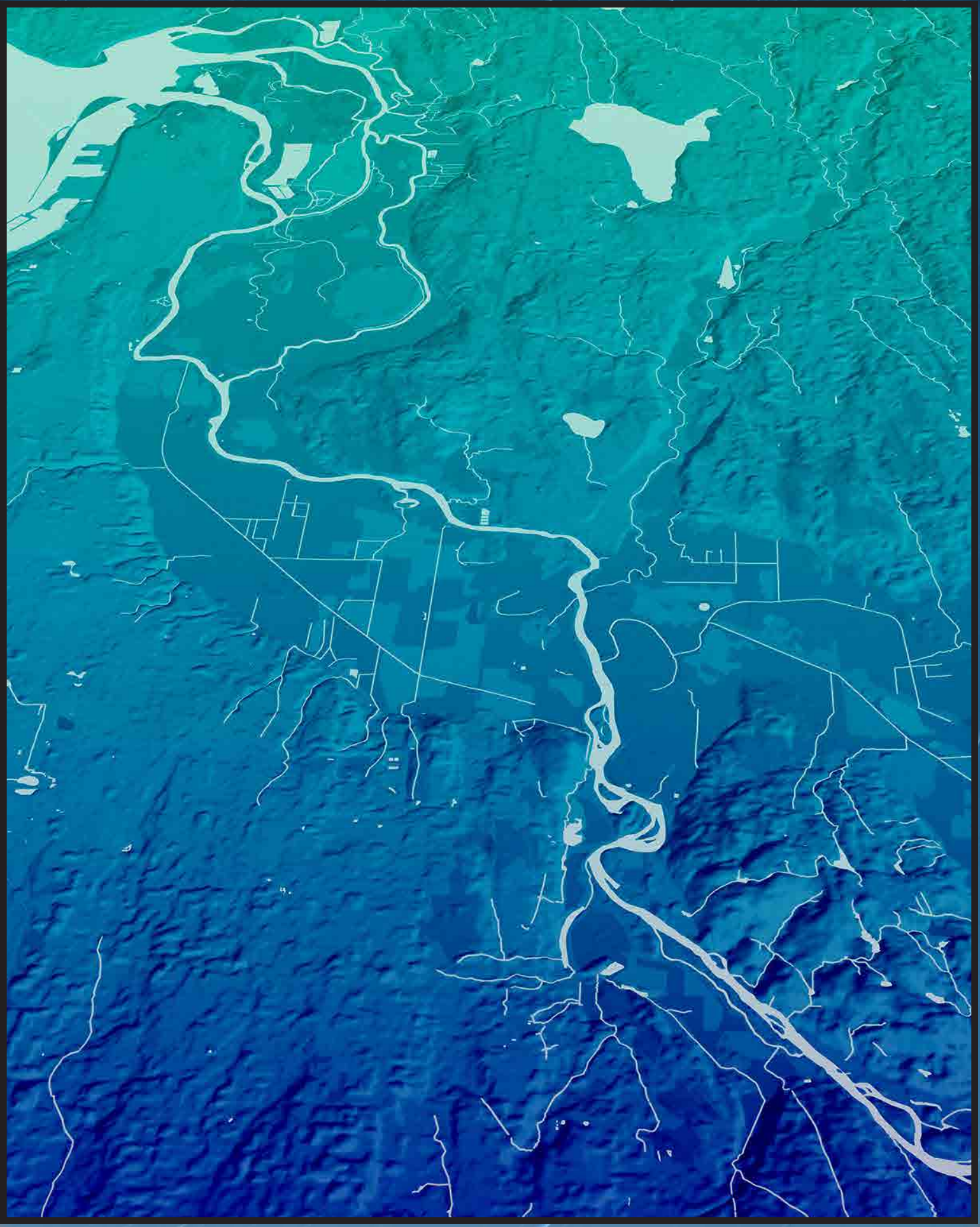

I walked down to the waterfall.


The afternoon colors were beautiful.

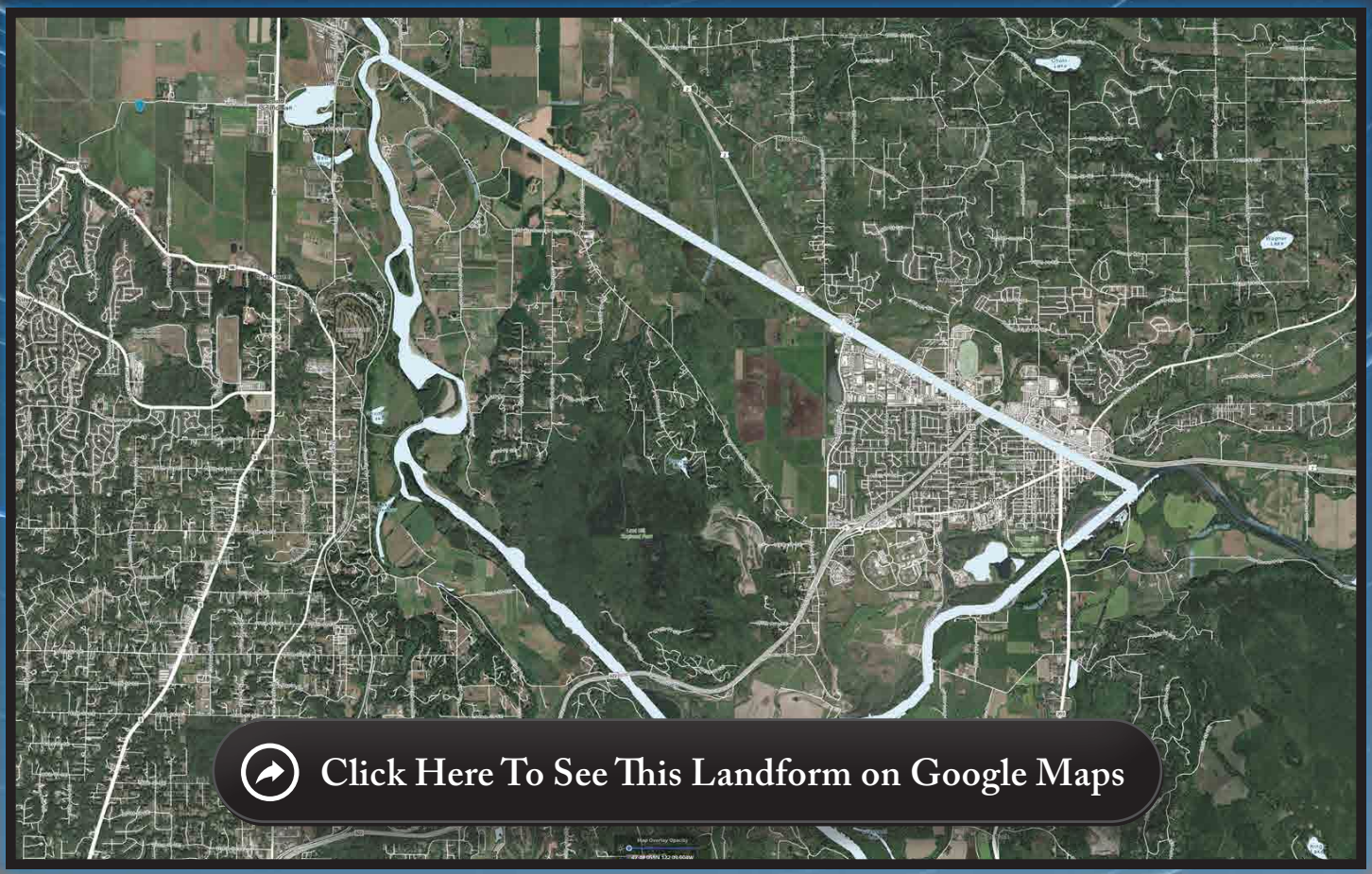

In the evening, the moon rose.

I saw a man watching over the Valley Of The Moon.

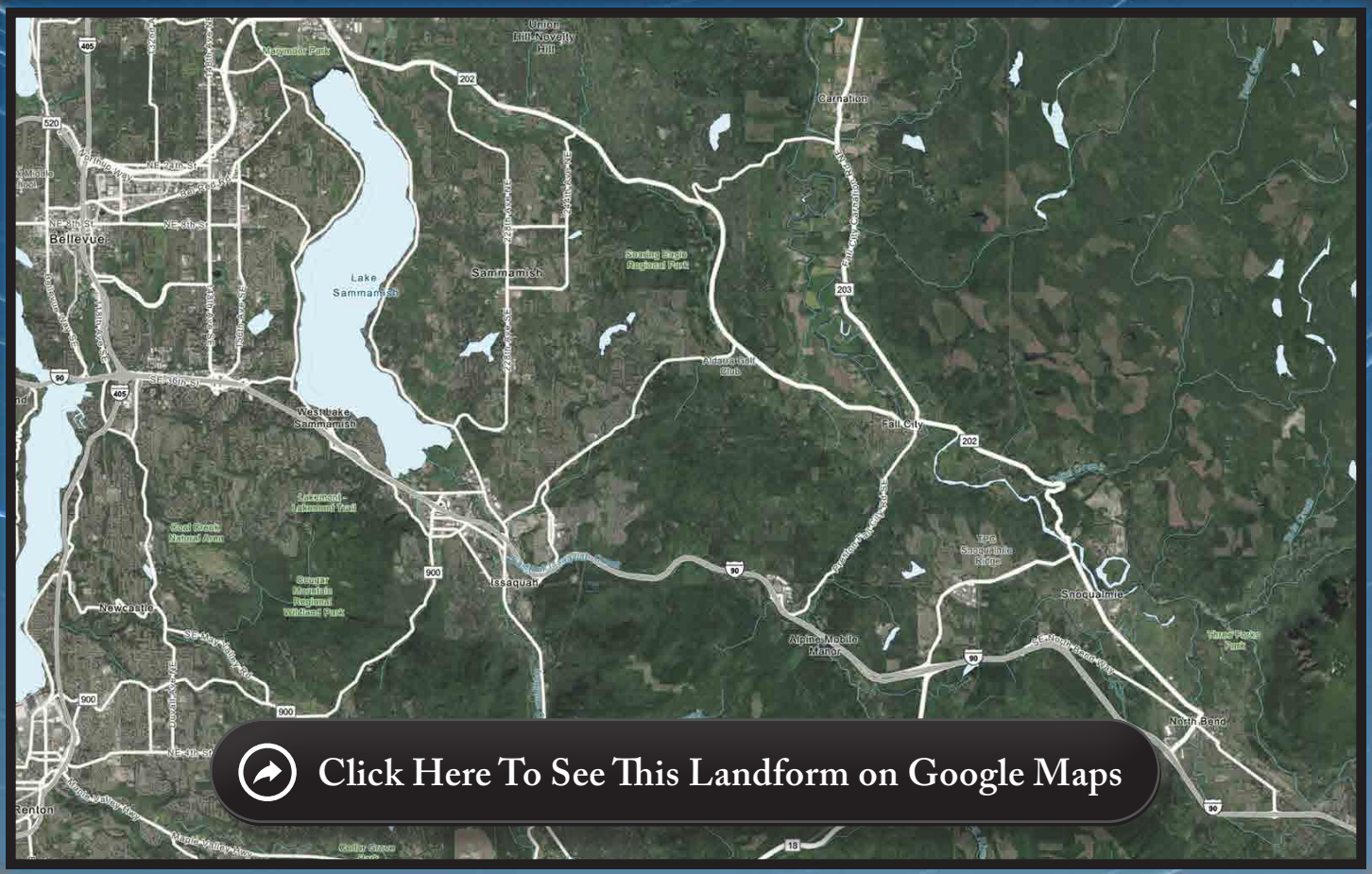




I saw a beautiful fish,
leaping from the water.

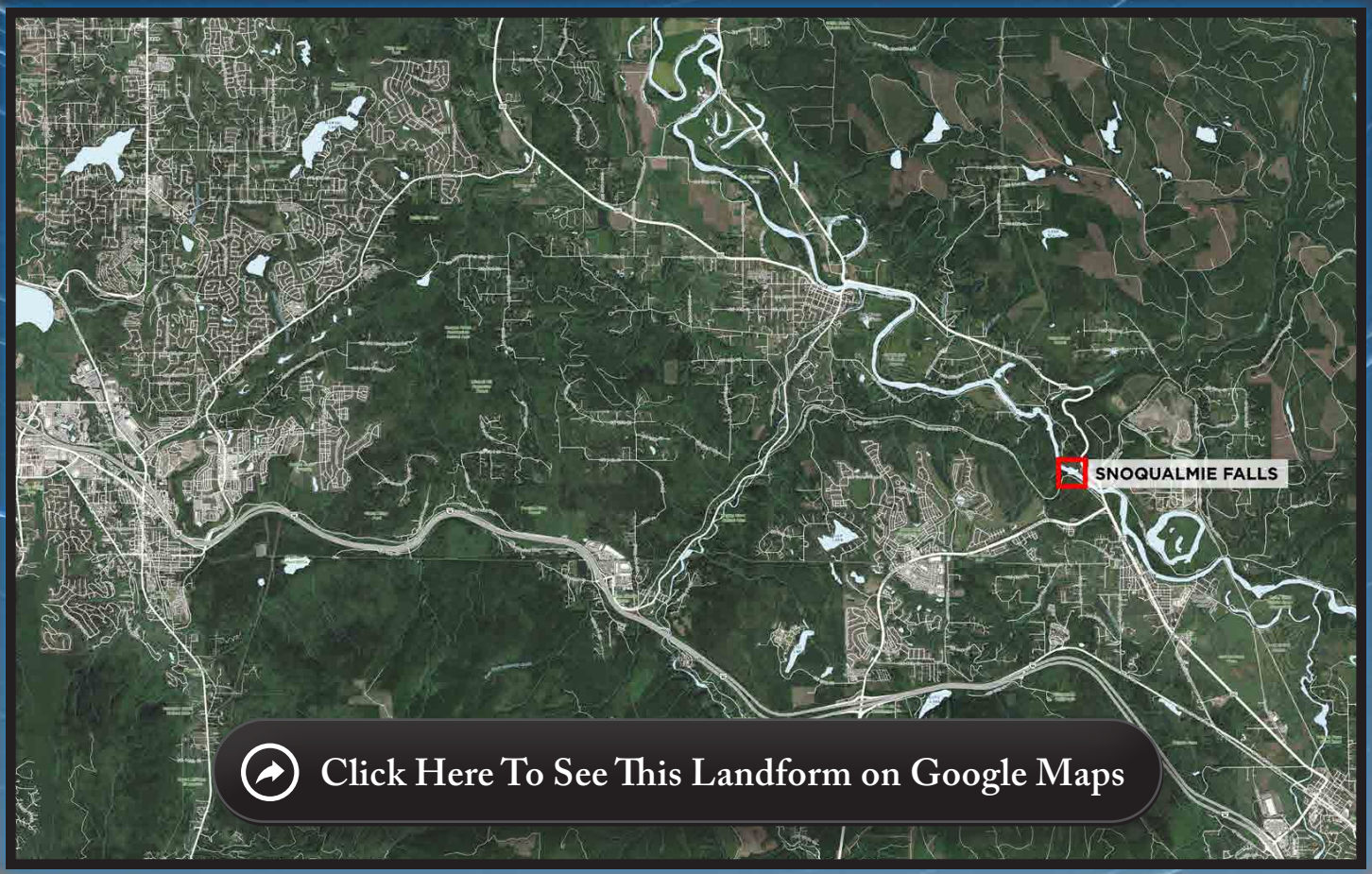


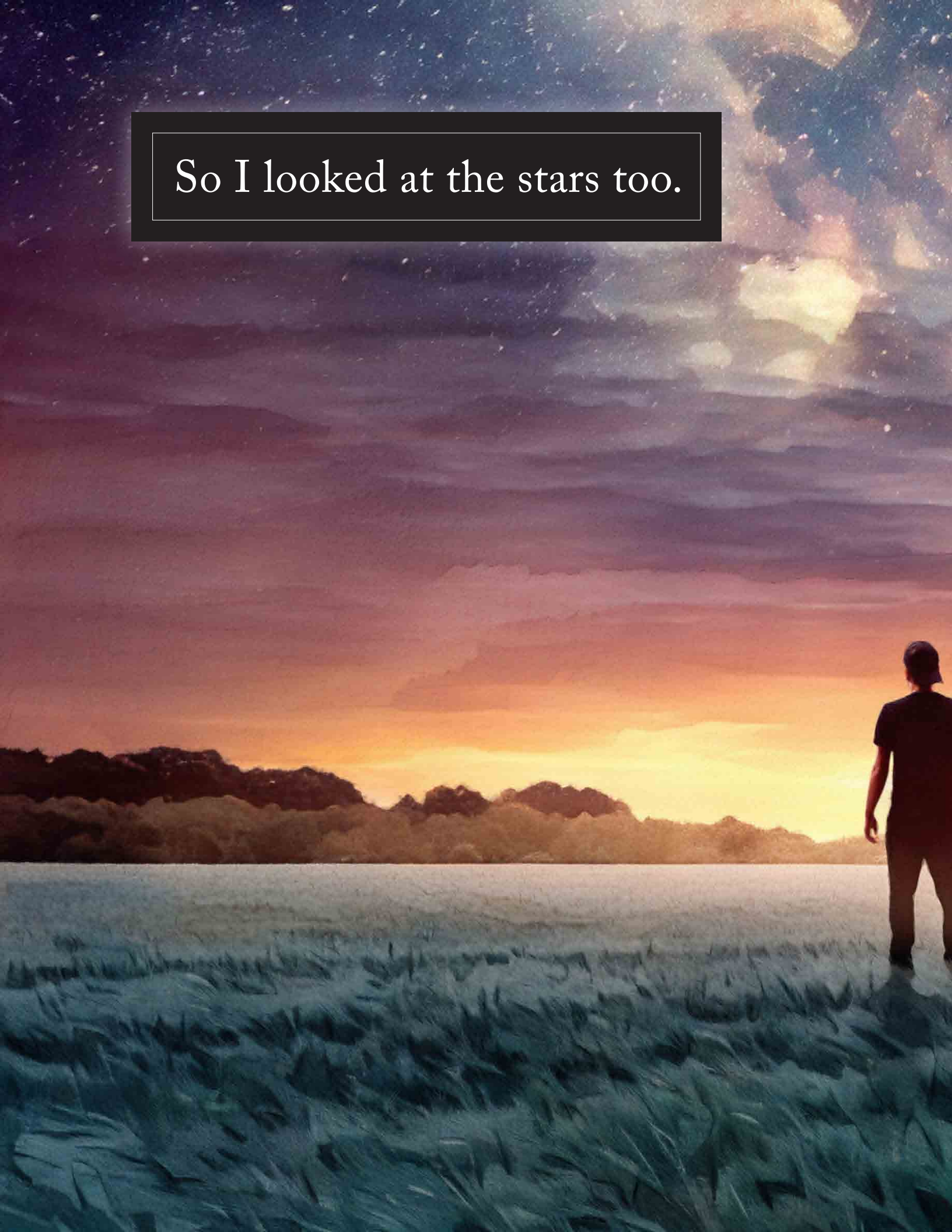
I saw a woman walking next to her horse.

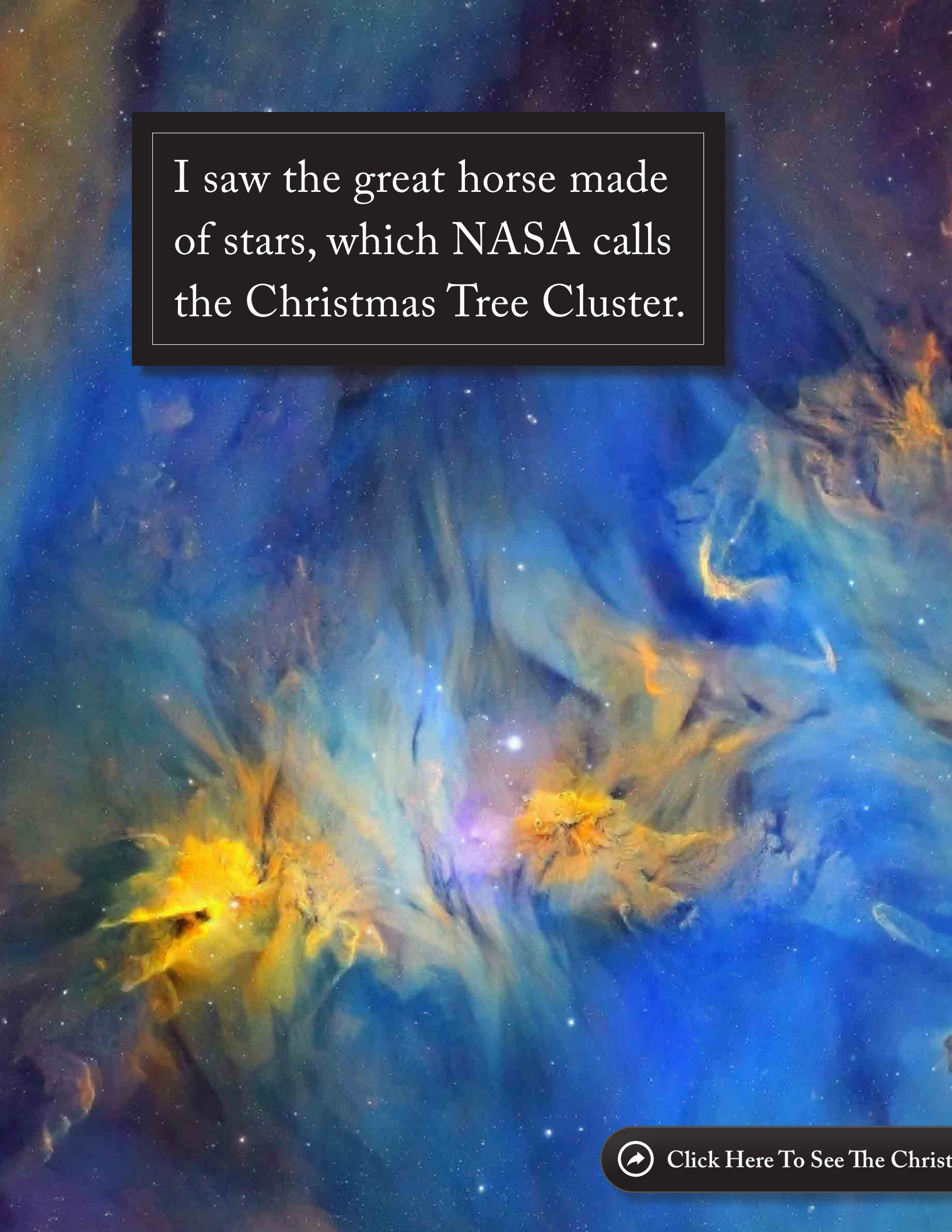



Lake Sammamish
Lake Sammamish
Lake Sammamish
Pine Lake
Beaver Lake
Ames Lake
Issaquah Creek
Phantom

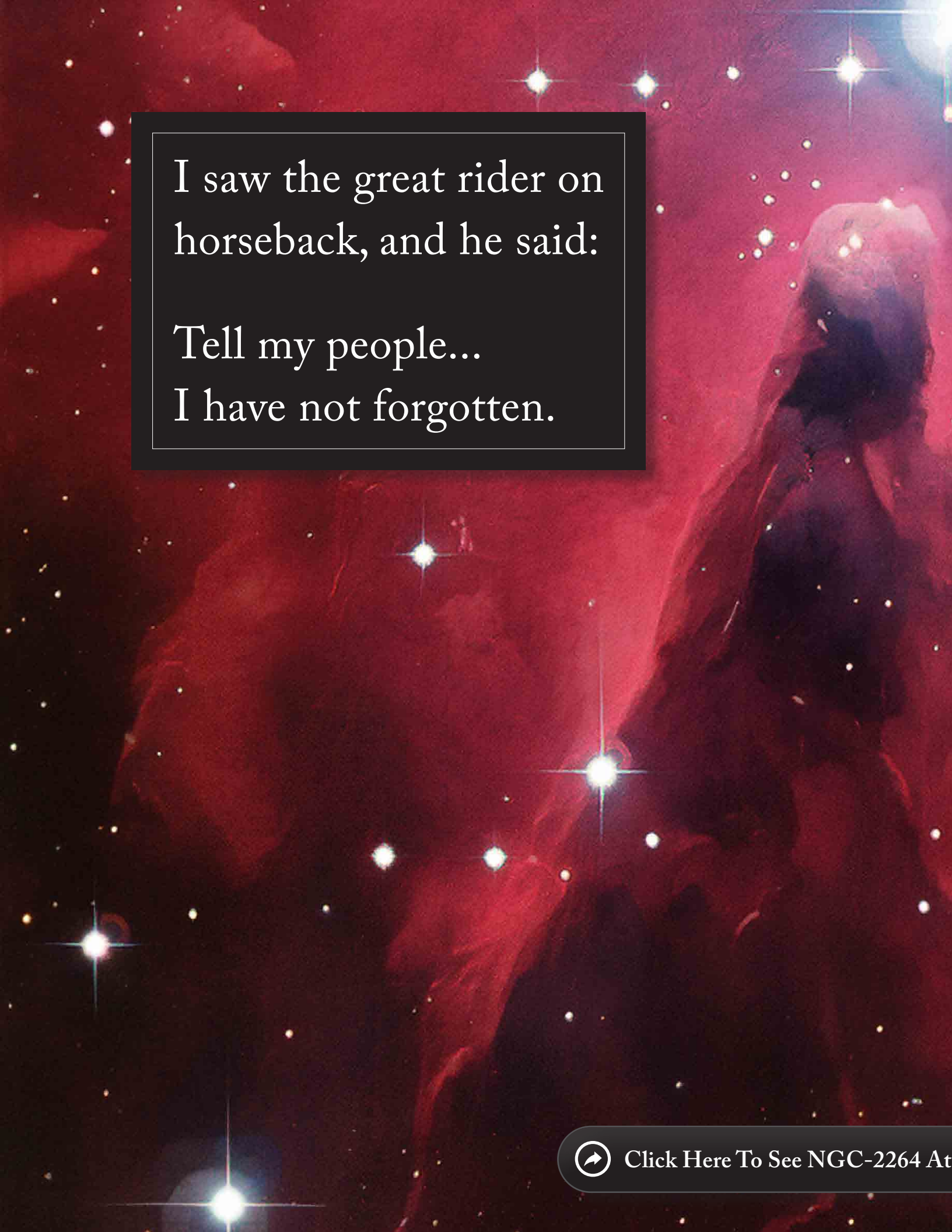
I saw her magnificent horse,
gazing at the stars.




So I looked at the stars too.

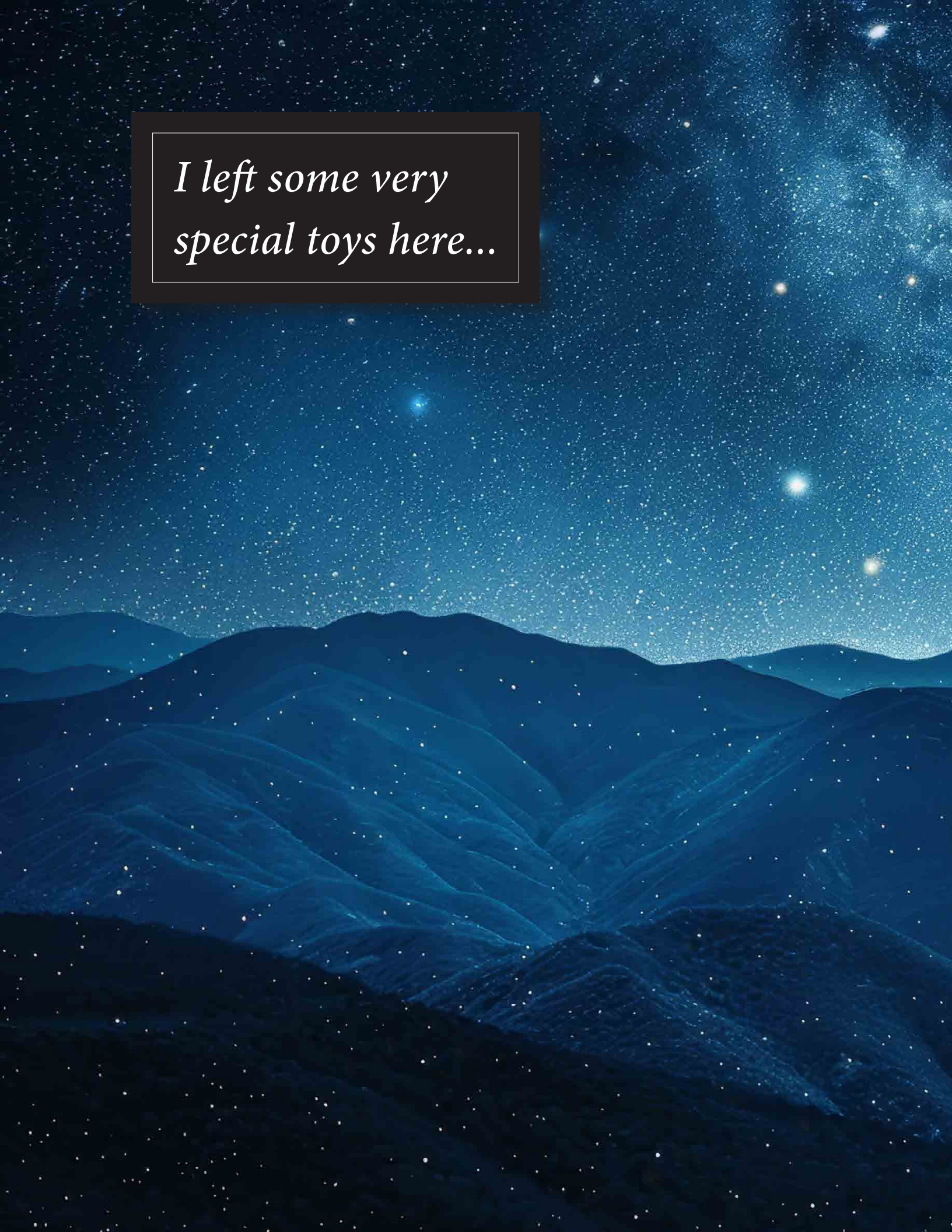

I saw the great horse made of stars, which NASA calls the Christmas Tree Cluster.
Click Here To See The Christ


tmas Tree Cluster On Astrobin


I saw the great rider on horseback, and he said:
Tell my people...
I have not forgotten.
Click Here To See NGC-2264 At

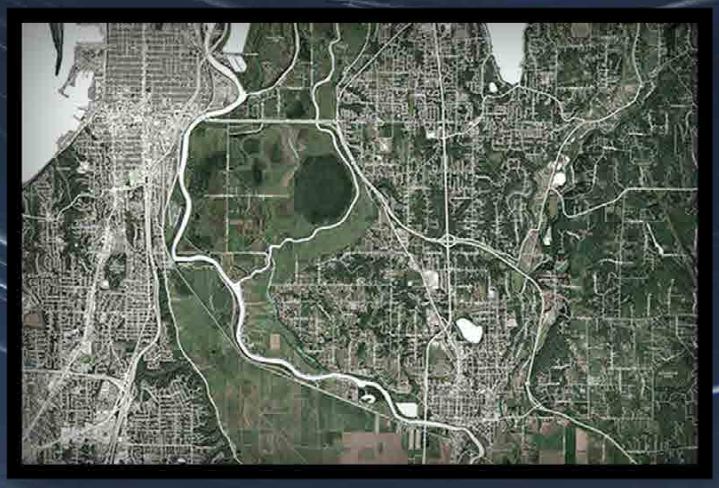
The European Southern Observatory


I saw a woman who lived here long ago.
In a soft voice she said:

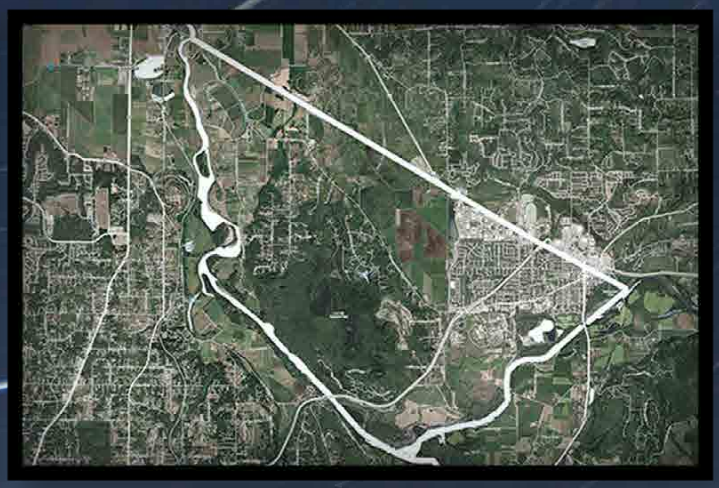

I left some very special toys here...


Will you show them to my children?

So I went to the
Valley Of The Moon.

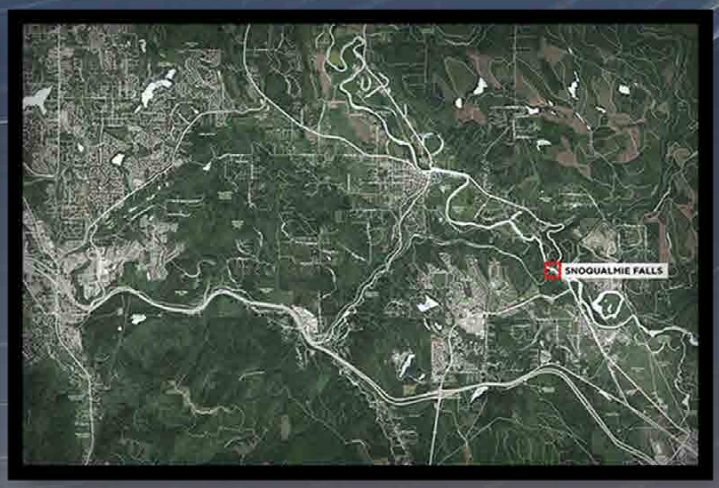


1 The Man



2 The Fish

3 The Woman

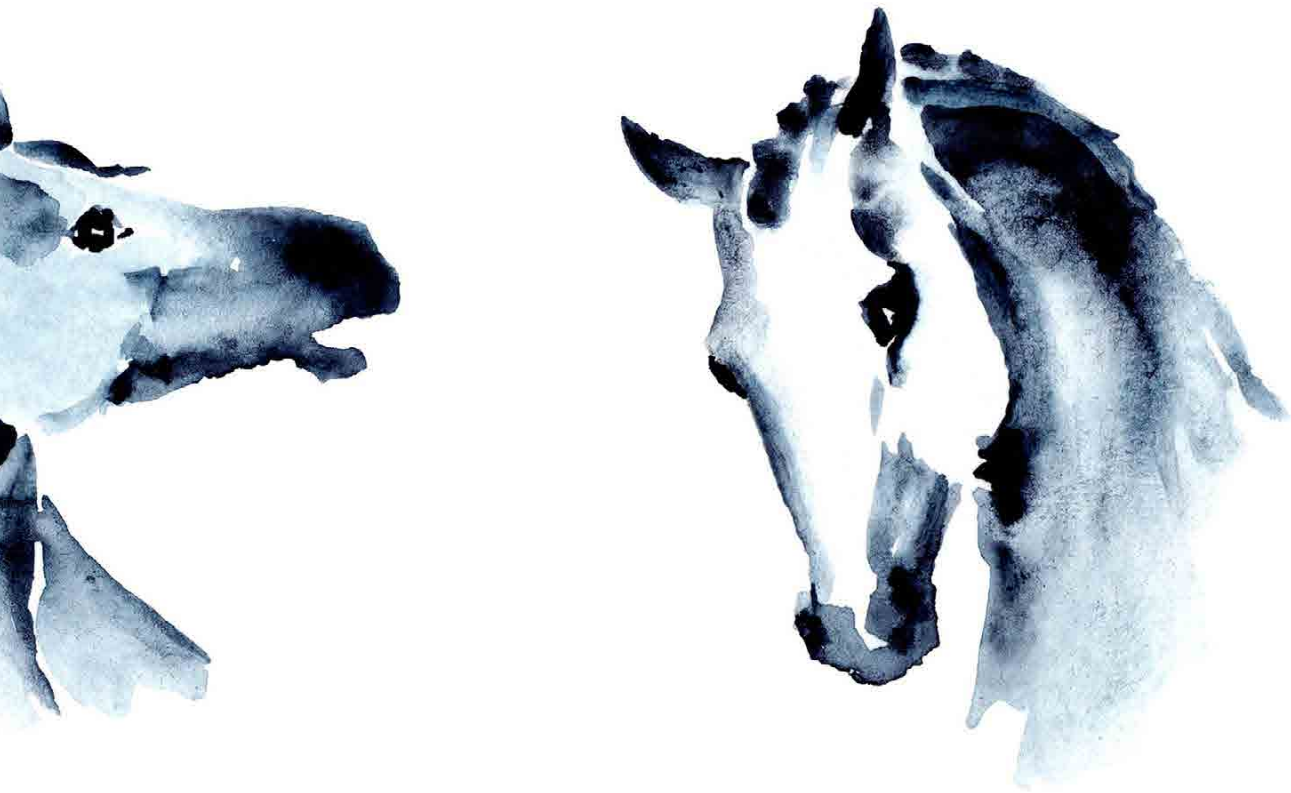


4 The Horse


The Valley
Of The Moon
1
2
3
4
Everett
PINEHURST
Snohomish River
Bunch Creek
Snohomish River
Browns Bay
CANYON PARK
RICHMOND BEACH
MAPLE LEAF
Shilshole Bay
Green Lake
WALLINGFORD
FREMONT
MAGNOLIA
MADISON PARK
Smith Cove
CAPITOL HILL
Seattle
BEACON HILL
WEST SEATTLE
Andrews Bay
GEORGETOWN
Fauntleroy Cove
Boeing Field
Cedar River
EASTGATE
TRILOGY
REDMOND RIDGE
Lake Sammamish
EAST RENTON HIGHLANDS
Washington
5
2
405
90

And I began lool

king for the toys.



The Jade Horse, the White

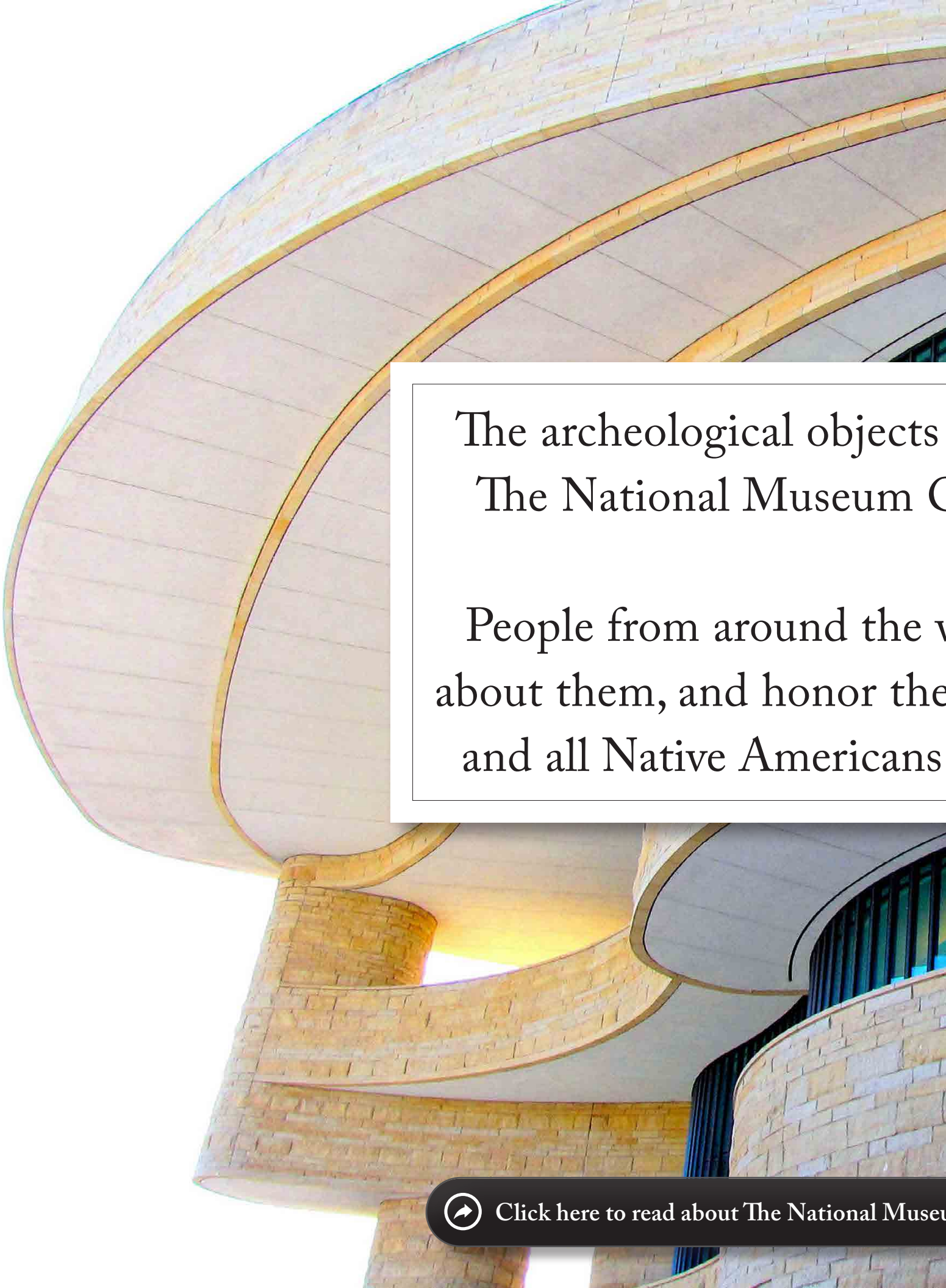
Horse, and the Red Horse.


The very special toys connect the Sn

noqualmie people to the great horse!


To the Snoqualmie
the indigenous pe
Merry C

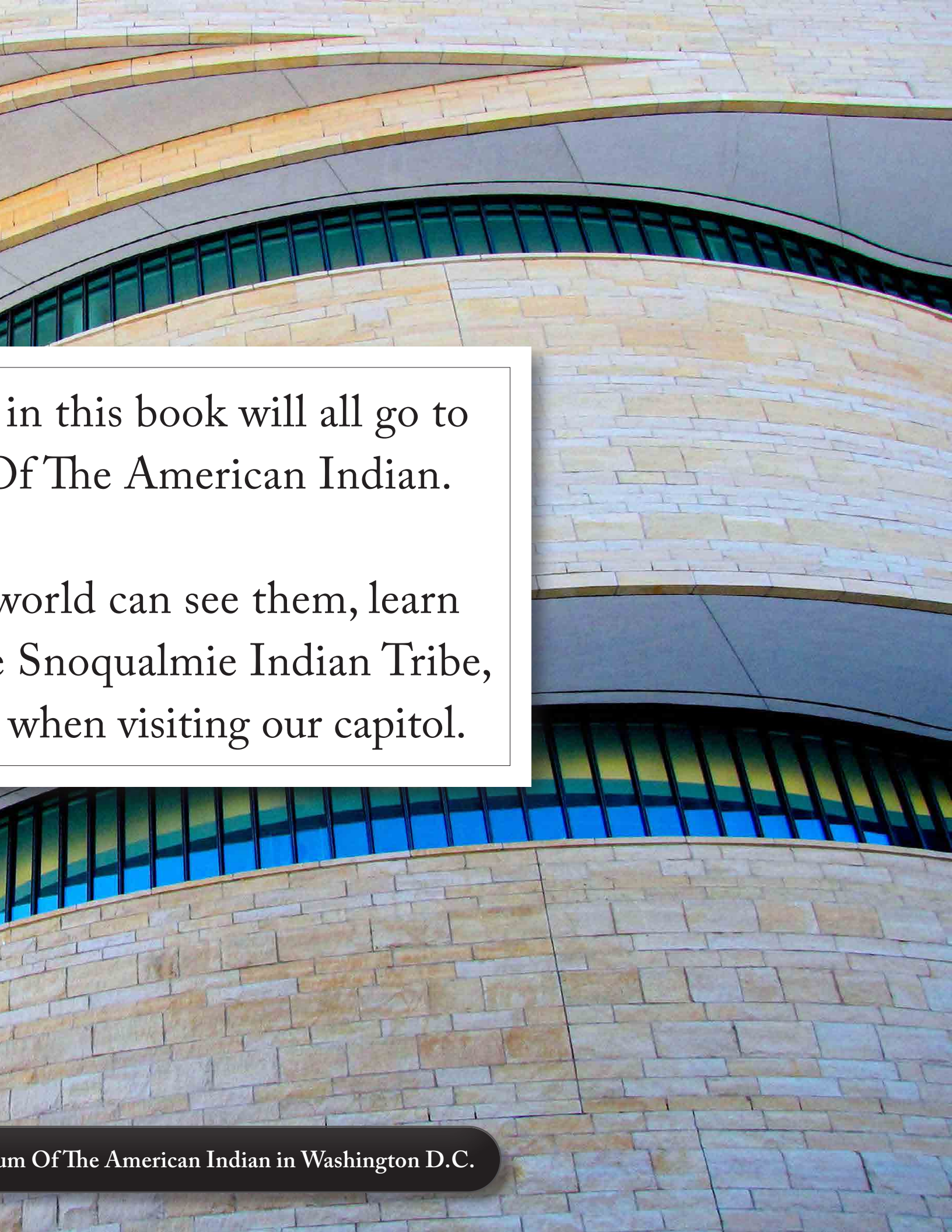
e people, and to all
ople of the world:
hristmas



The archeological objects
The National Museum C

People from around the w
about them, and honor the
and all Native Americans

Click here to read about The National Museu



in this book will all go to
Of The American Indian.

world can see them, learn
e Snoqualmie Indian Tribe,
when visiting our capitol.

um Of The American Indian in Washington D.C.

THE JADE HORSE

02

I found the Jade Horse in 2014 in Issaquah, Washington, in a dry creek bed, in soil that USGS (US Geological Survey)has classified as Pre-Holocene, meaning before the last Ice Age.

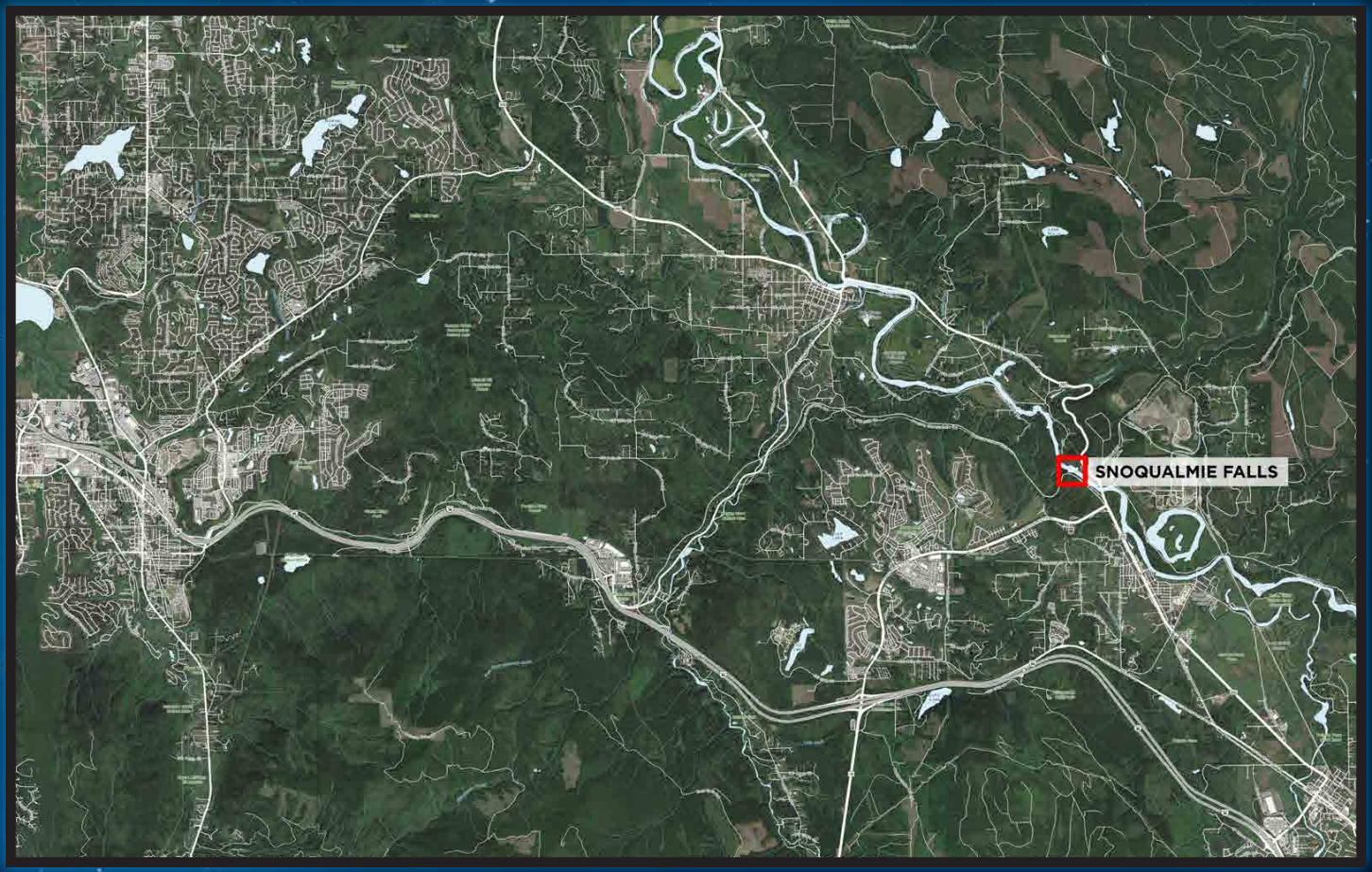
This ancient toy is made of Nephrite, a type of Jade that has a long history with the people of the Pacific Northwest.

The Jade Horse shows all four of the giant landforms in The Valley Of The Moon.

Click here for more about Native American Jades

Click here for my statement about cultural objects

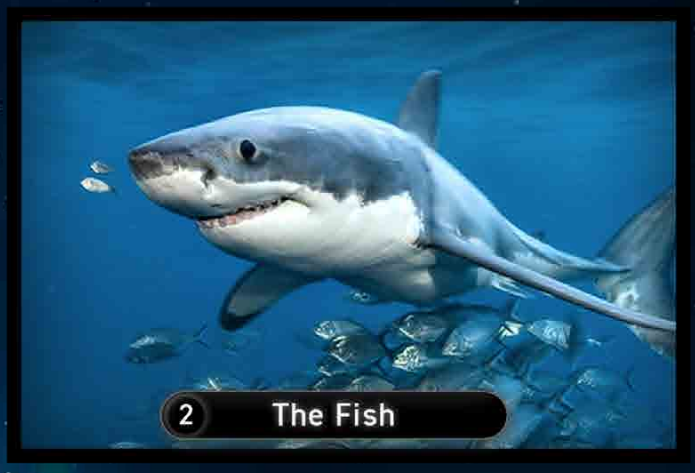
The Jade Horse matches the horse landform and the Christmas Tree Cluster.


SNOQUALMIE FALLS

Here are some pictures to compare with each of the four facets of the Jade Horse.

Can you see them now?


1 The Man


2 The Fish


3 The Woman


4 The Horse

There are more things you can see on the Jade Horse.

A crow, a jaguar, a frog, and a water lilly bud!

The drawing of the crow comes from a book called Bayer's Uranometria (1604).

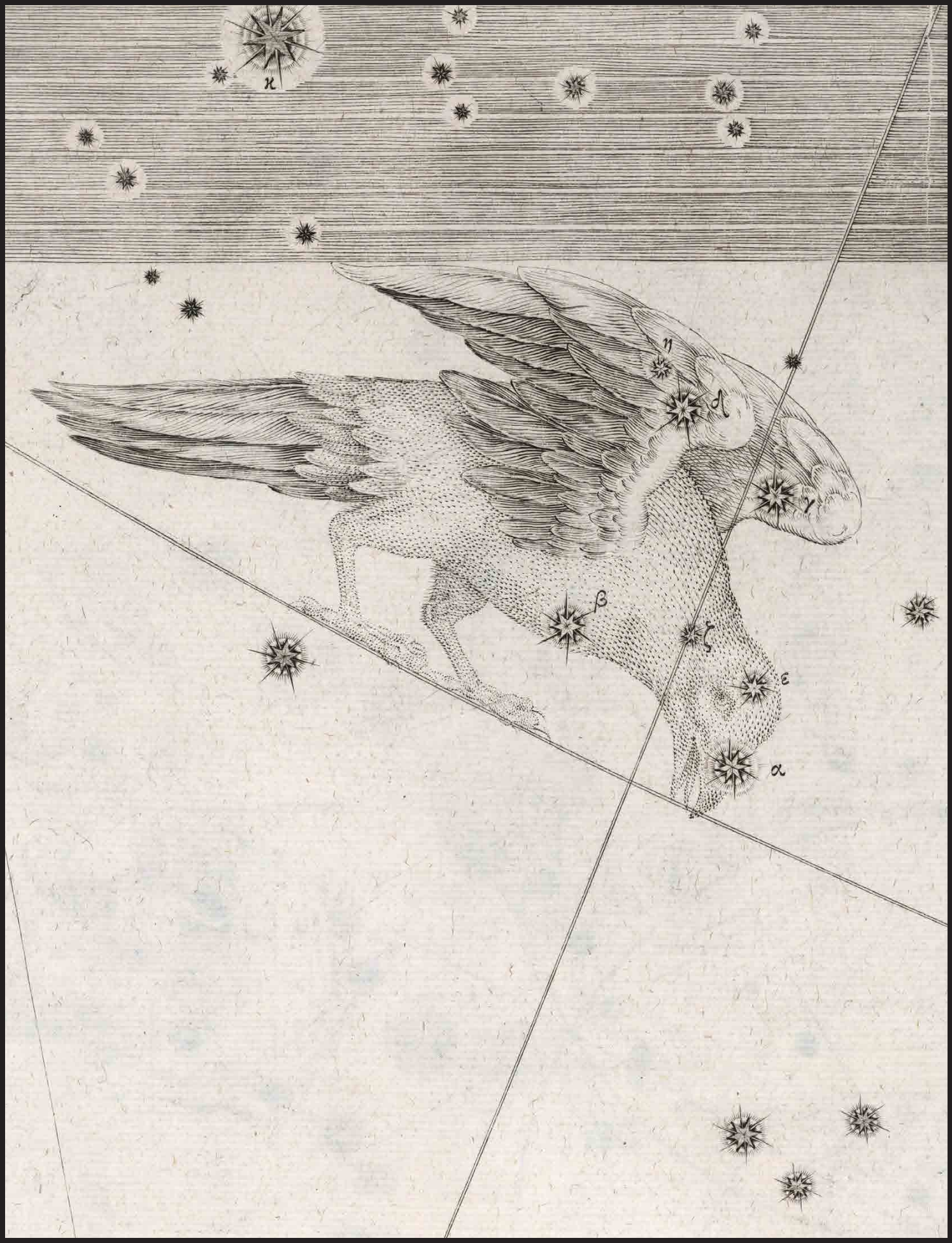

1 The Crow


2 The Jaguar


3 The Frog


4 A Water Lilly Bud

Click here to see more images from Bayer's Uranometria


κ
η
λ
γ
β
ζ
ε
α

The Horse

The Woman

The Fish

The Man

The Frog

The Jaguar

THE WHITE HORSE

03

I found the White Horse in 2014 in Issaquah, Washington, in the same dry creek bed where I found the Jade Horse.

The White Horse shows three of the landforms in The Valley Of The Moon.

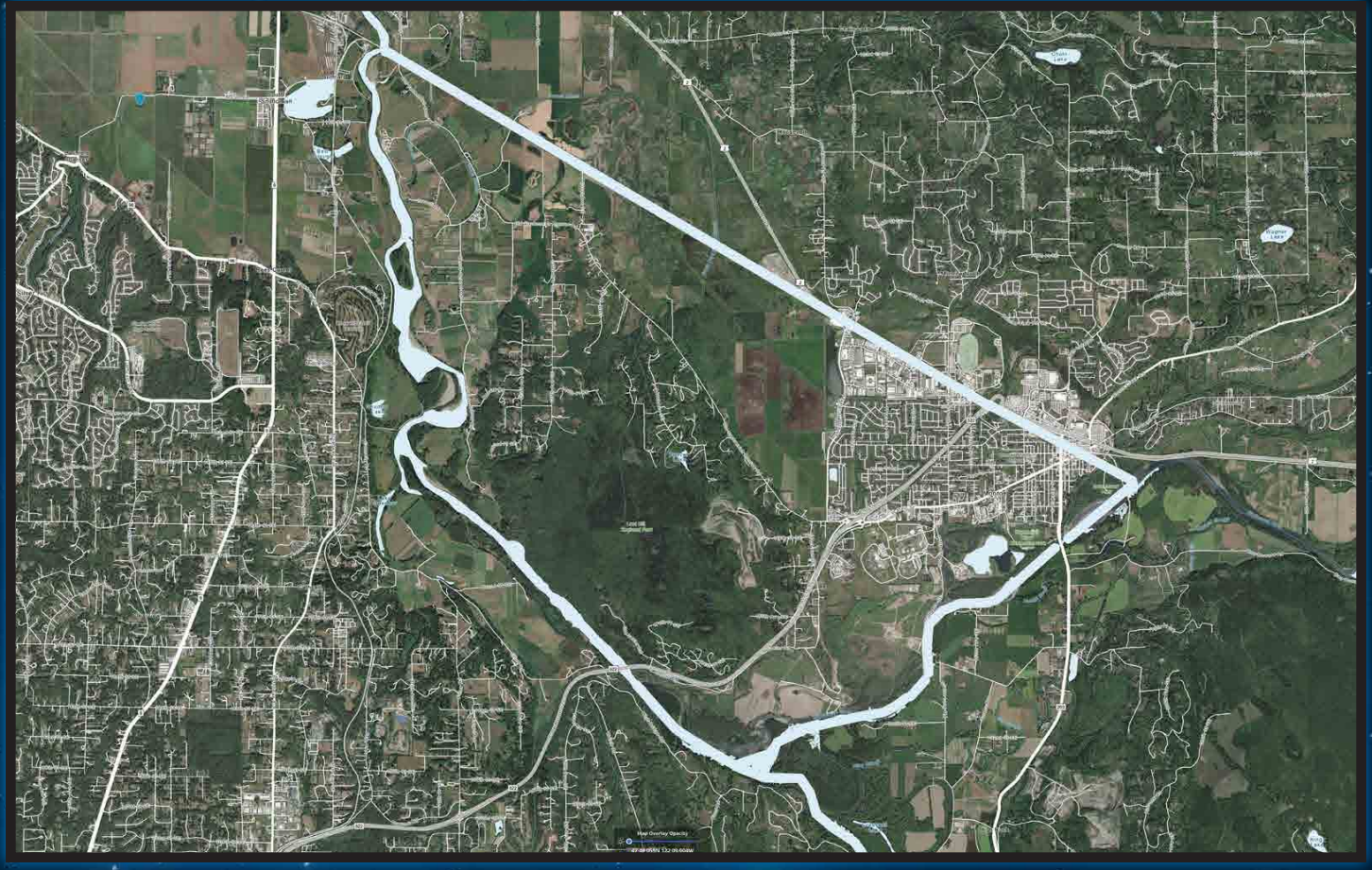
What is really interesting about the White Horse is that the fish (which looks like a shark) and the horse and the man are all together in the middle of the stone.

The man seems to be standing at the top of Snoqualmie Falls, looking down and wearing a tall hat.

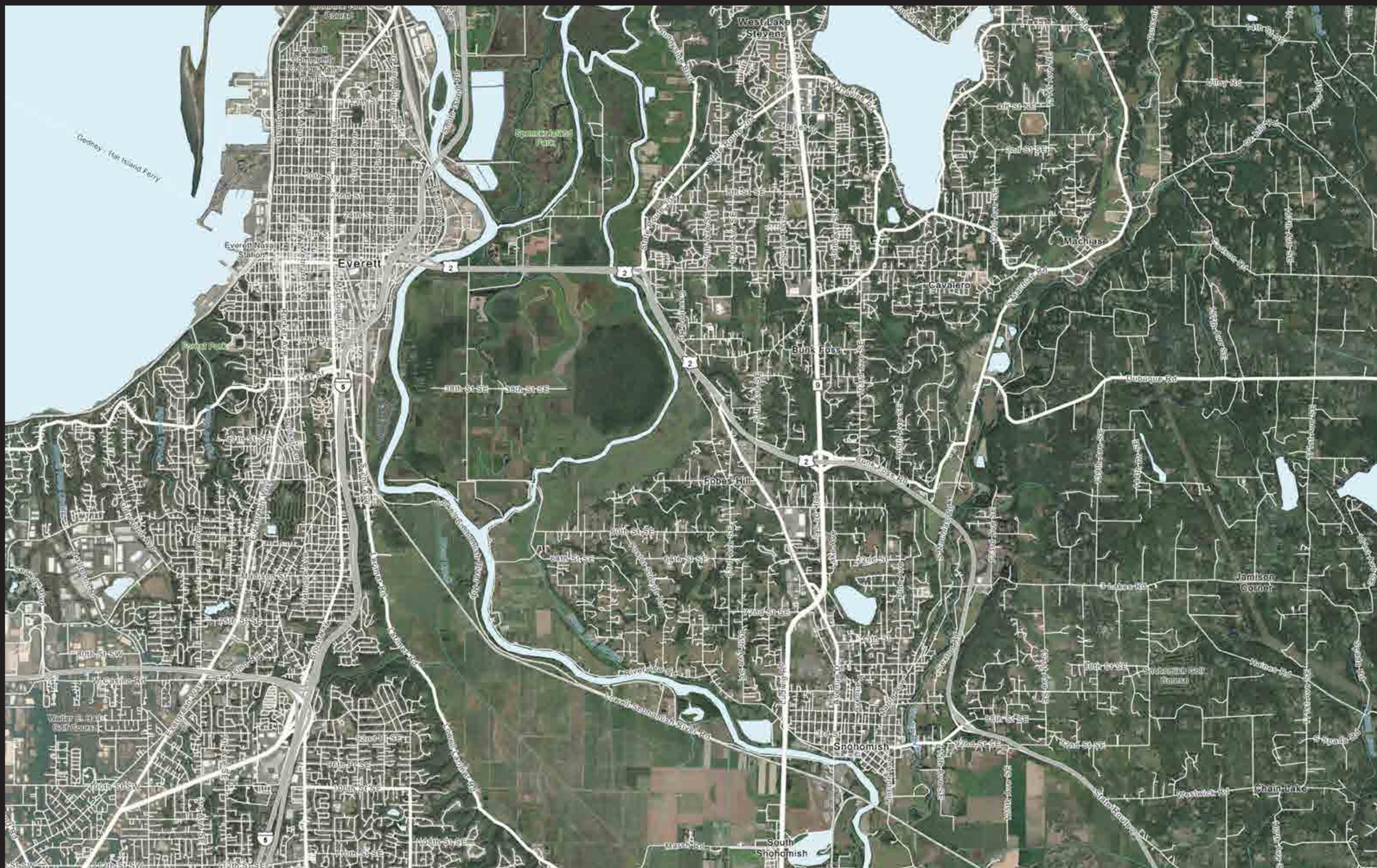
The White Horse: Horse Facet


SNOQUALMIE FALLS

The White Horse: Fish Facet



The White Horse: Man Facet


West Lake Stevens
Gedney - Hat Island Ferry
Spencer Island Park
Everett
Everett Naval Station
Forest Park
38th St SE
Machias
Cavalero
Bunk Foss
Dubuque Rd
Fobes Hill
Jamison Corner
Snohomish
South Snohomish
Chain Lake

The Horse & The Fish

The Man

THE RED HORSE

04

I found the Red Horse in 2014 in Issaquah, Washington, in the same dry creek bed where I found the Jade Horse and the White Horse.

The Red Horse is very small. The horse looks like The Christmas Tree Cluster, and the red color appears to be pigment applied over a stone carving.

If you look closely you can see a second smaller horse, like a foal next to a mare.

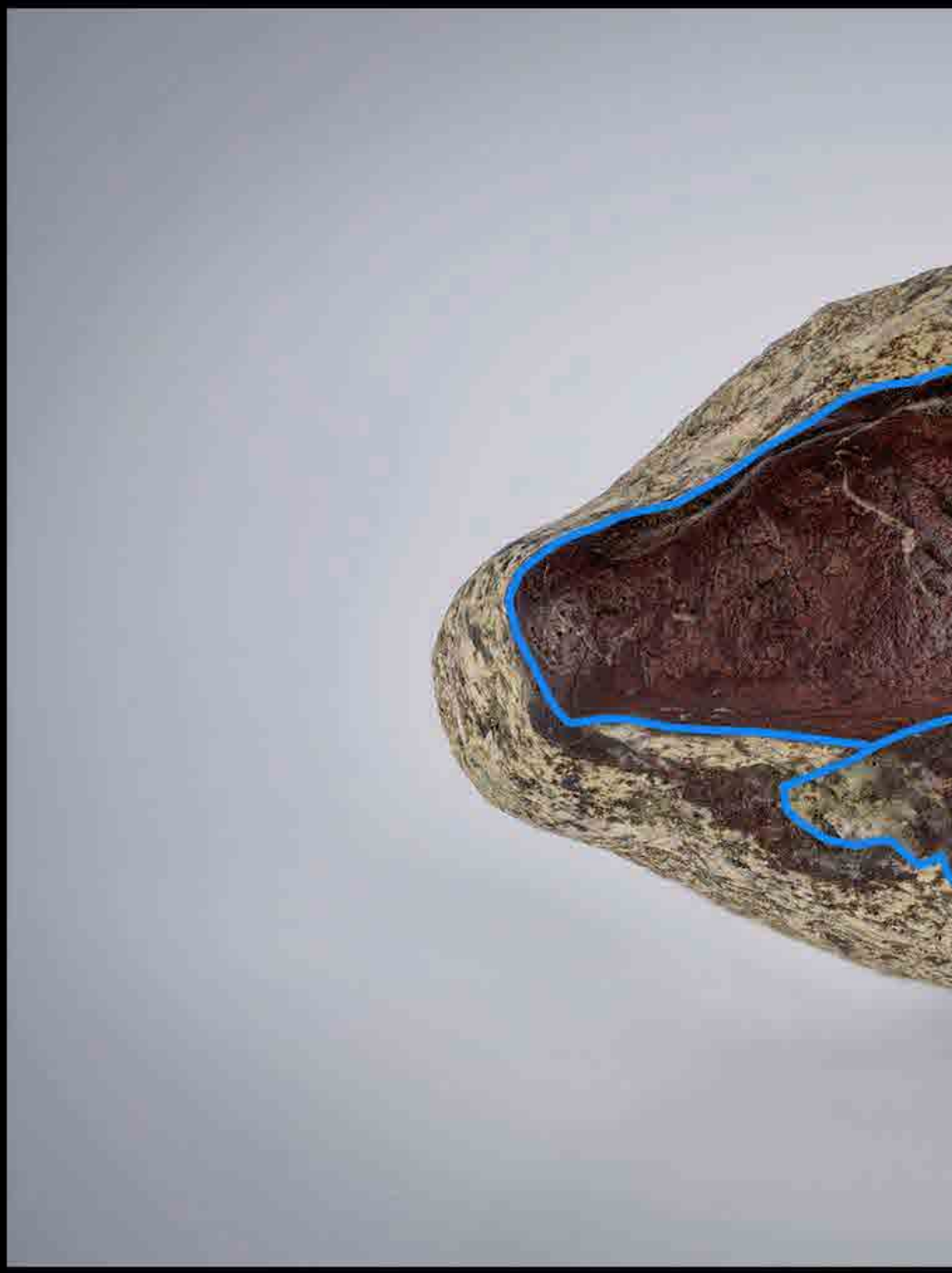
If you look closely at the horse in the Christmas Tree Cluster, you can see a second smaller horse there too!

The Red Horse looks just like

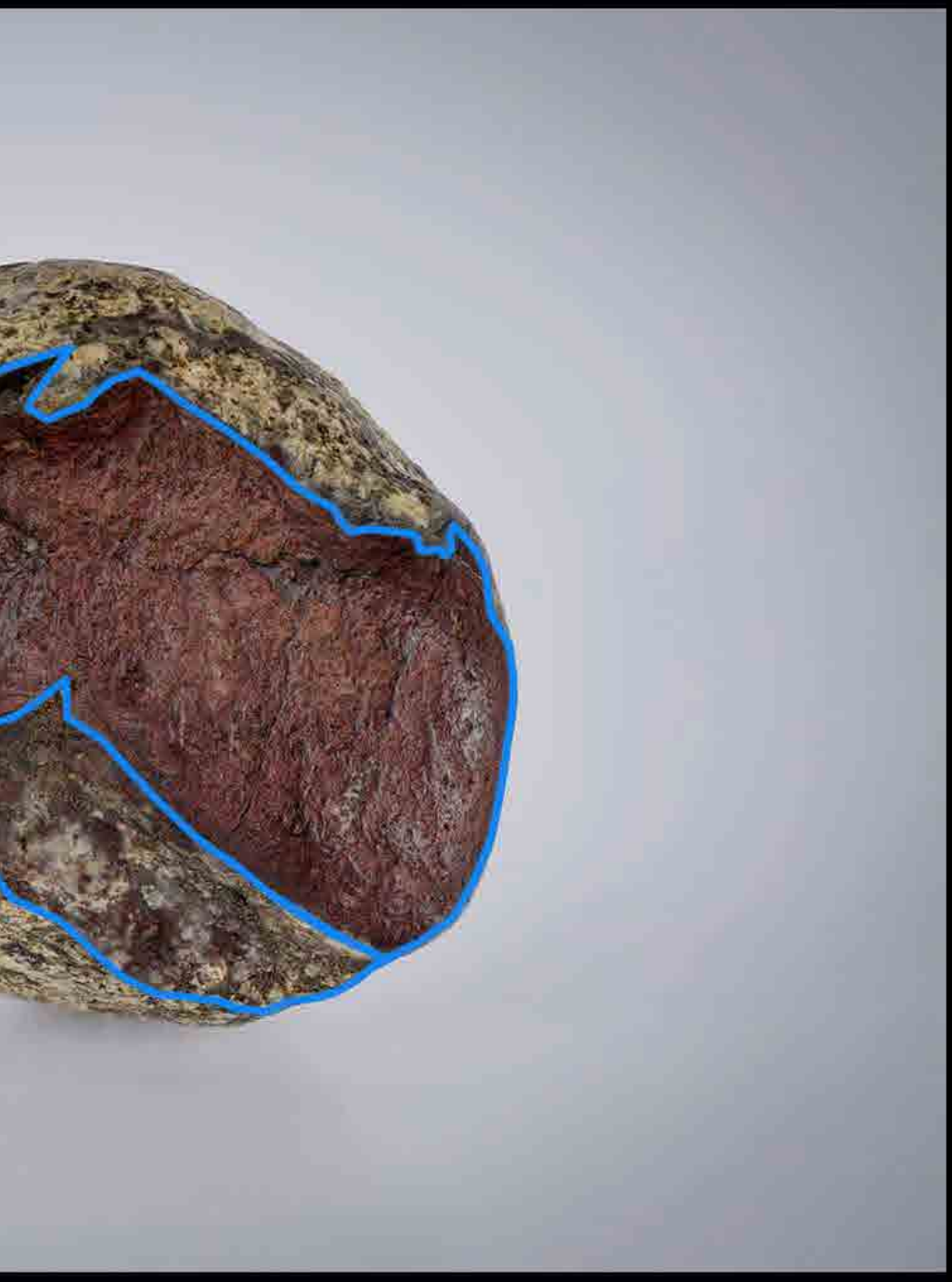
the great horse made of stars.

There is a small Red Horse rig

ght next to the big Red Horse.



The small Red Horse and the big

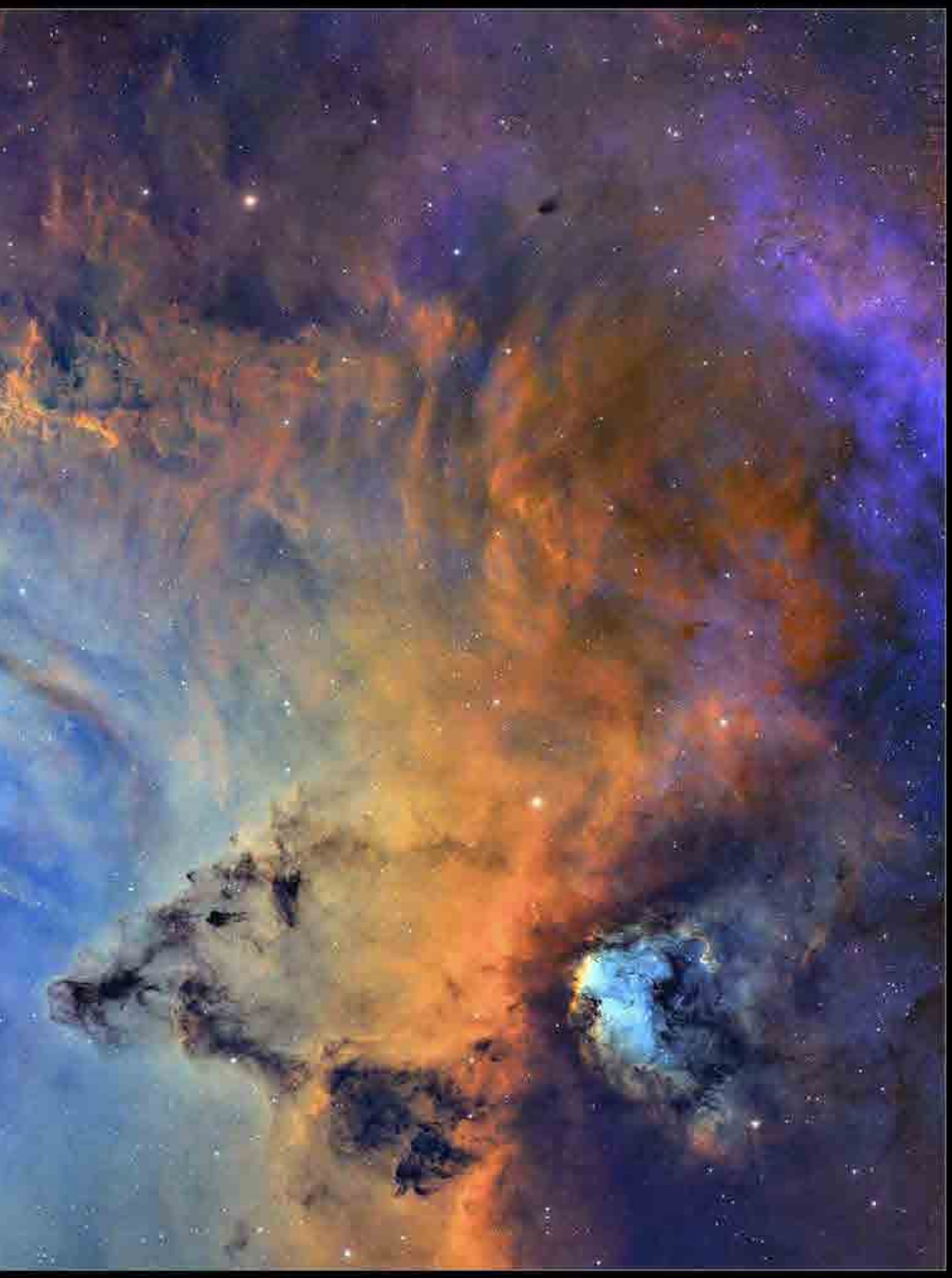


Red Horse are running together.

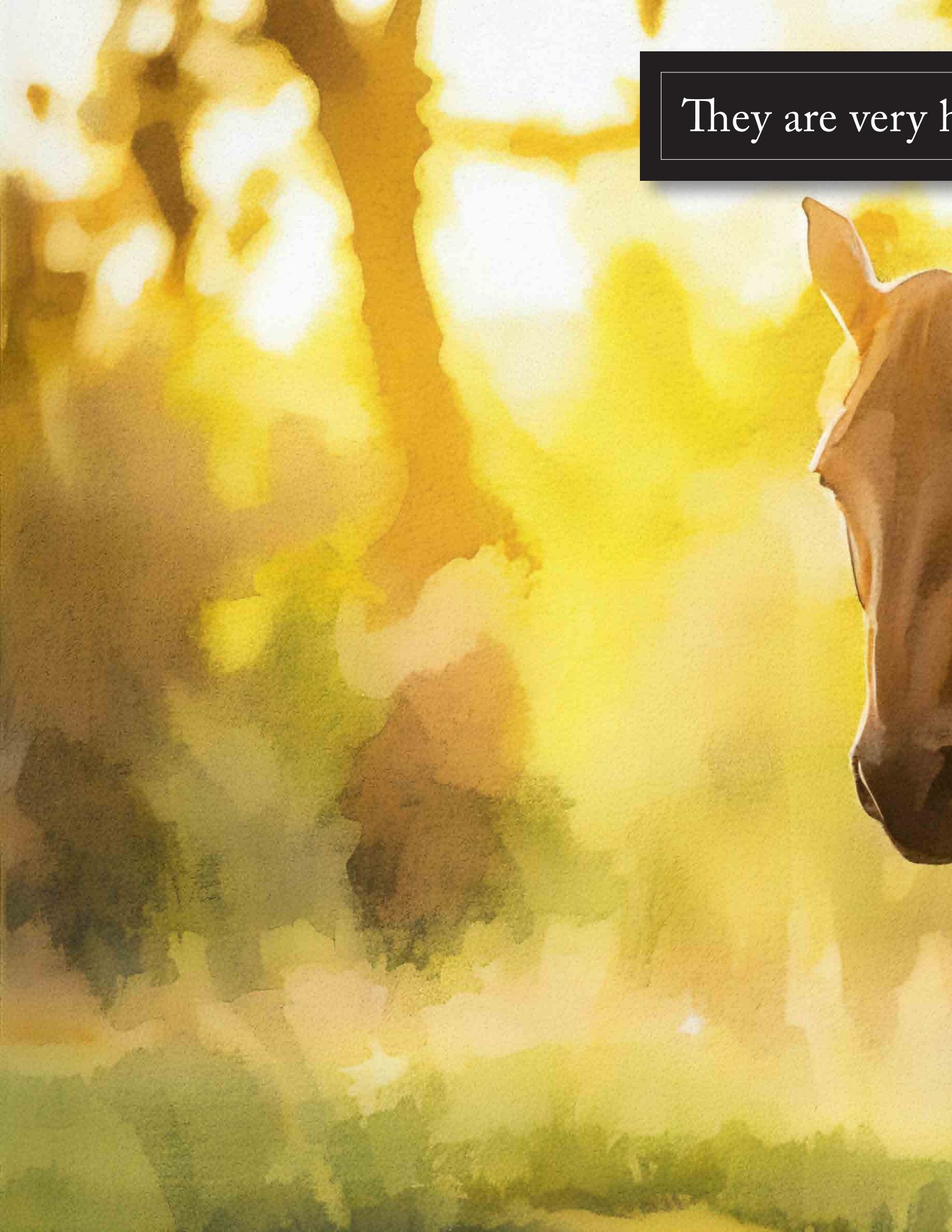
Like a beautiful

mare with a foal!

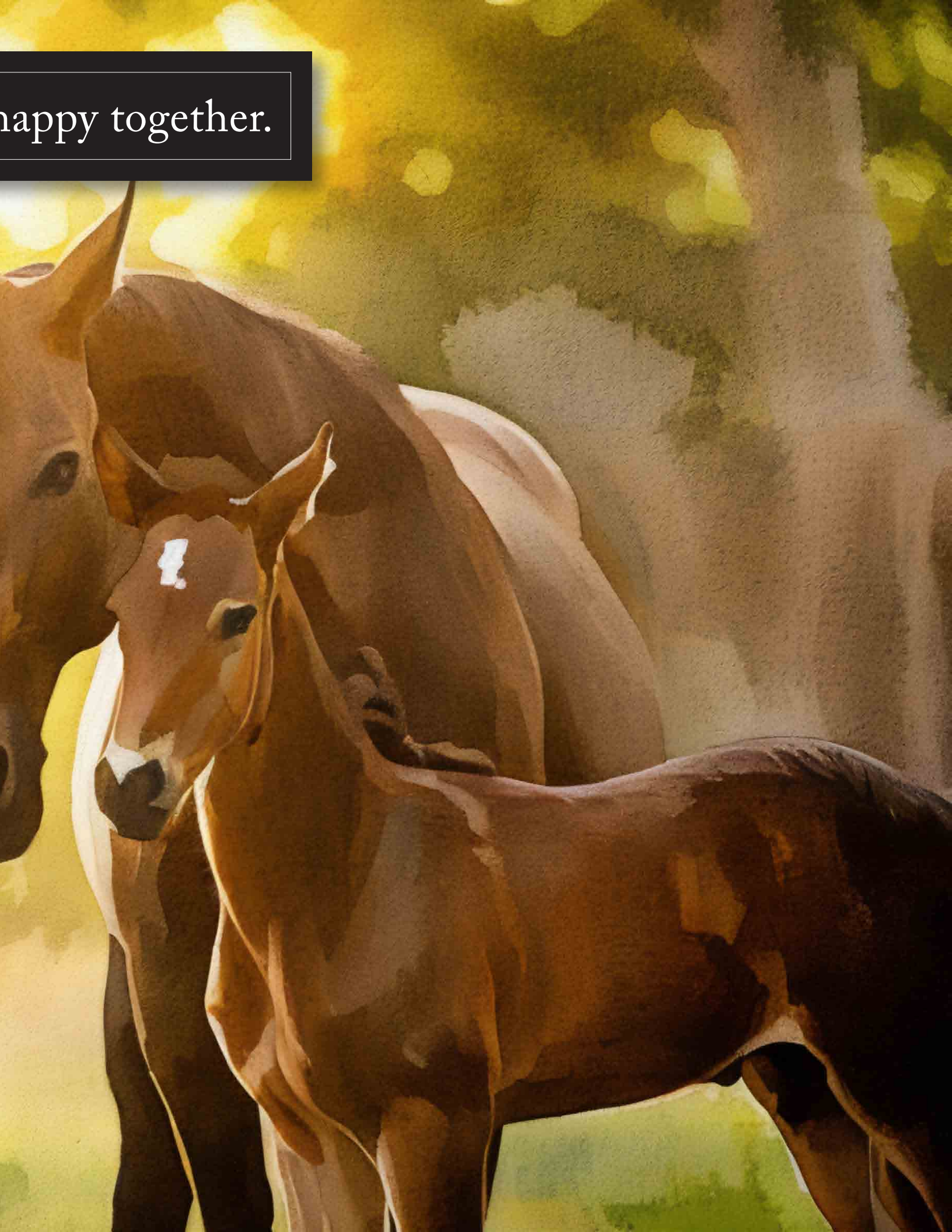
Can you see the little hors



se next to the great horse?


They are very h

happy together.



The great rider is w

earing a red hoodie.

Now what does th

ne rider look like?

The Rec

d Horse

THE HIDDEN VALLEY

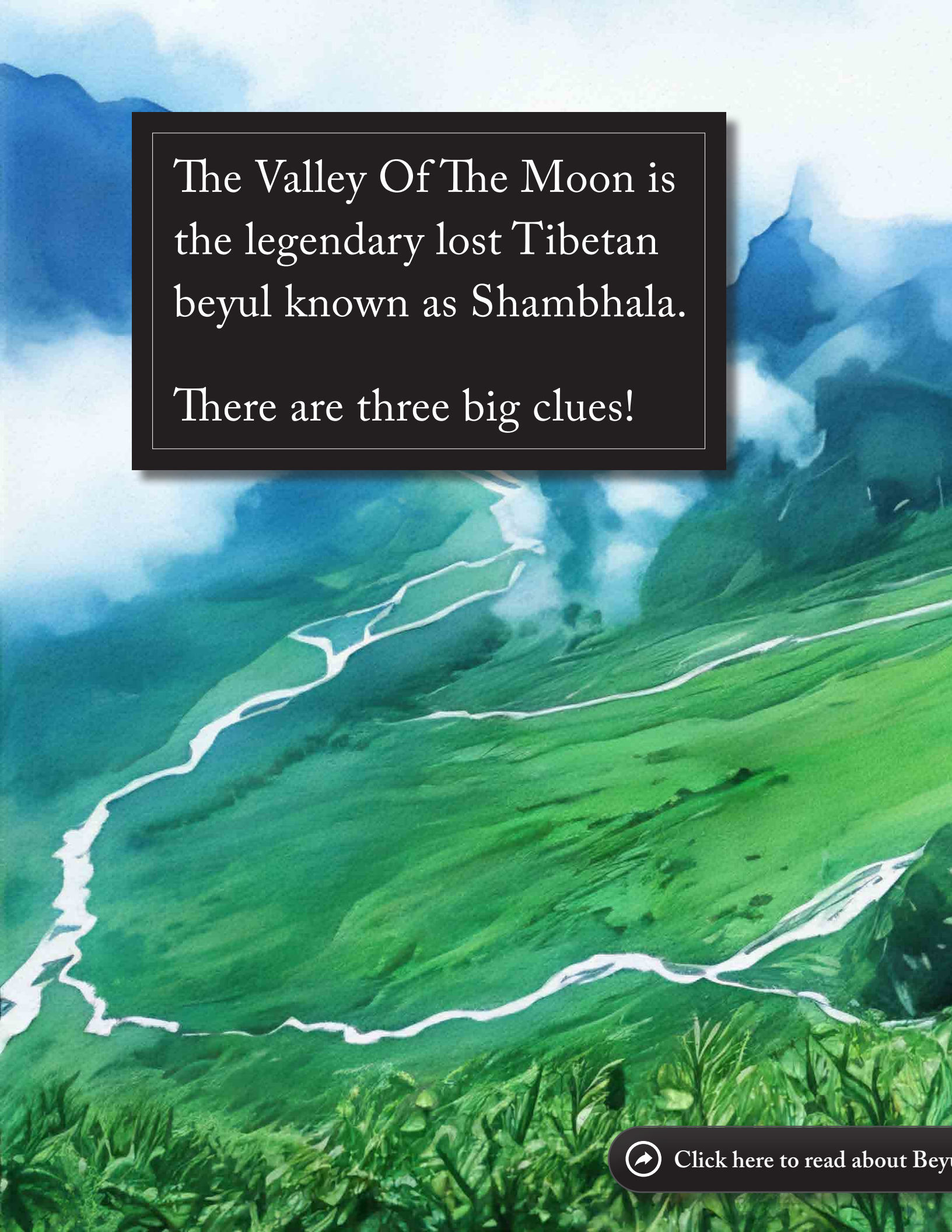
05

Beyul are the hidden (be) valleys (yul) described in ancient Tibet, where physical and spiritual worlds overlap.

Beyul are discovered when our world is about to change for the better.

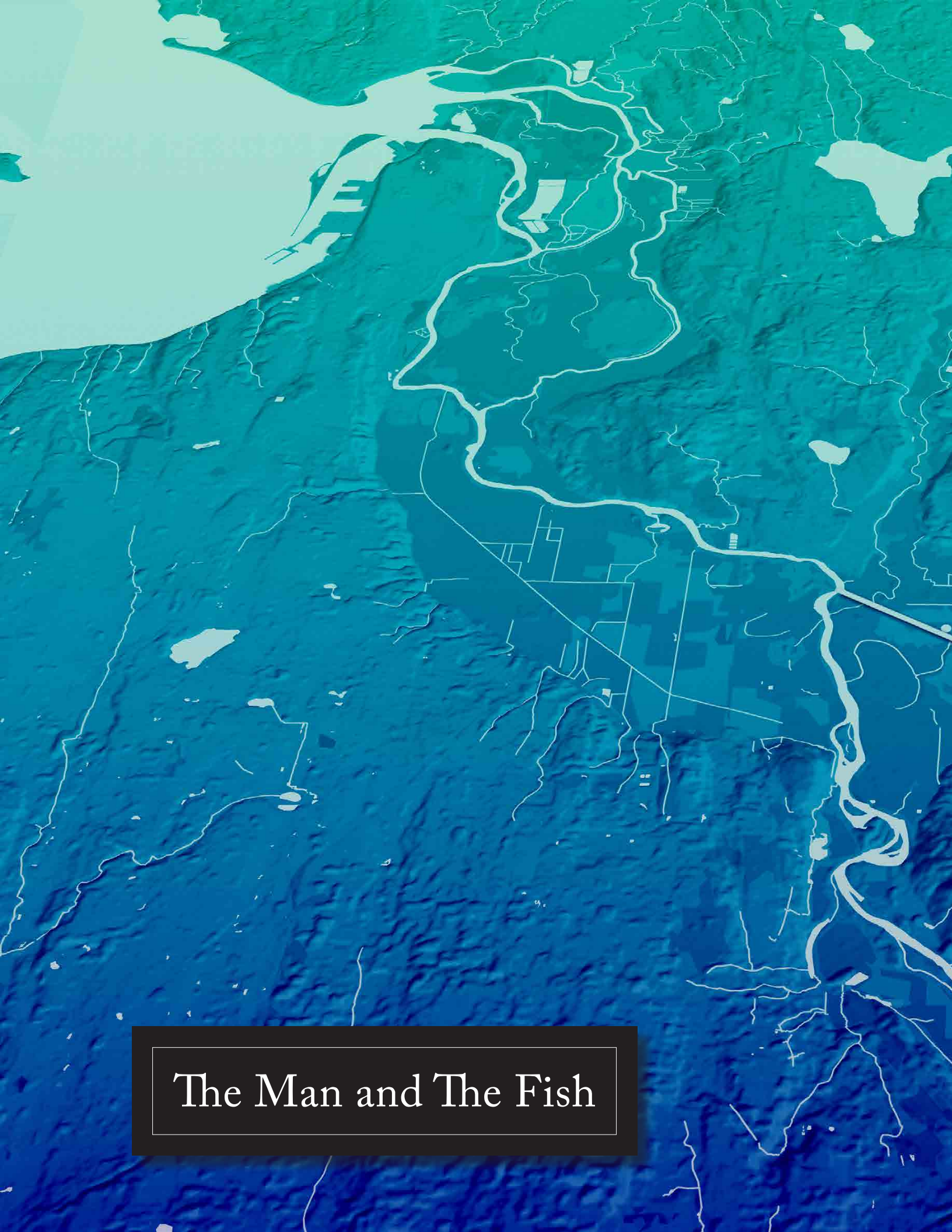
The Valley Of The Moon is very likely the legendary lost Tibetan beyul traditionally known as Shambhala.

The reason Shambhala was so hard to find is because it was here - in America!

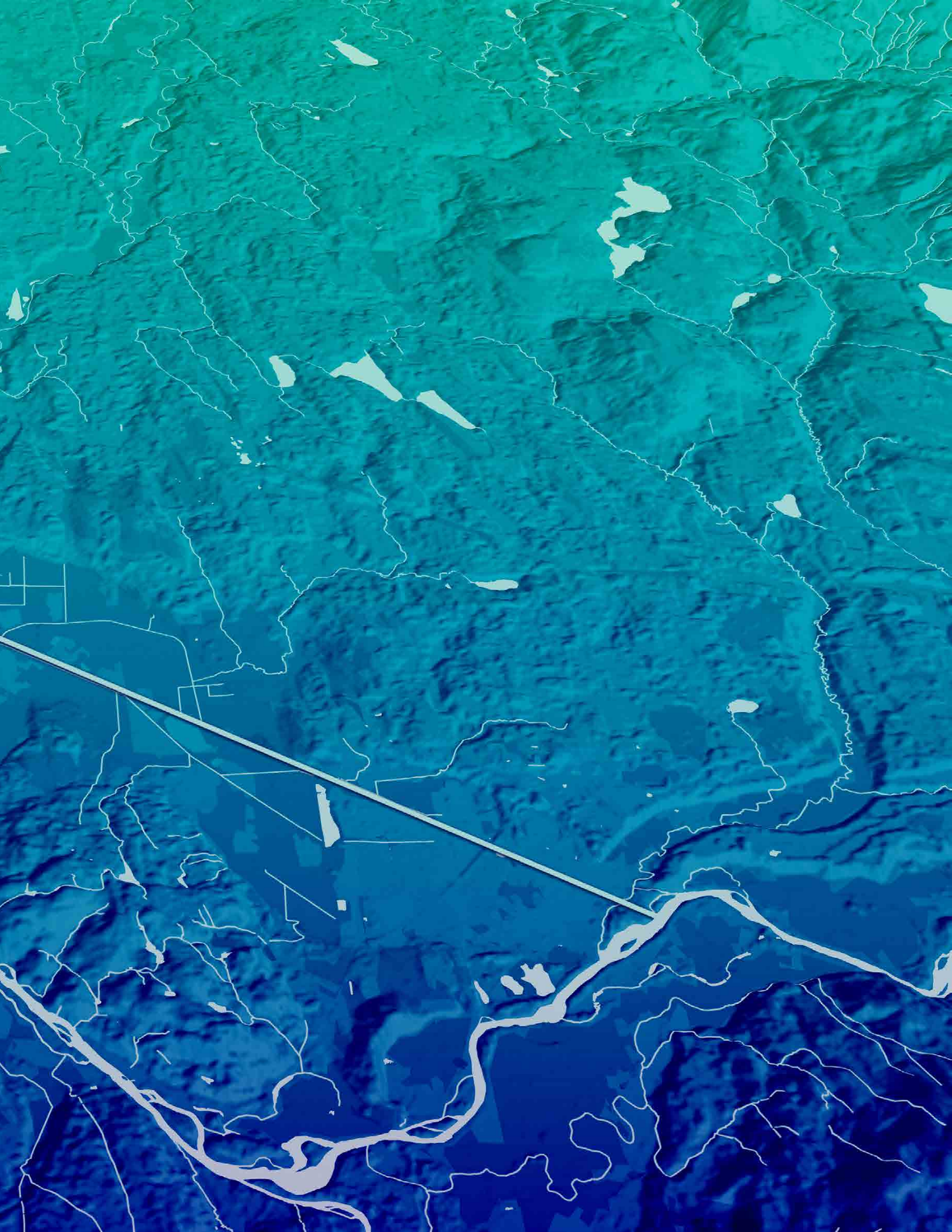

The Valley Of The Moon is the legendary lost Tibetan beyul known as Shambhala.
There are three big clues!
Click here to read about Beyu

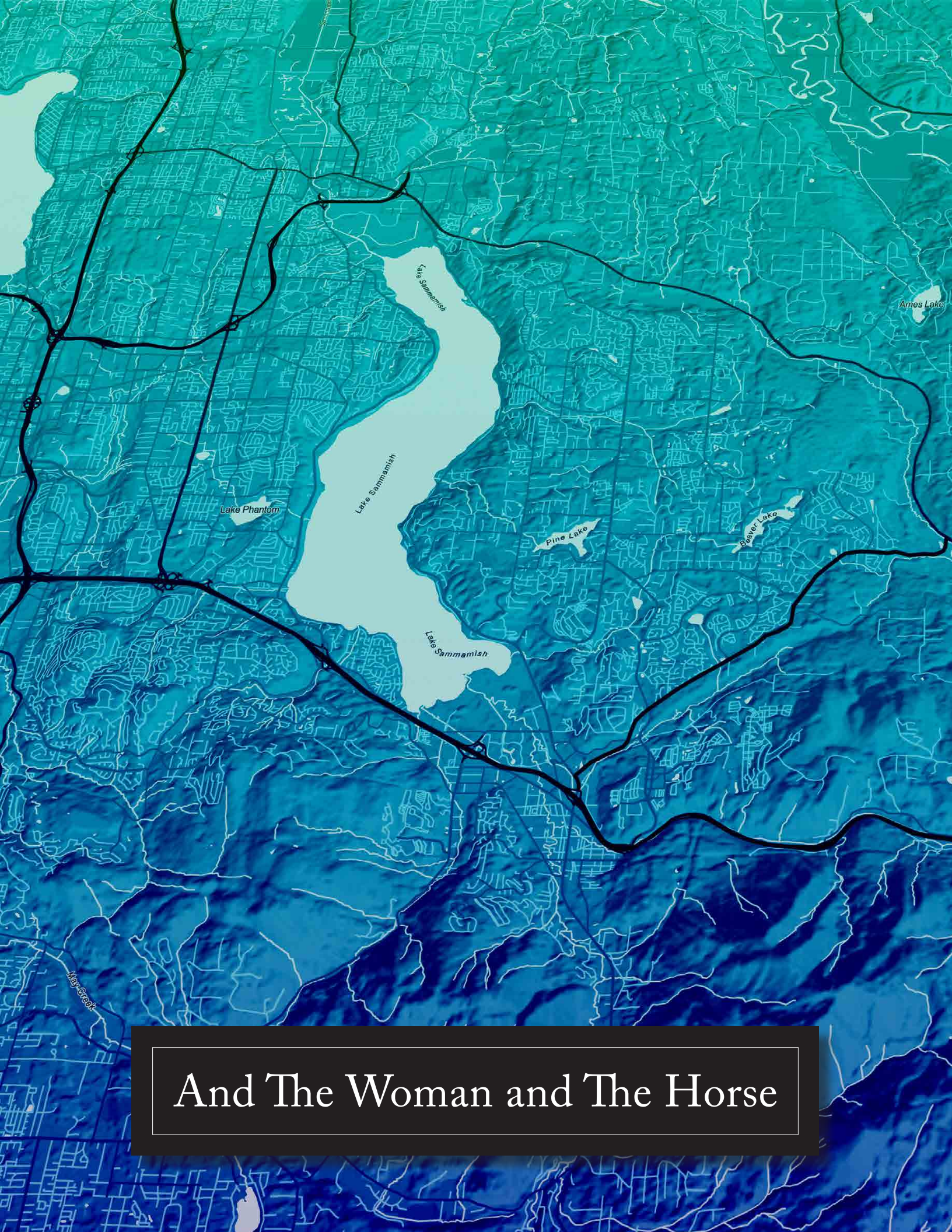

uls (hidden valleys) on Wikipedia


The four landforms are the first big clue.



The Man and The Fish





And The Woman and The Horse


Lake Joy
Griffin Creek
East Fork
Tokul Creek
Tokul Creek
Snoqualmie River
Snoqualmie River
Snoqualmie Mill Pond
Joy Creek

Two plants that meet the following criteria are the second big clue about Shambhala:

1) They are native to the Valley Of The Moon

2) They are related to local archeological objects

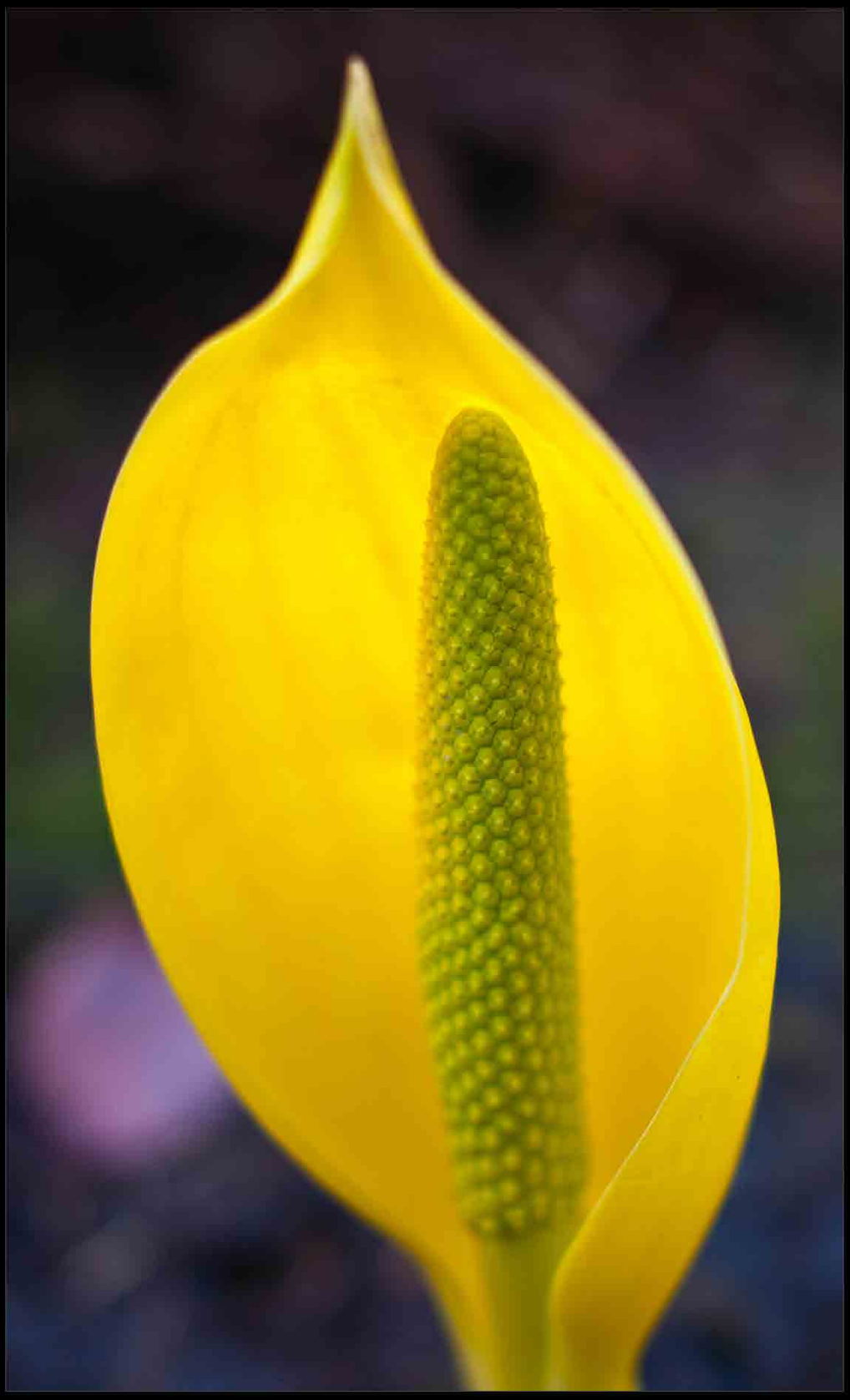
3) They are related to Tibetan cultural elements

Swamp Lanterns

The first of these plants is the Swamp Lantern, also known as the Western Skunk Cabbage, or Lysichiton Americanus.

Swamp Lanterns thrive at the base of Snoqualmie Falls, in fields that are muddy and wet. Sometimes these fields are covered in several inches of water!

Let's take a look.



Swamp Lantern (Lysichiton Americanus)

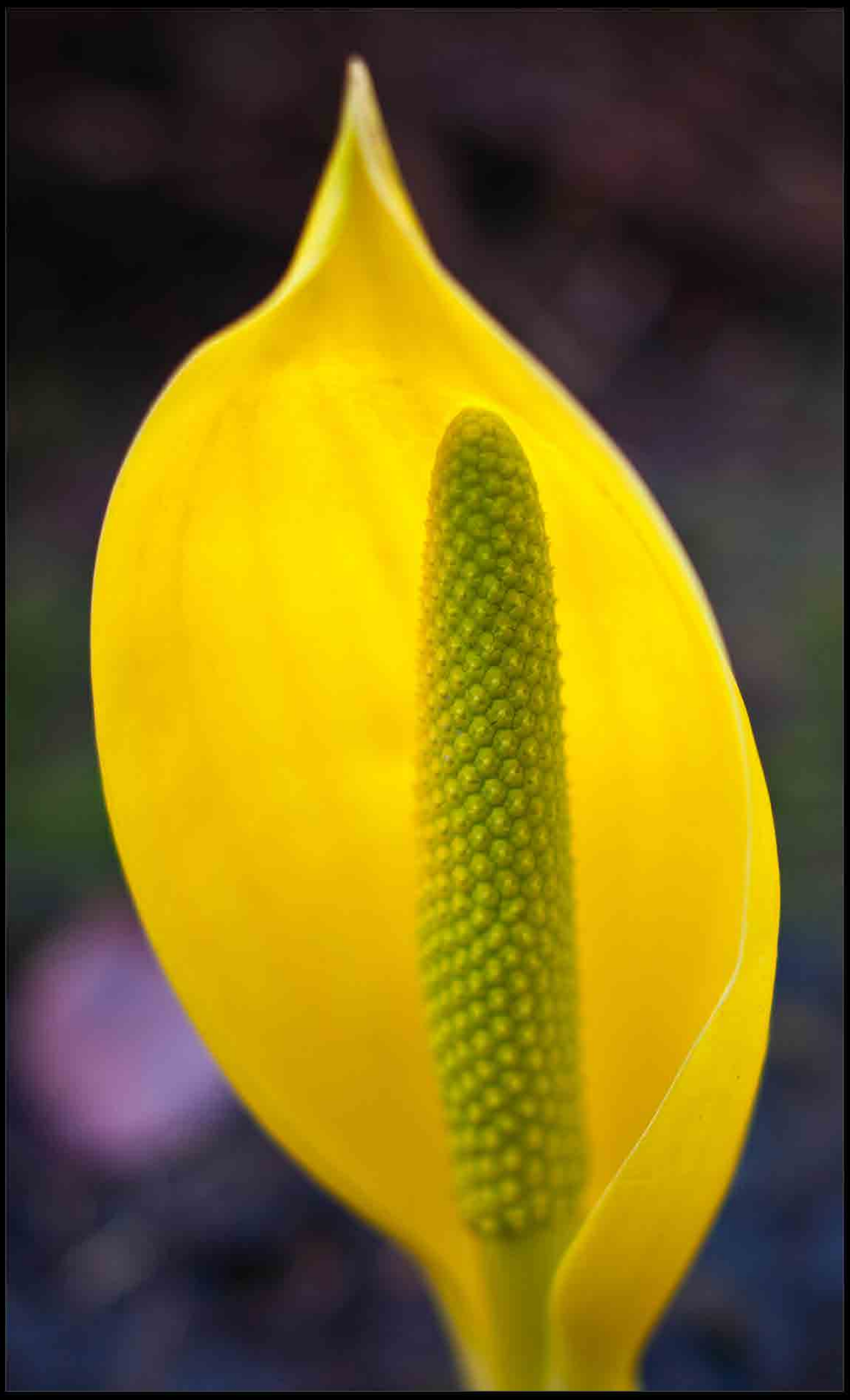
Kuan-yin of a Thousand Arms and Eyes

National Palace Museum - Taipei, Taiwan

Swamp Lantern Spadix (Detail Enlarged)

Kuan-yin of a Thousand Arms and Eyes (Detail Enlarged)

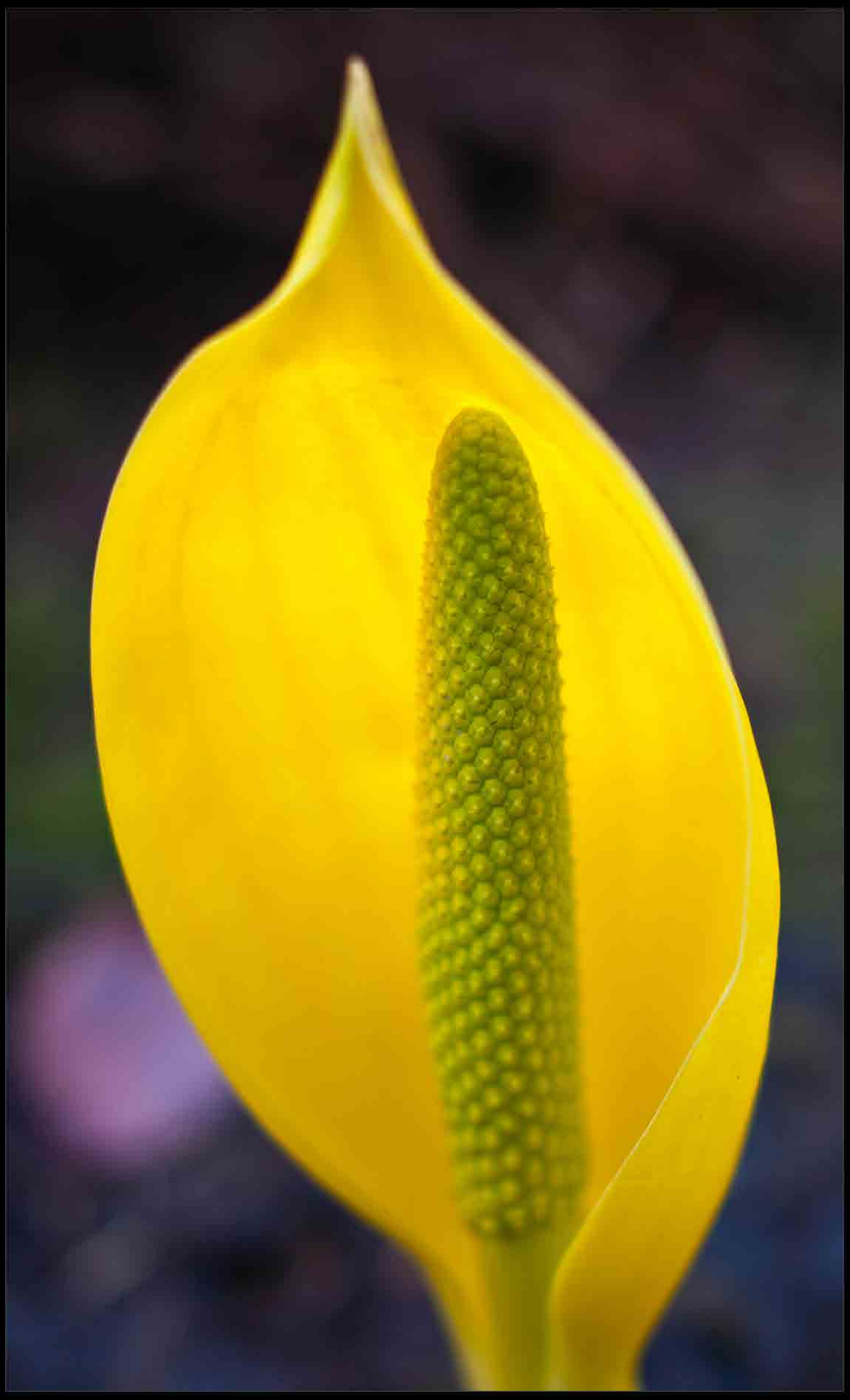
National Palace Museum - Taipei, Taiwan



Swamp Lantern (Lysichiton Americanus)

Tsenshap Serkong Rinpoche

The Origin of the Yellow Hat



Swamp Lantern (Lysichiton Americanus)

Stone Object Shaped Like A Boy
Wearing A Swamp Lantern Flower

Tsenshap Serkong Rinpoche

[The Origin of the Yellow Hat]

Stone Object Shaped Like A Boy
Wearing A Swamp Lantern Flower

All Five Elements

s For Comparison

Could this be the plant version of "Kua

Could this be the actual origin of the

an-yin of a Thousand Arms and Eyes"?
Yellow Hat of Yellow Hat Buddhism?

Gilt-Bronze Buddha With Inscription

(Front View)

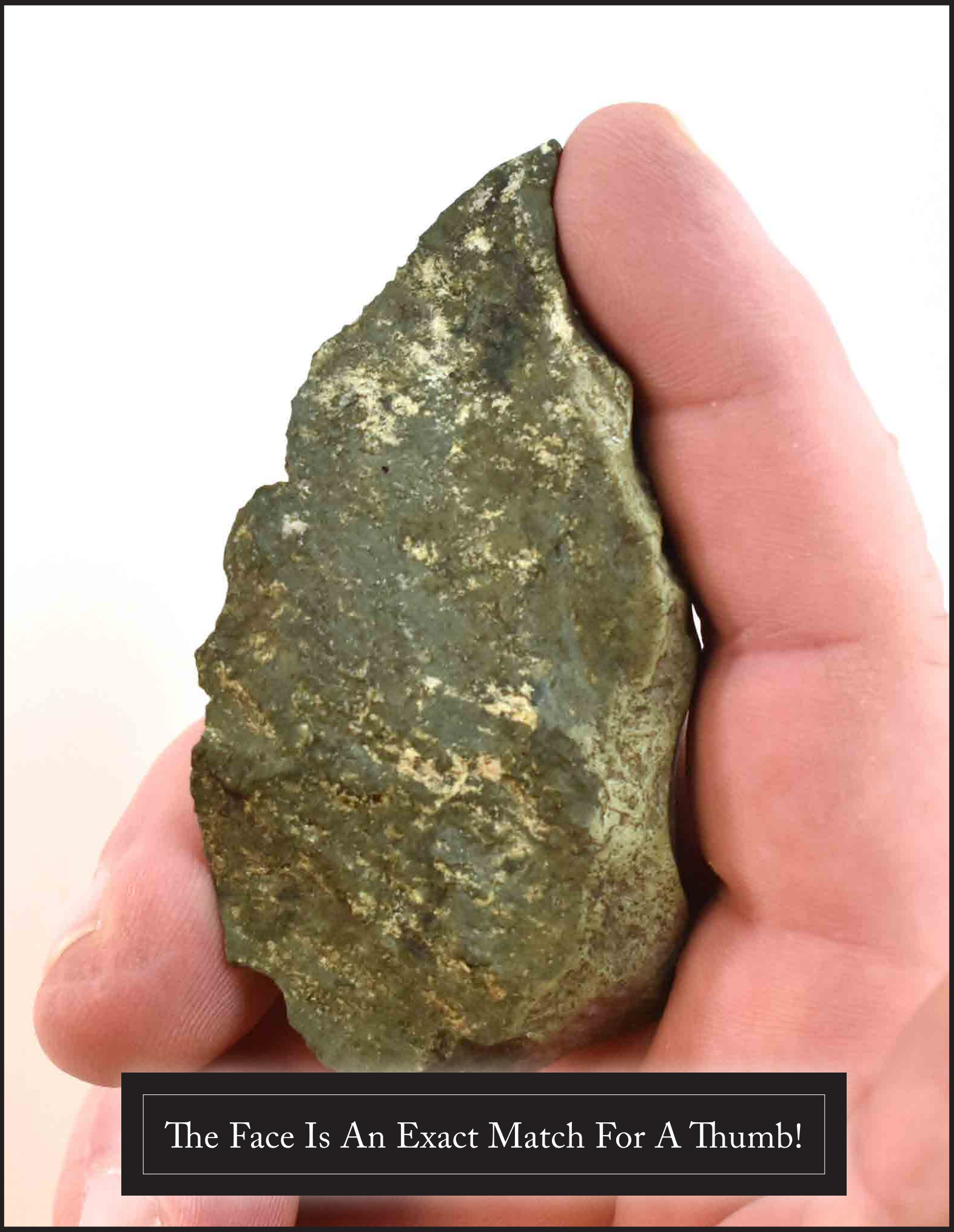
[Gilt-Bronze Buddha With Inscription]

(Back View)

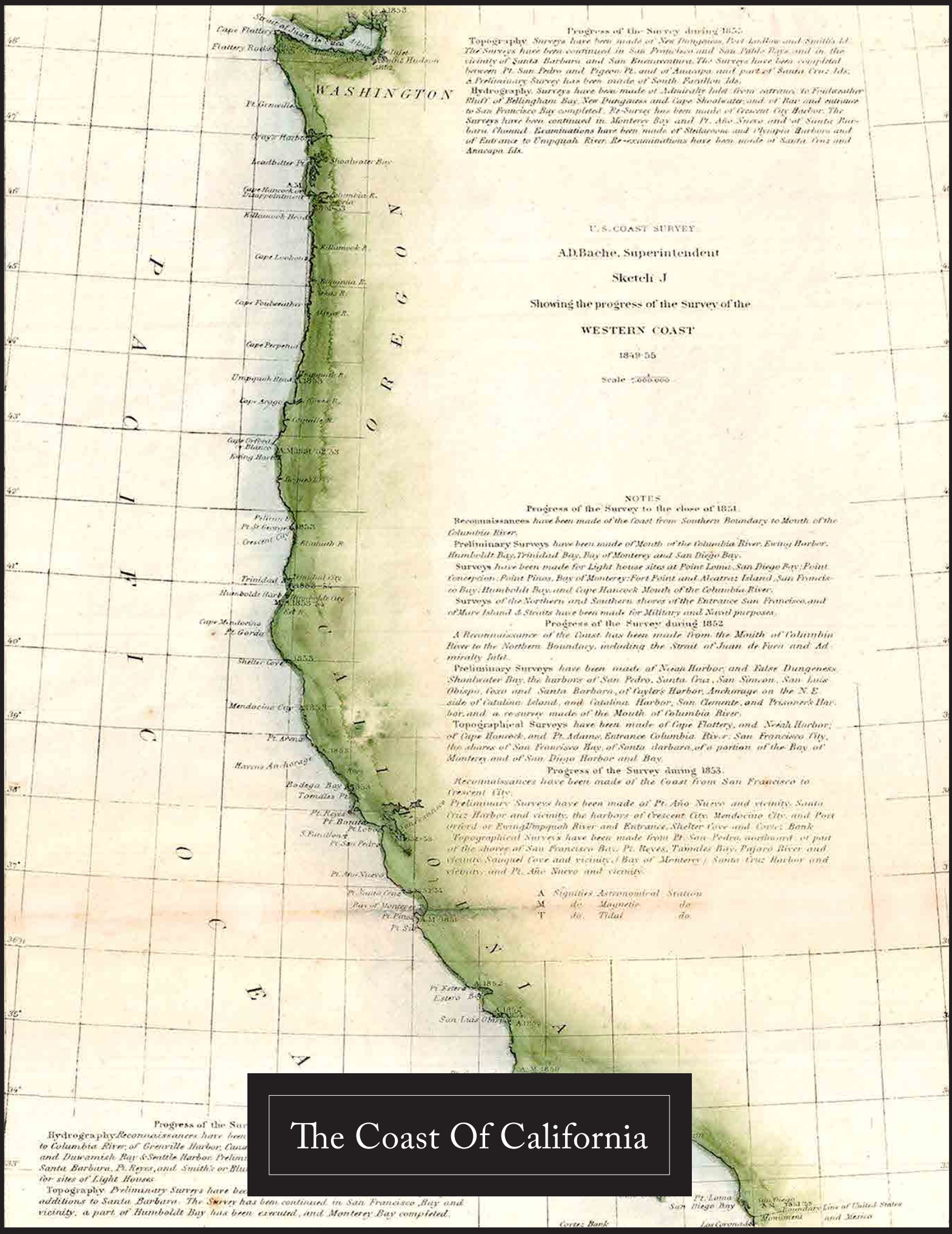
The green material (Nephrite?) of the object is flecked and matches the look of the green water at the base of Snoqualmie Falls.

Stone Object Shaped Like A Boy Wearing
A Swamp Lantern Flower (Sideways View)

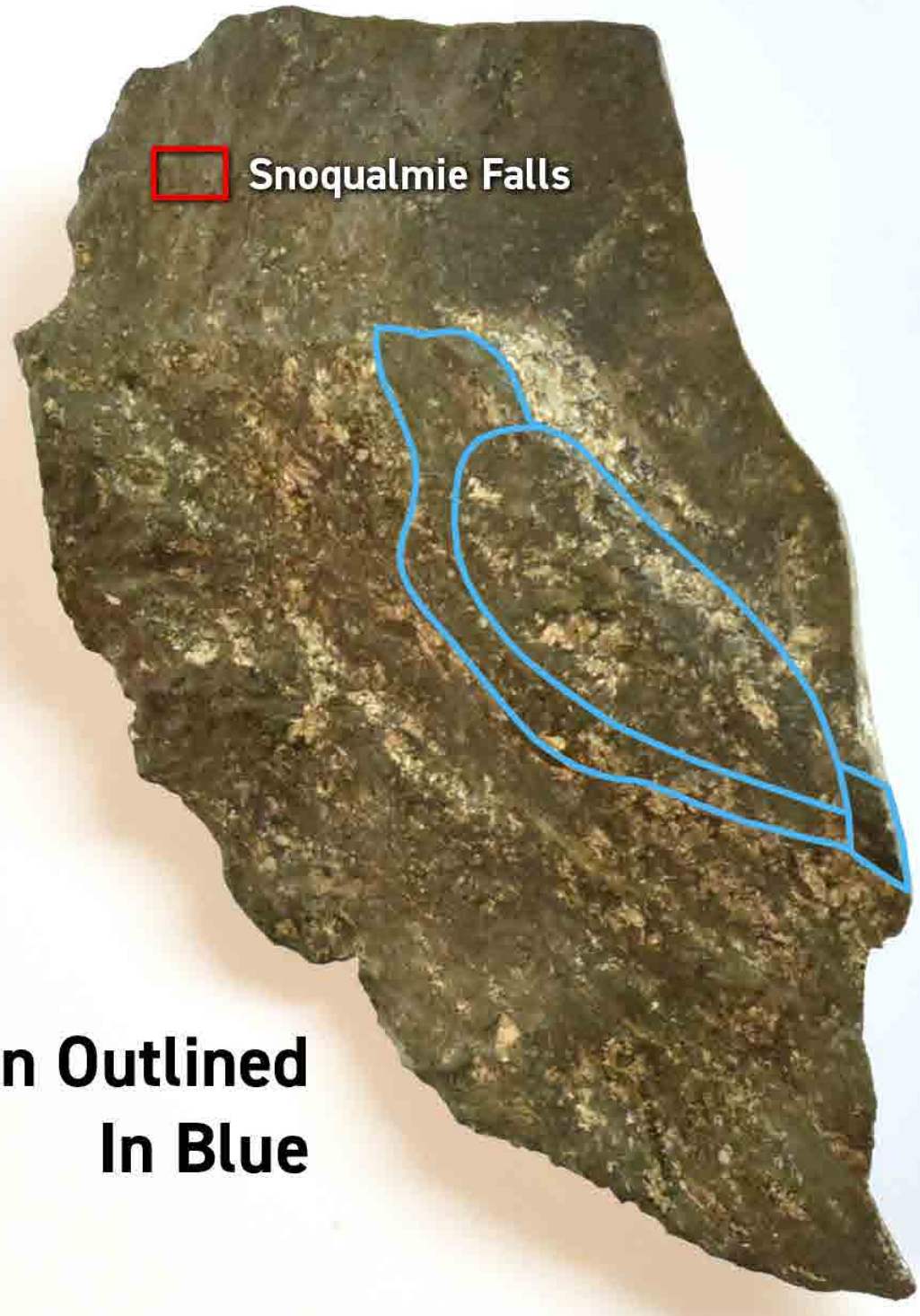
The Right Side Fits A Finger Precisely



The Face Is An Exact Match For A Thumb!

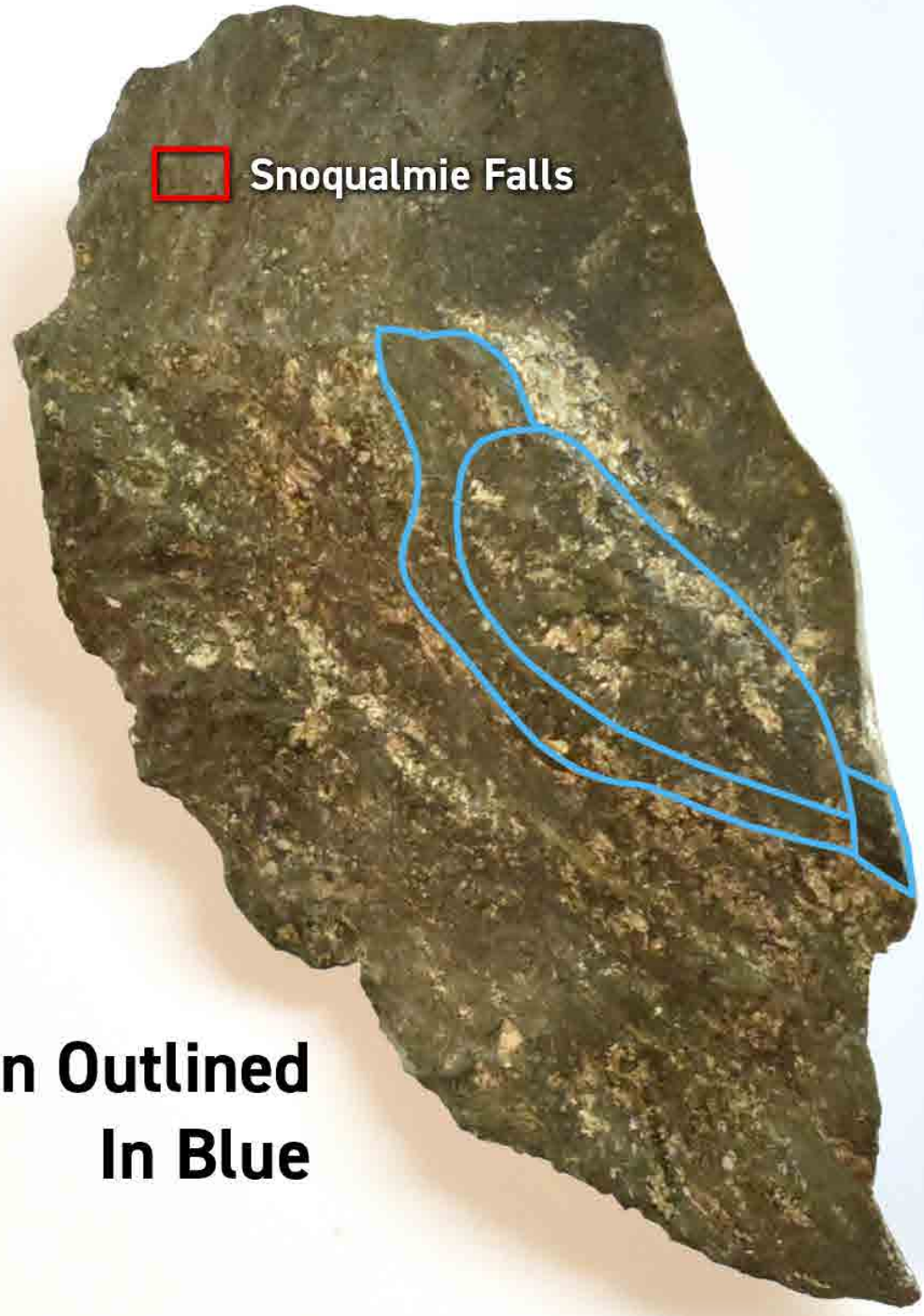


The Coast Of California



Falcon Outlined In Blue

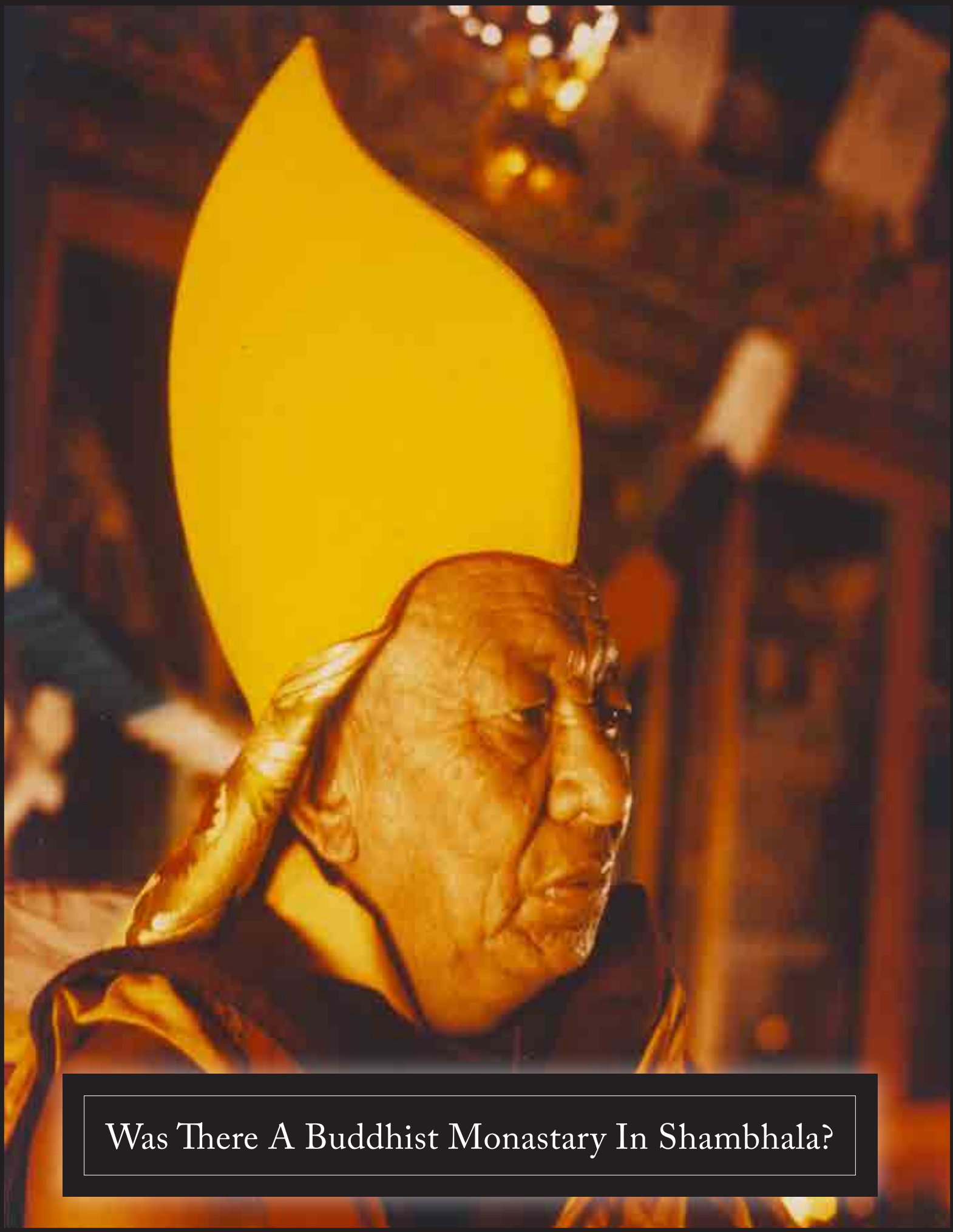
The Object - See The Falcon?



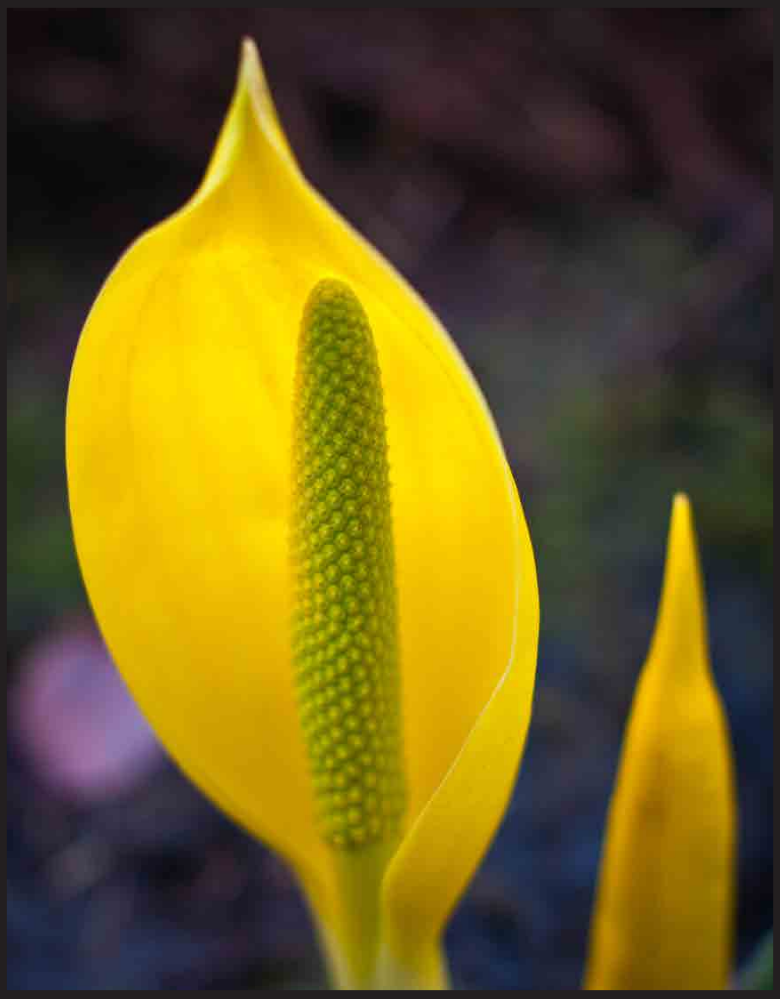
Falcon Outlined In Blue

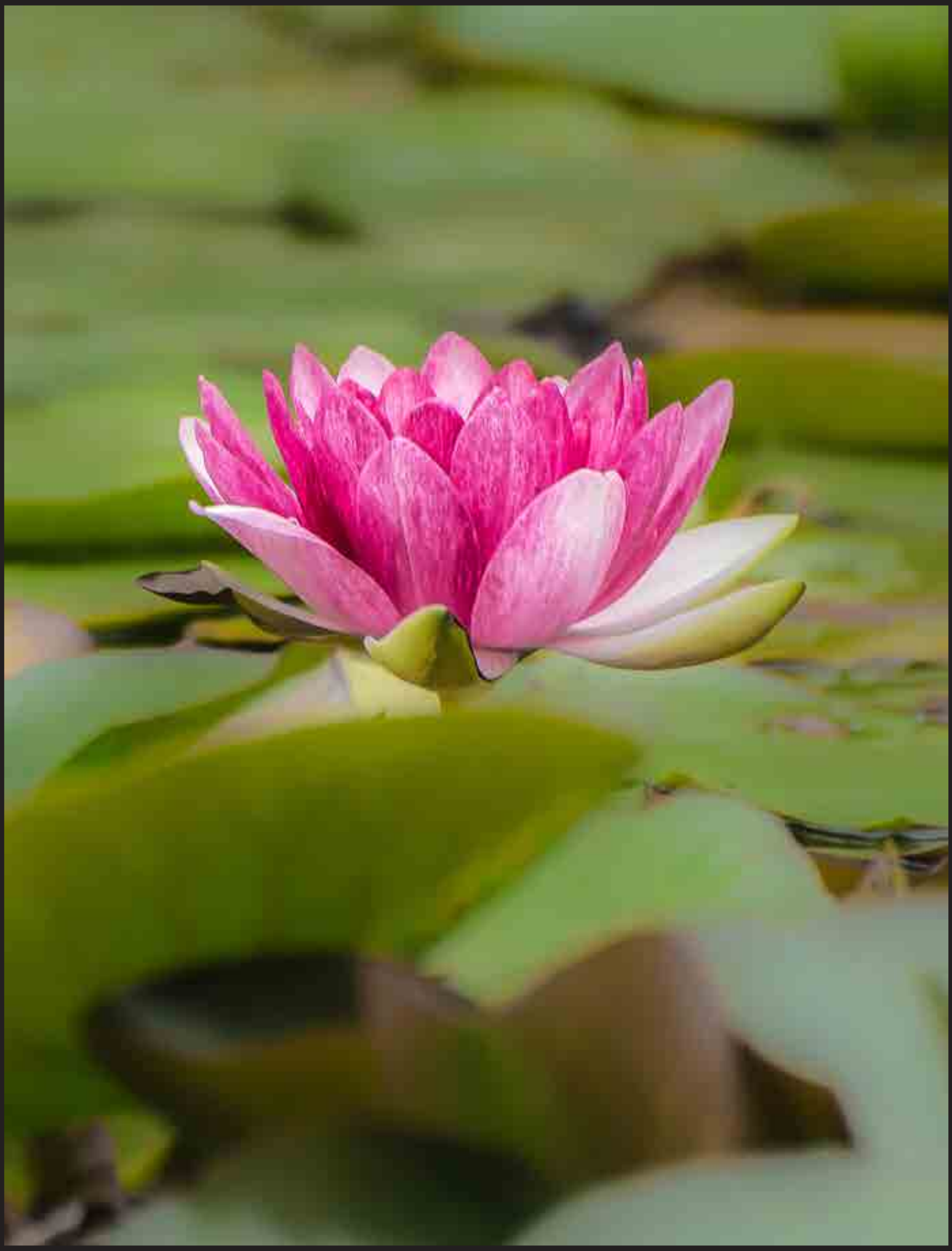
The Pacific Northwest Falcon

The Ancient Egyptian Falcon



Was There A Buddhist Monastary In Shambhala?





Two plants that meet the following criteria are the second big clue about Shambhala:

1) they are native to the Valley Of The Moon

2) they are related to archeological objects

3) they are related to Tibetan cultural elements

Water Lillies

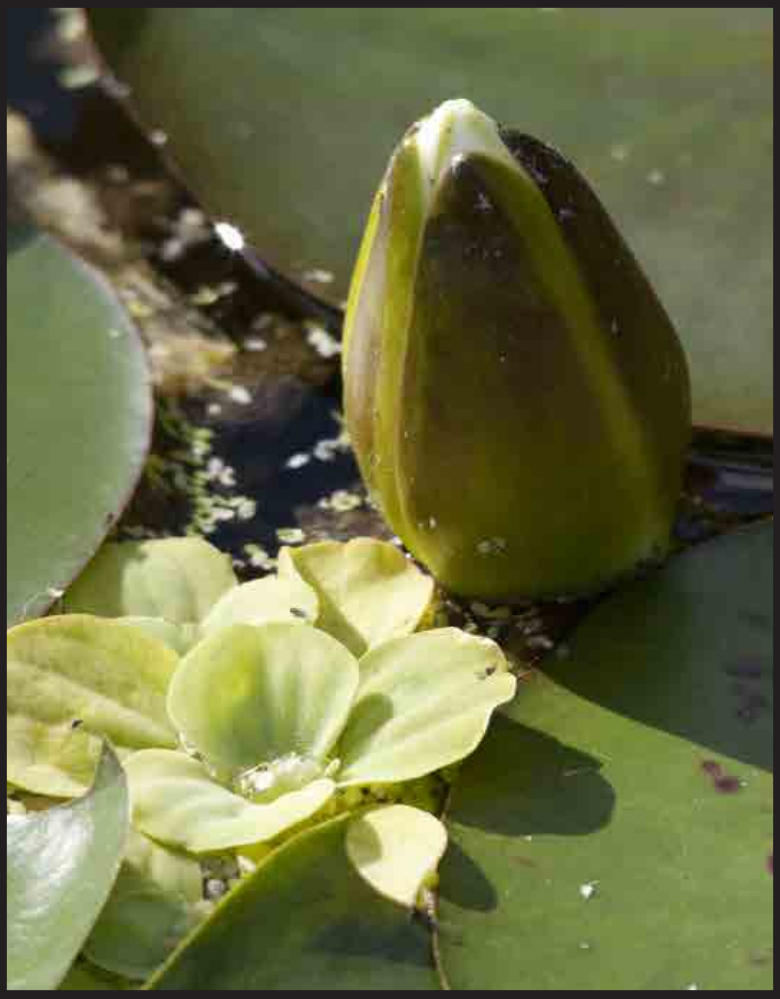
The second plant is the Water Lilly, also known as Nymphaea odorata. The Lady Bird Johnson Wildflower Center lists this water plant as native in the lower 48 states.

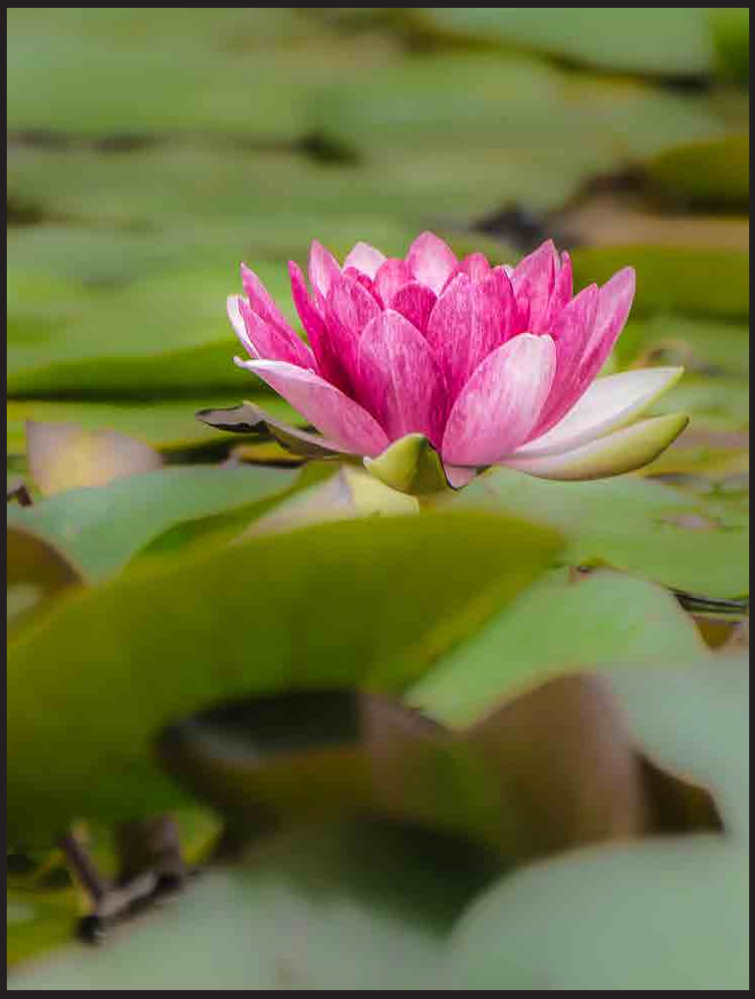
Water Lillies are common in lakes and ponds in Washington State.

The Jade Horse (Nephrite) object when turned on end resembles a Water Lilly before it opens.

This is consistent with the artistic approach of representing multiple facets on a single object, each traceable to the point of origin.

The Jade Horse was found in close proximity to a lake covered with Water Lillies.





PROOF IN AFRICA

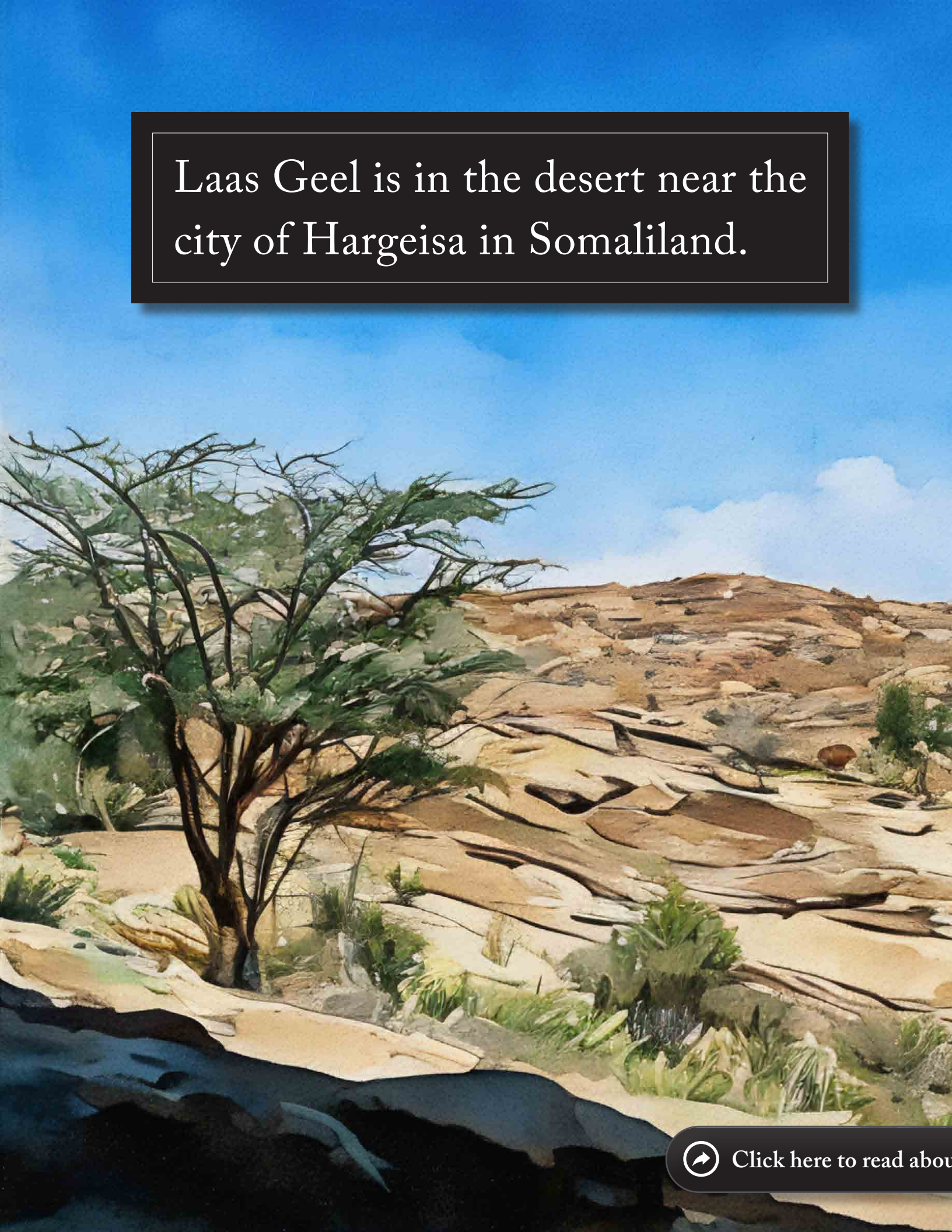
06

Ancient people in Africa, in a place called Laas Geel, in a country called Somaliland painted pictures in a cave 5000 years ago.

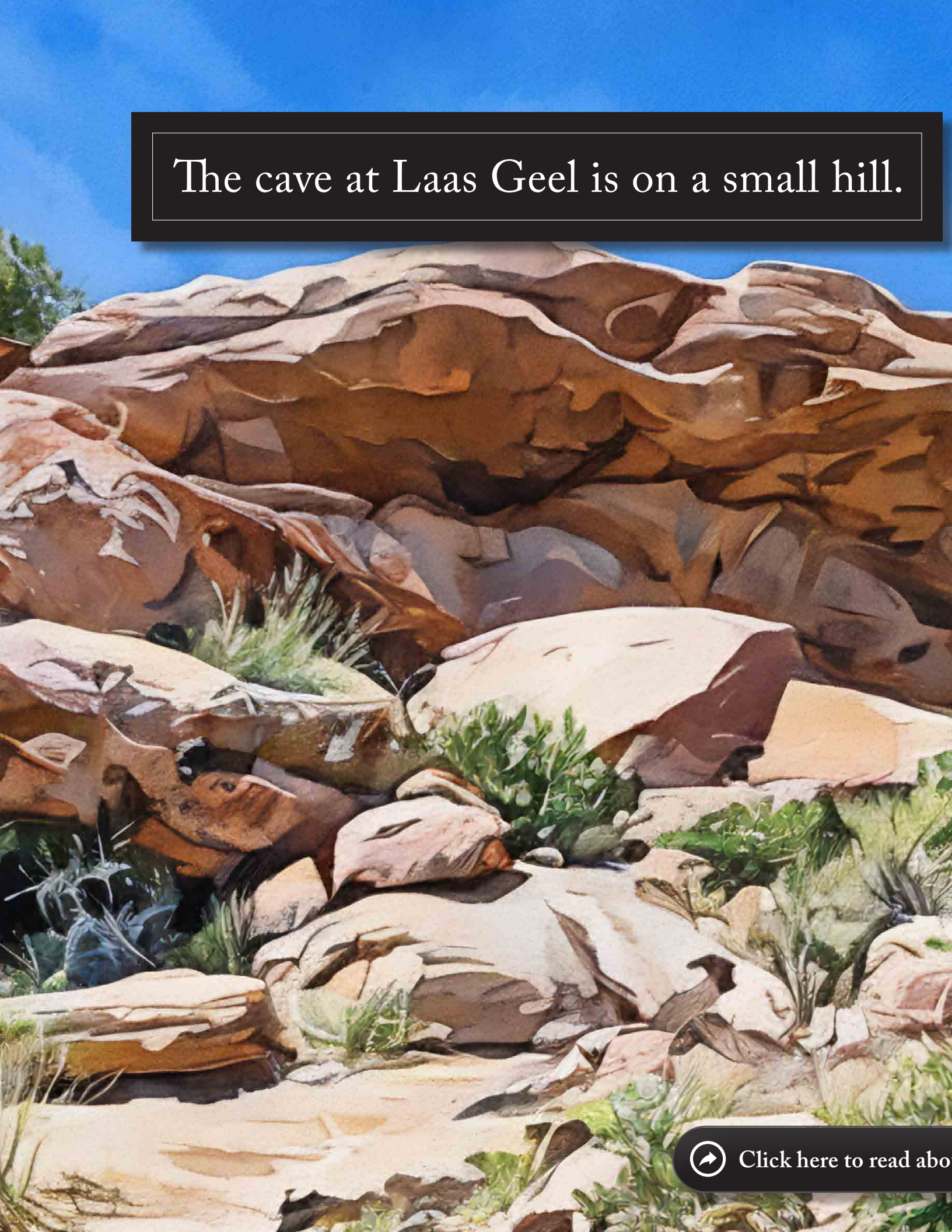
Those pictures appear to match modern images of star systems surrounding the constellation Monoceros (The Unicorn).

They were painting the same group of stars around the Christmas Tree Cluster!

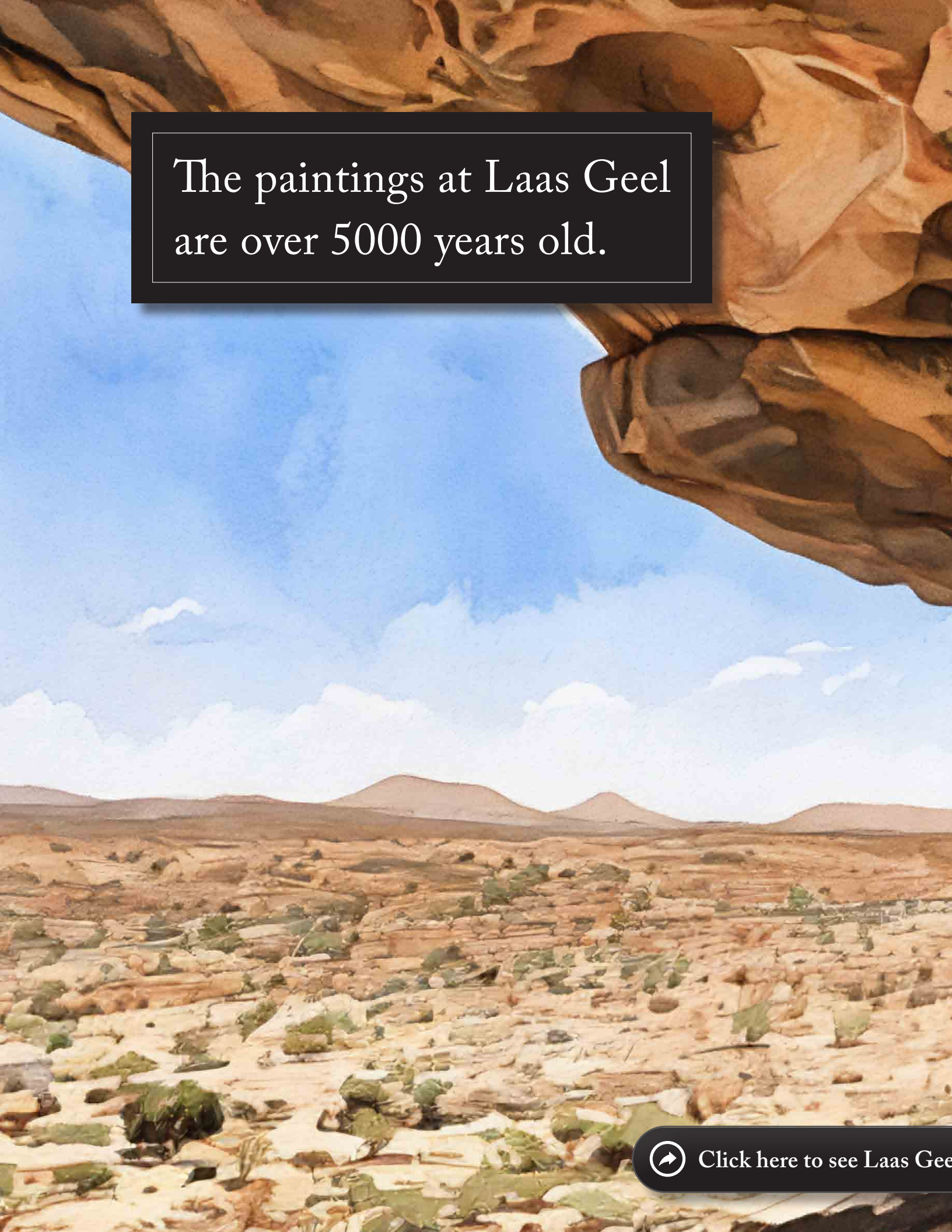
In Egypt, the constellation Monoceros was called Hathor, which appears in an ancient mural that matches the cave paintings at Laas Geel.


Laas Geel is in the desert near the city of Hargeisa in Somaliland.
Click here to read abou

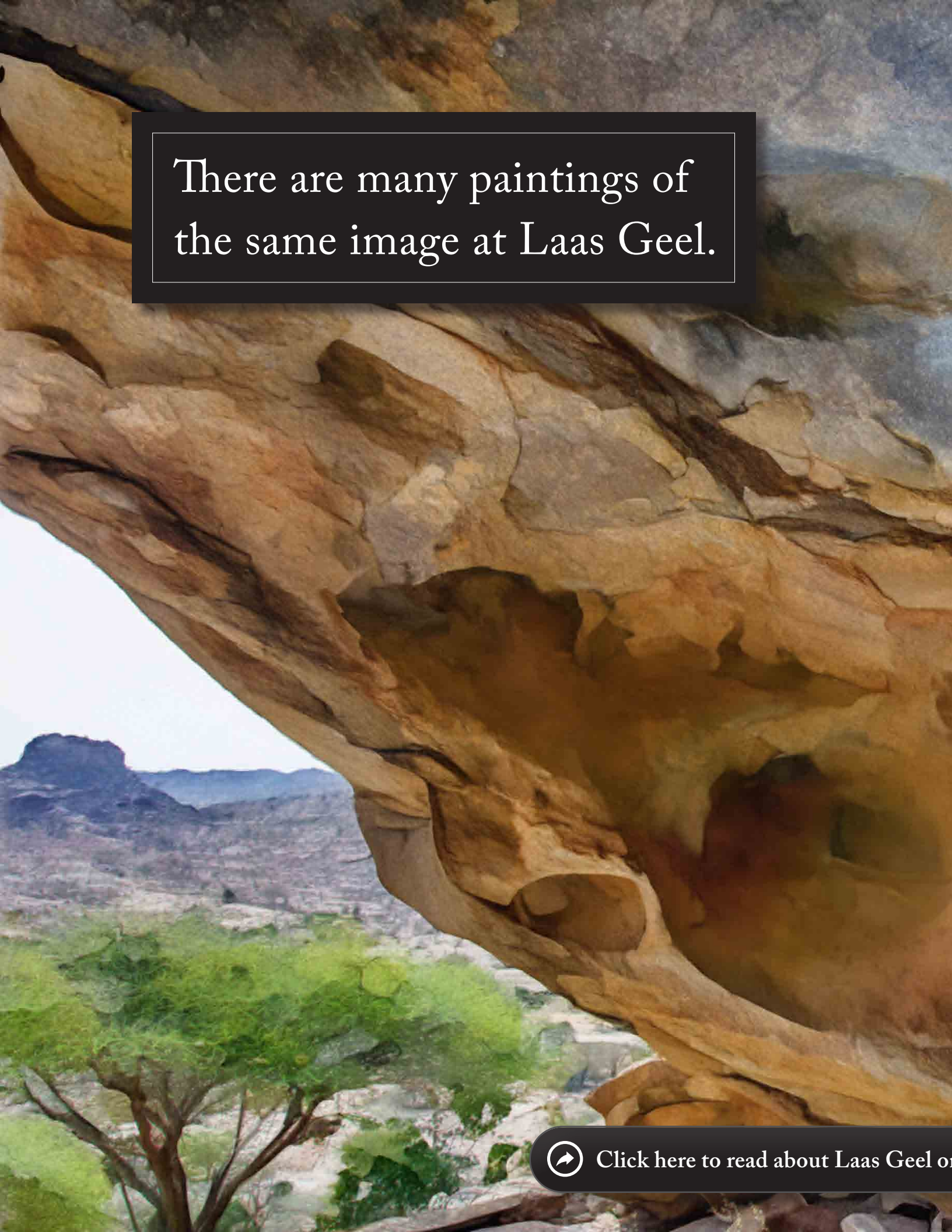

ut Somaliland on Wikipedia


The cave at Laas Geel is on a small hill.
Click here to read abo


ut Laas Geel on Wikipedia


The paintings at Laas Geel are over 5000 years old.
Click here to see Laas Gee

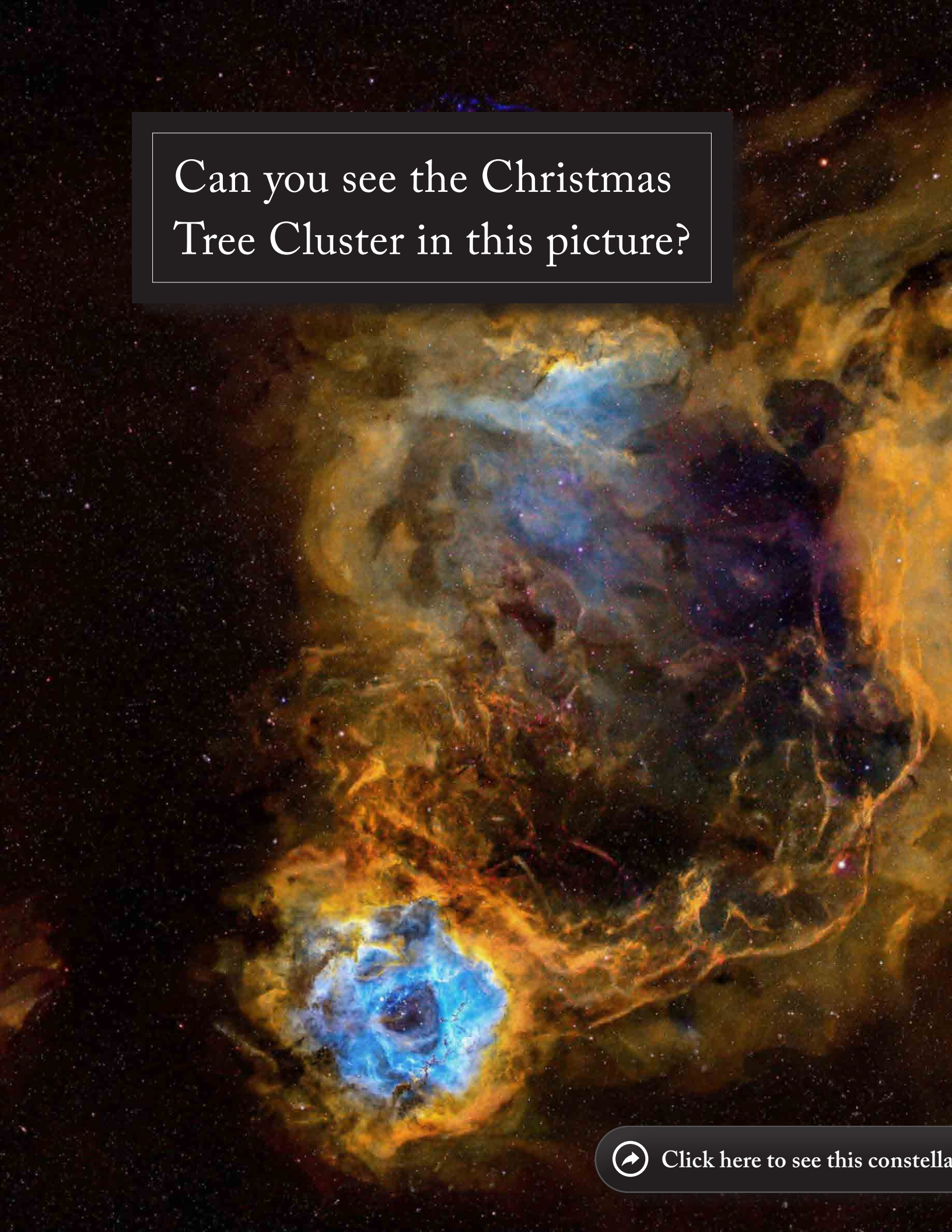
el on the Horn Heritage website


There are many paintings of the same image at Laas Geel.
Click here to read about Laas Geel o

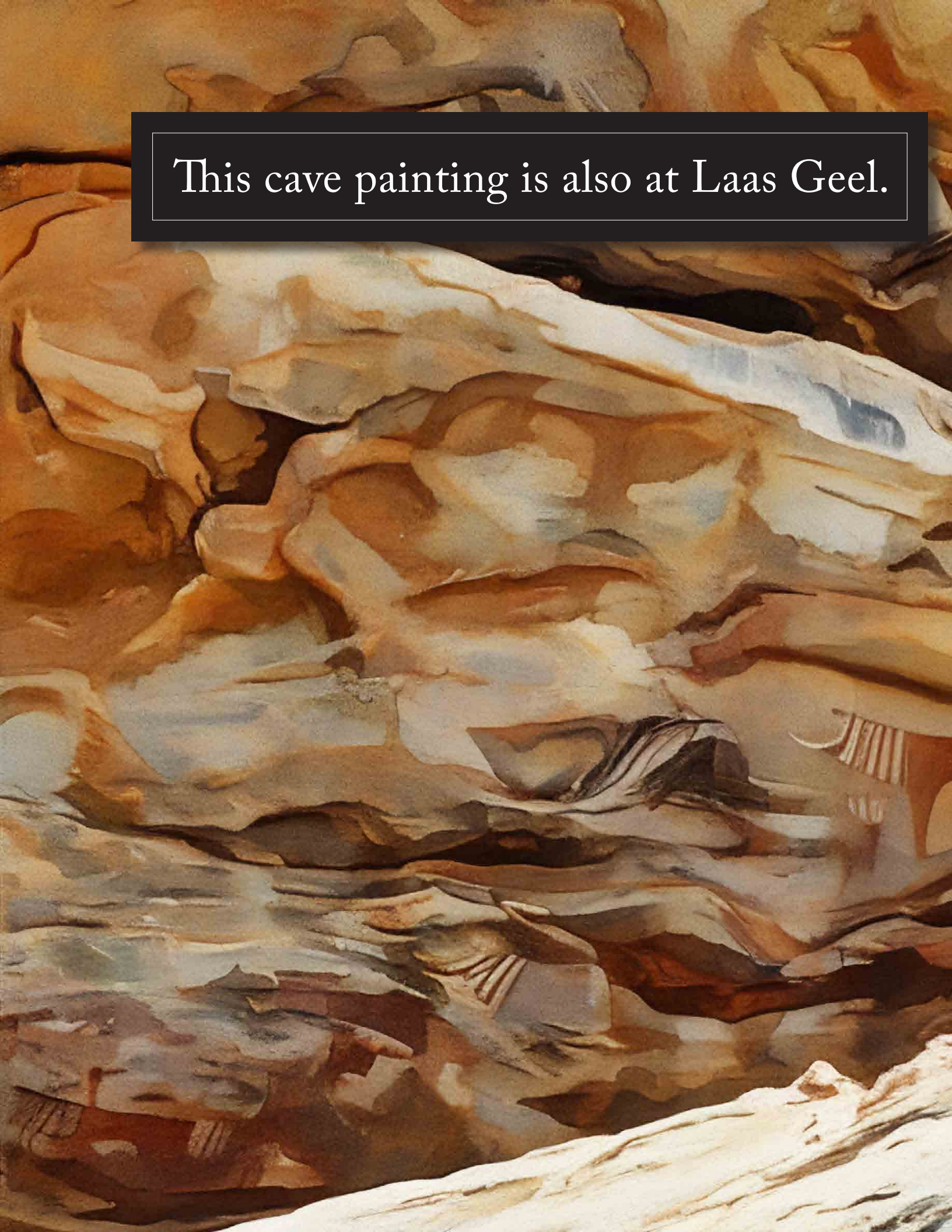
n the French Ministry Of Culture website


The image matches photos of
the constellation Monoceros/Hathor.
Click here to see pictures

of Laas Geel on Flickr


Can you see the Christmas Tree Cluster in this picture?
Click here to see this constella

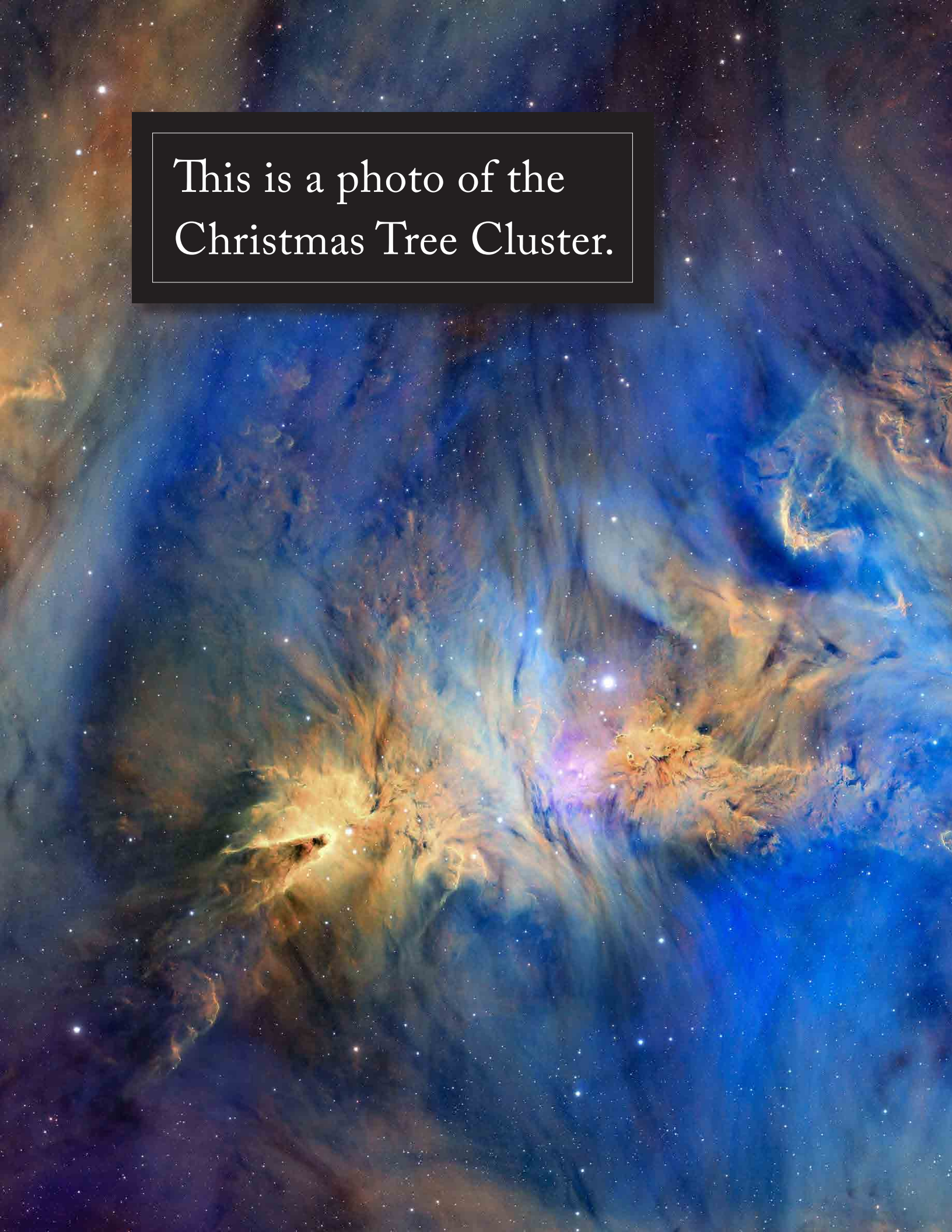
tion group on the Astrobin website

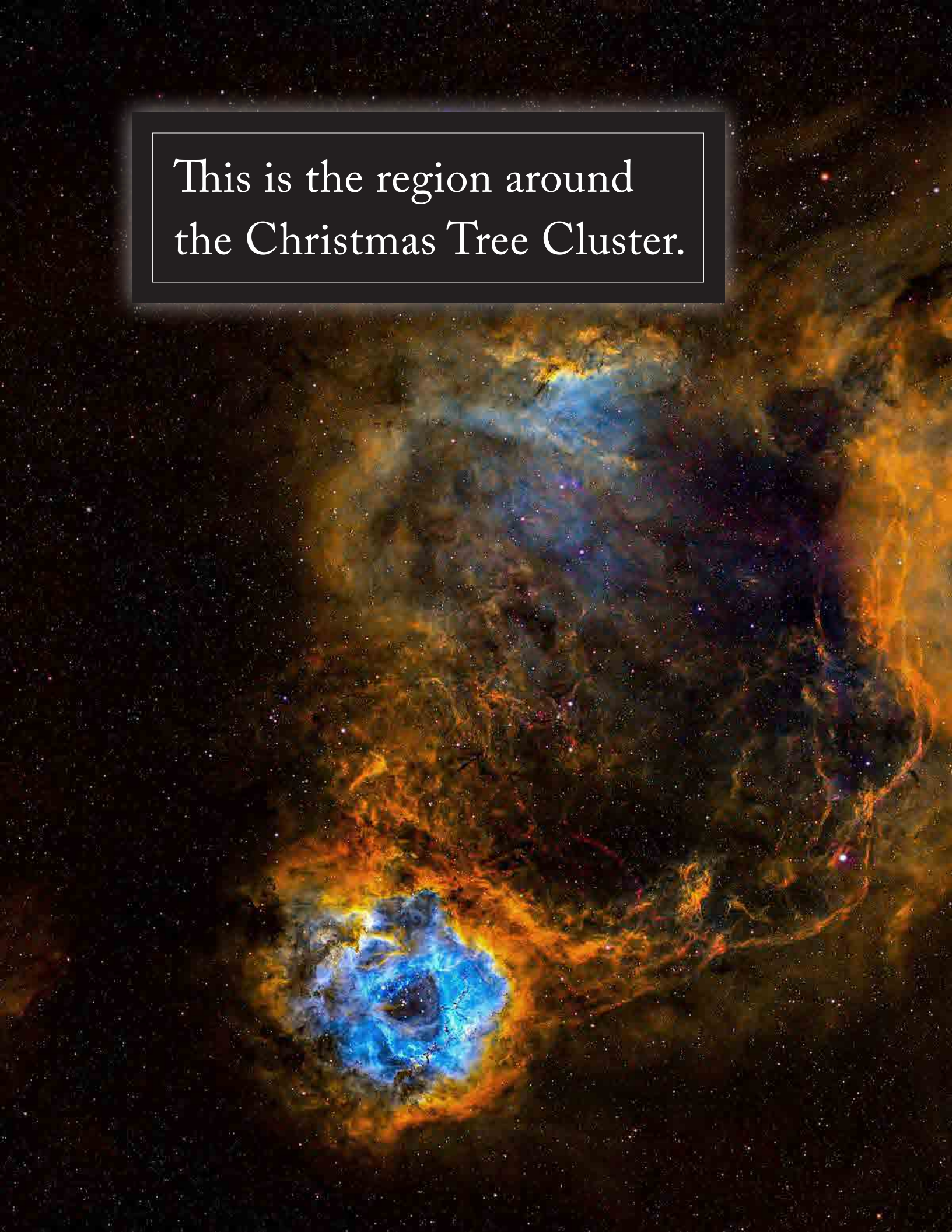

This cave painting is also at Laas Geel.


Can you see the same shapes in this painti


ng?


How about here?


This is a photo of the
Christmas Tree Cluster.

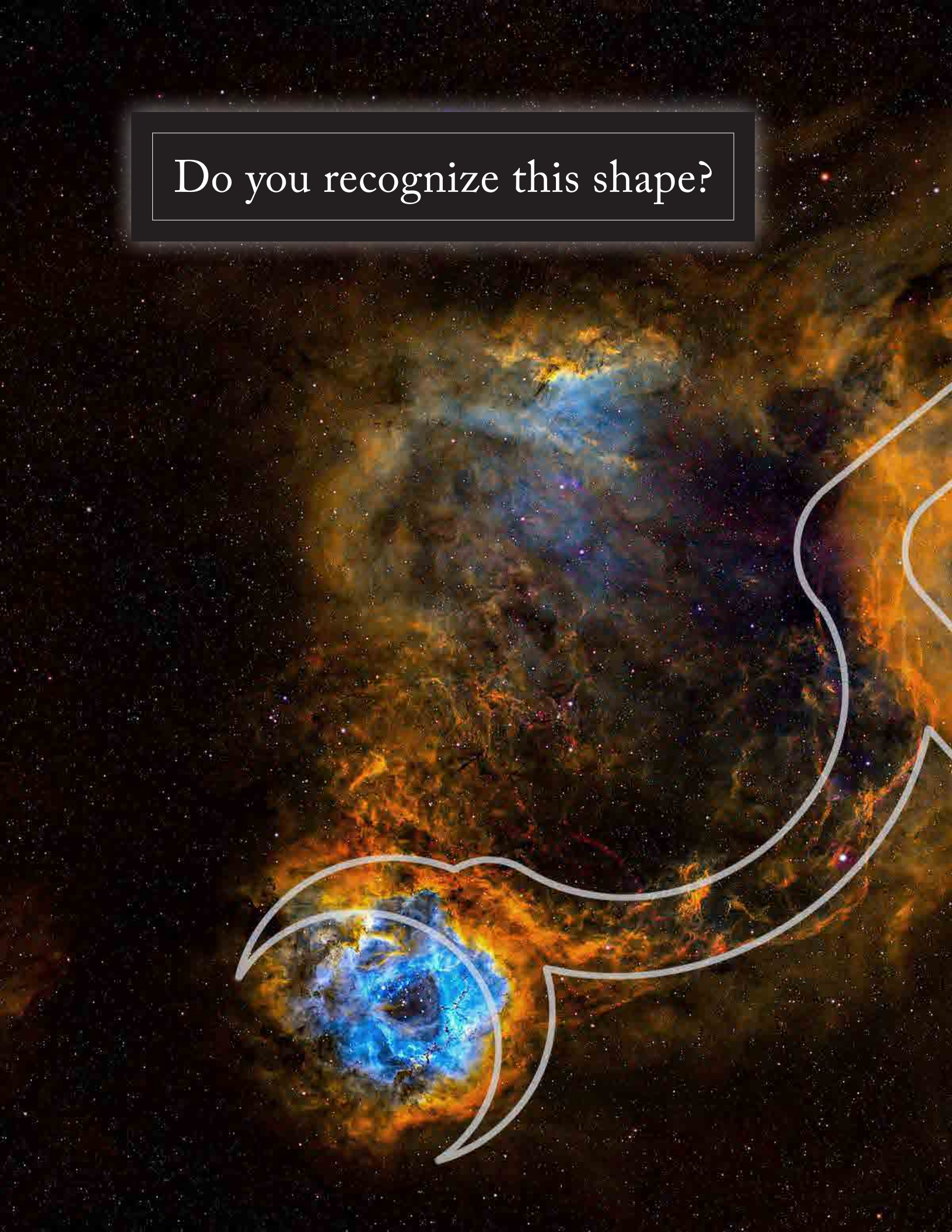

This is the region around
the Christmas Tree Cluster.

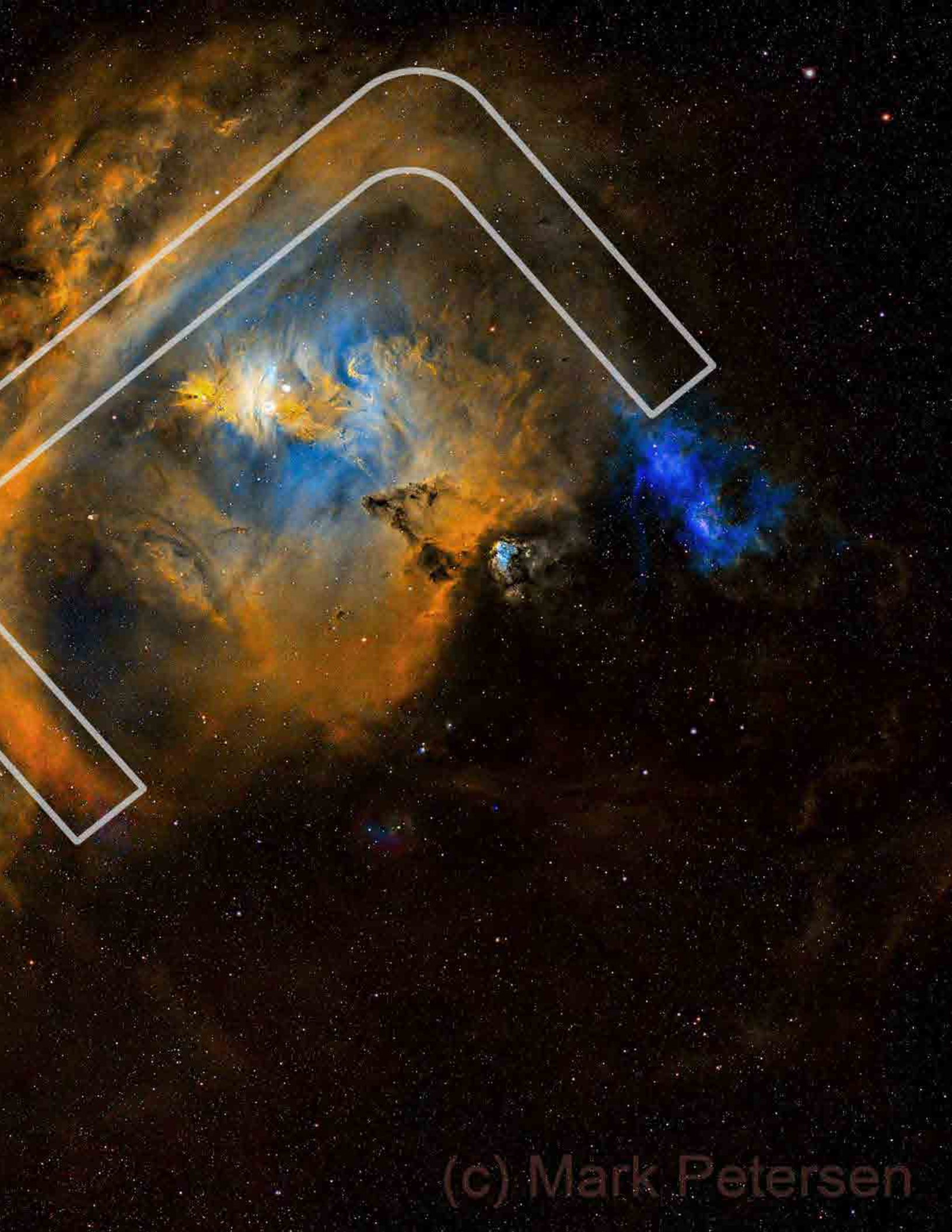

(c) Mark Petersen

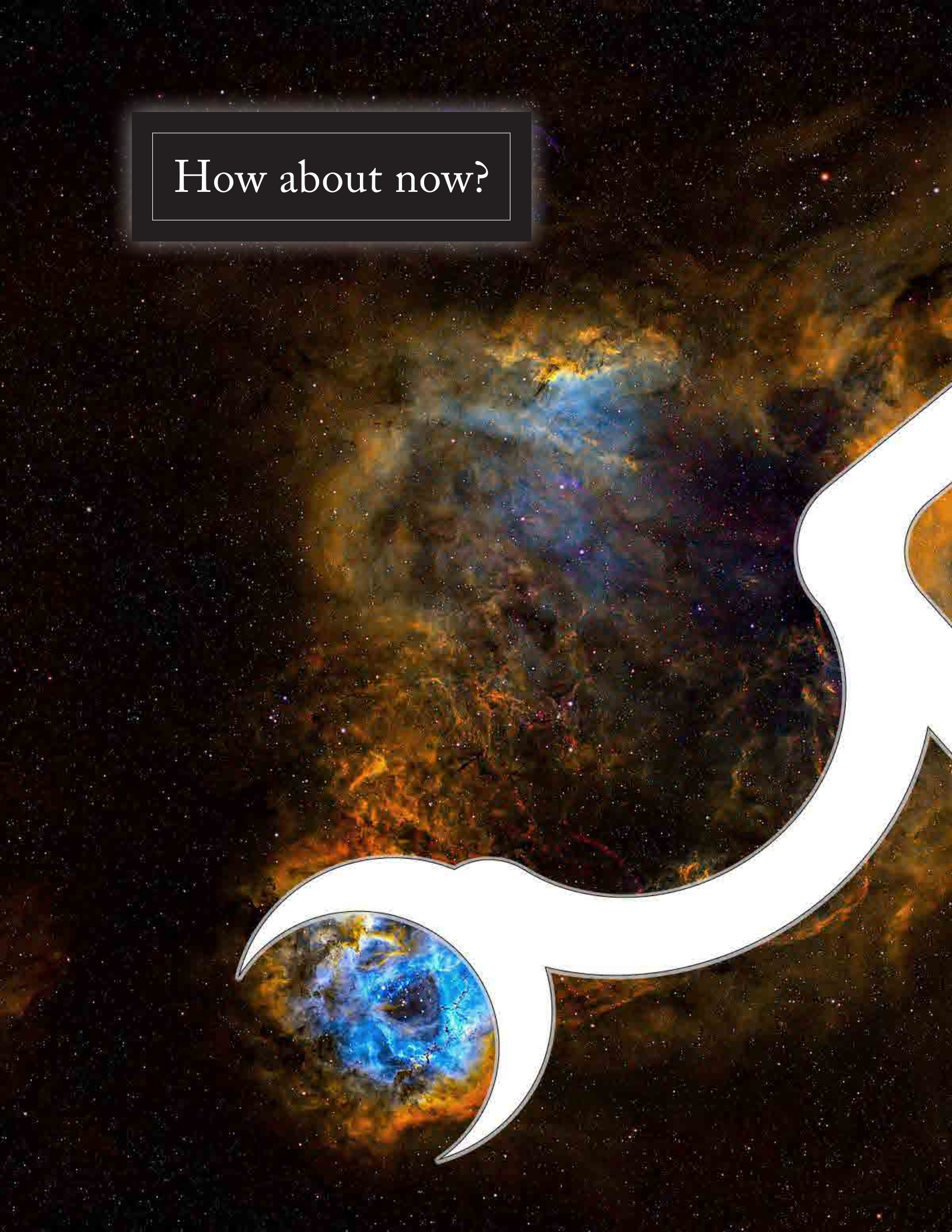

This image highlights
the Christmas Tree Cluster

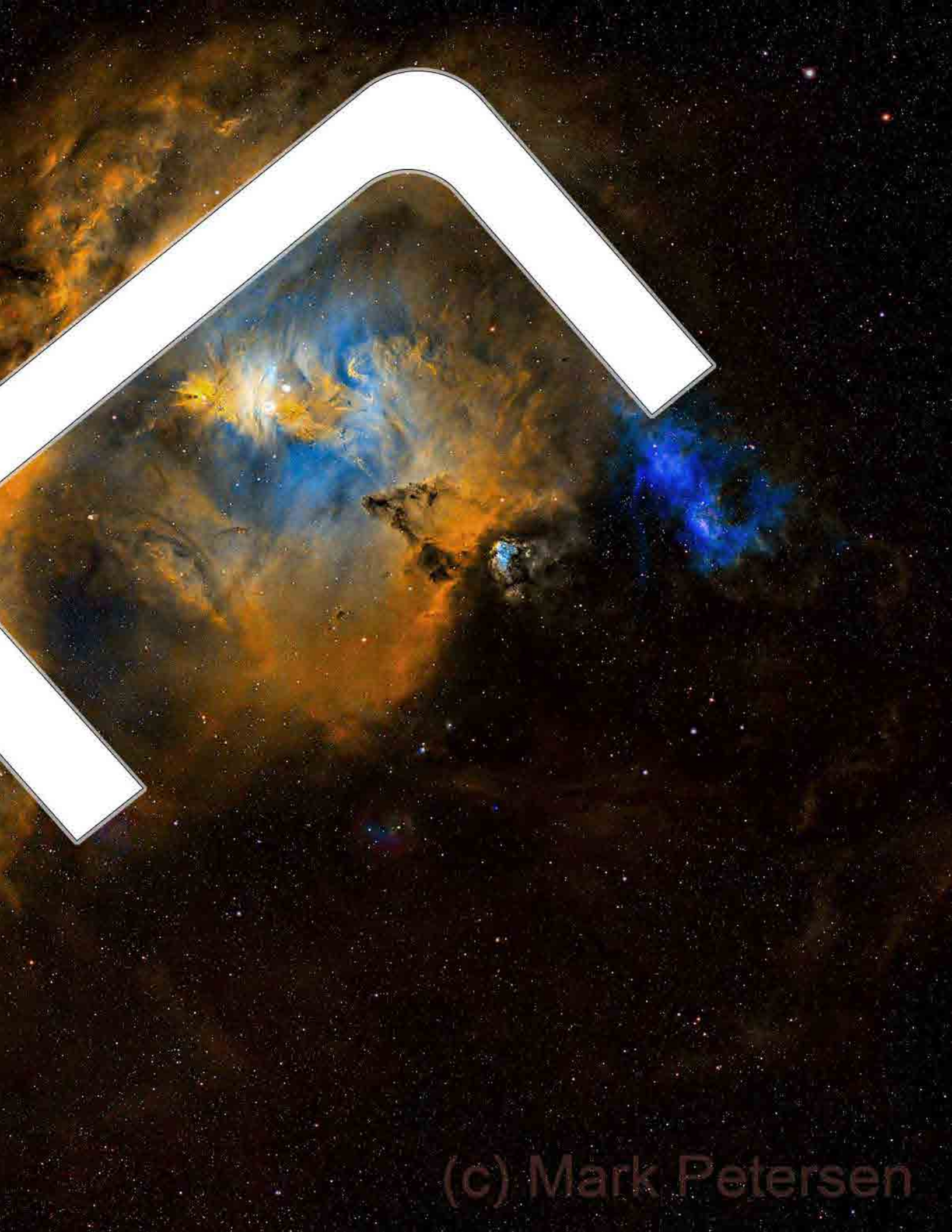

(c) Mark Petersen

Do you recognize this shape?




(c) Mark Petersen


How about now?


(c) Mark Petersen


What about now?
Click here to see pictures o

of Laas Geel on Flickr

“Right from the start, it was all about why we have so little representation of African history and African people, who have existed for over 200,000 years on the African continent.

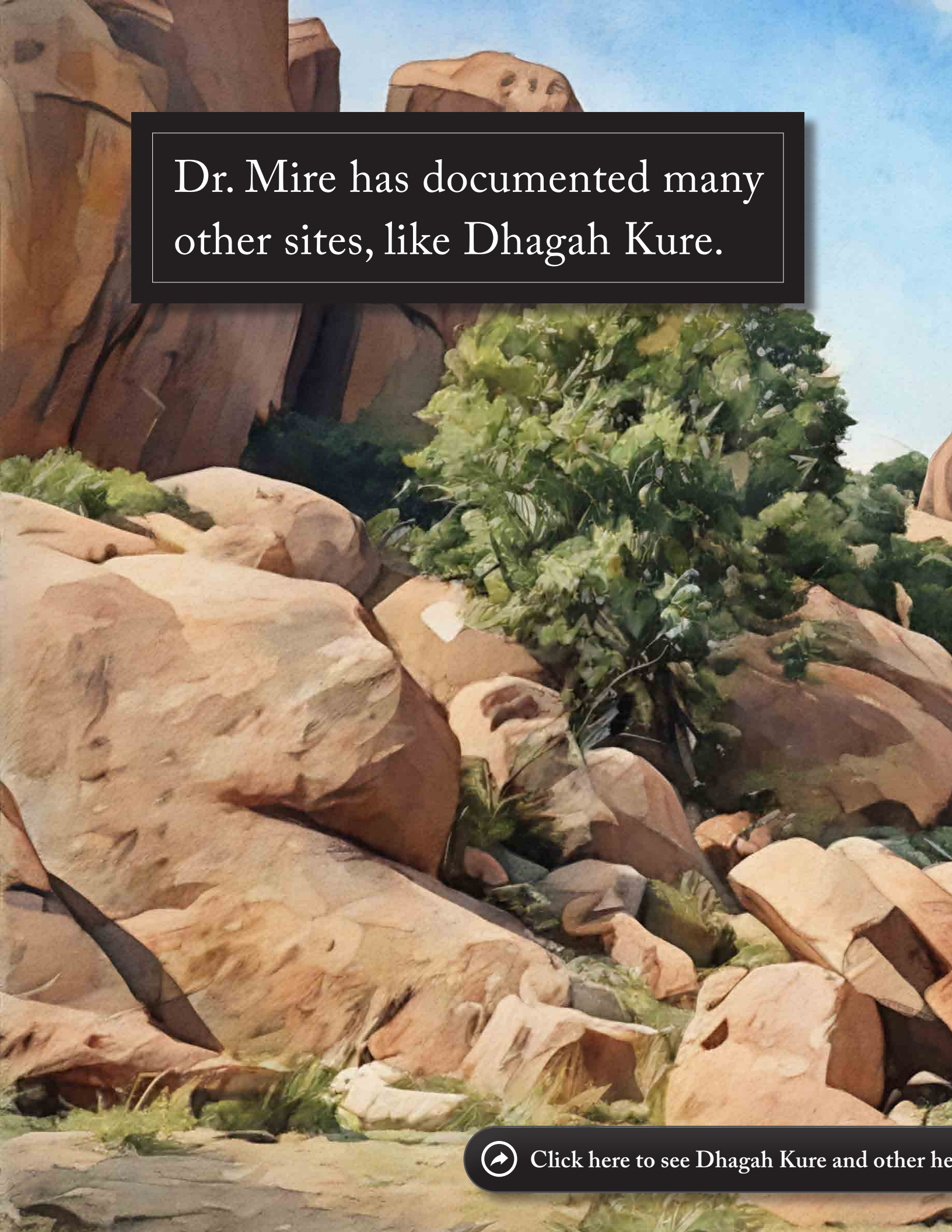
We have contributed so much to culture, science, technology, governance, philosophy, and literature, and there is nothing about it in the history books.

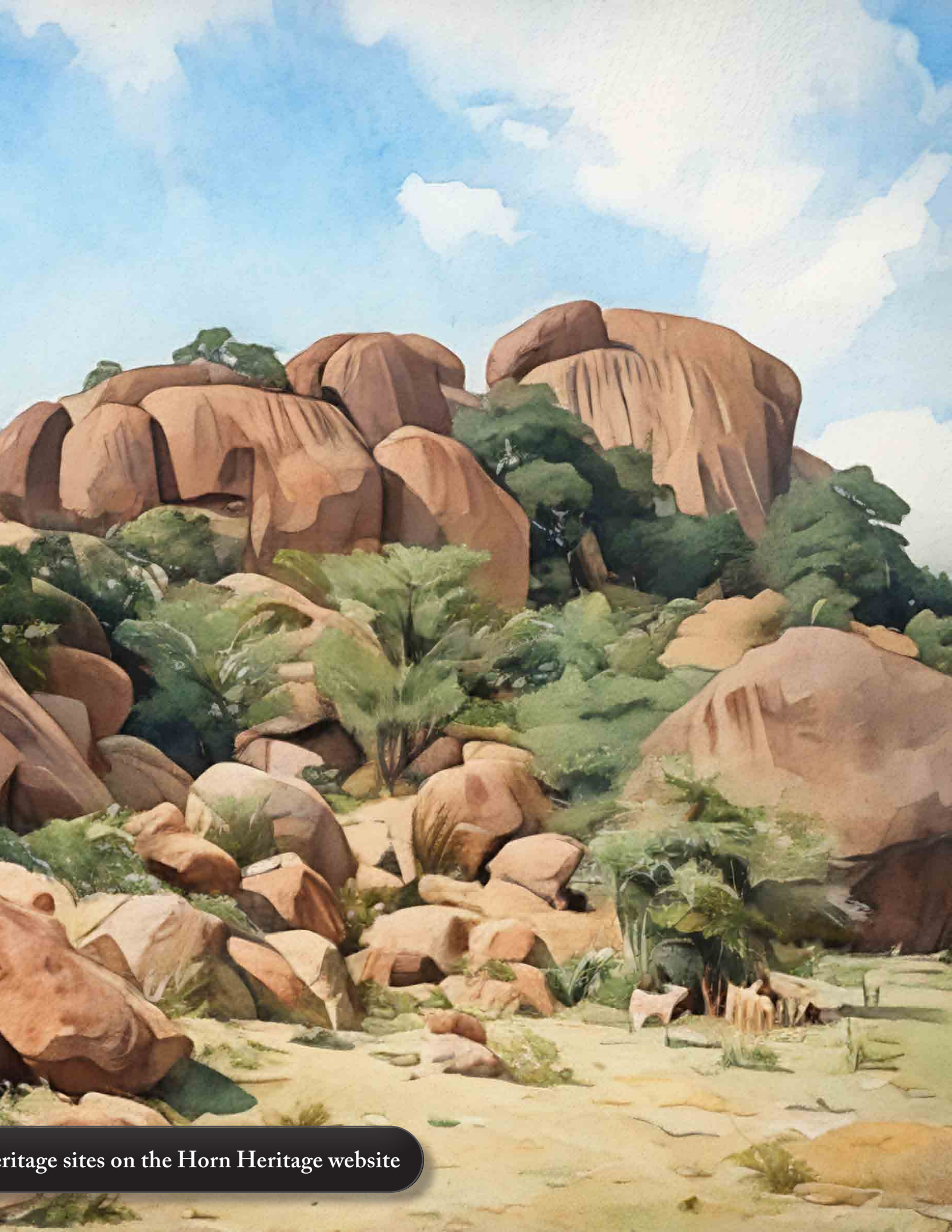
So, that is the number one reason I do what I do.

Also, I feel I can make the world a better place.”

Sada Mire, PhD
Somali Archeologist

Click here to read the article on www.sapiens.org


Dr. Mire has documented many other sites, like Dhagah Kure.
Click here to see Dhagah Kure and other he



eritage sites on the Horn Heritage website

HATHOR & MONOCEROS

07

The Christmas Tree Cluster is part of a region in the sky we know as the constellation Monoceros (The Unicorn).

In ancient Laas Geel, artists painted pictures of this region surrounding the Christmas Tree Cluster on cave walls.

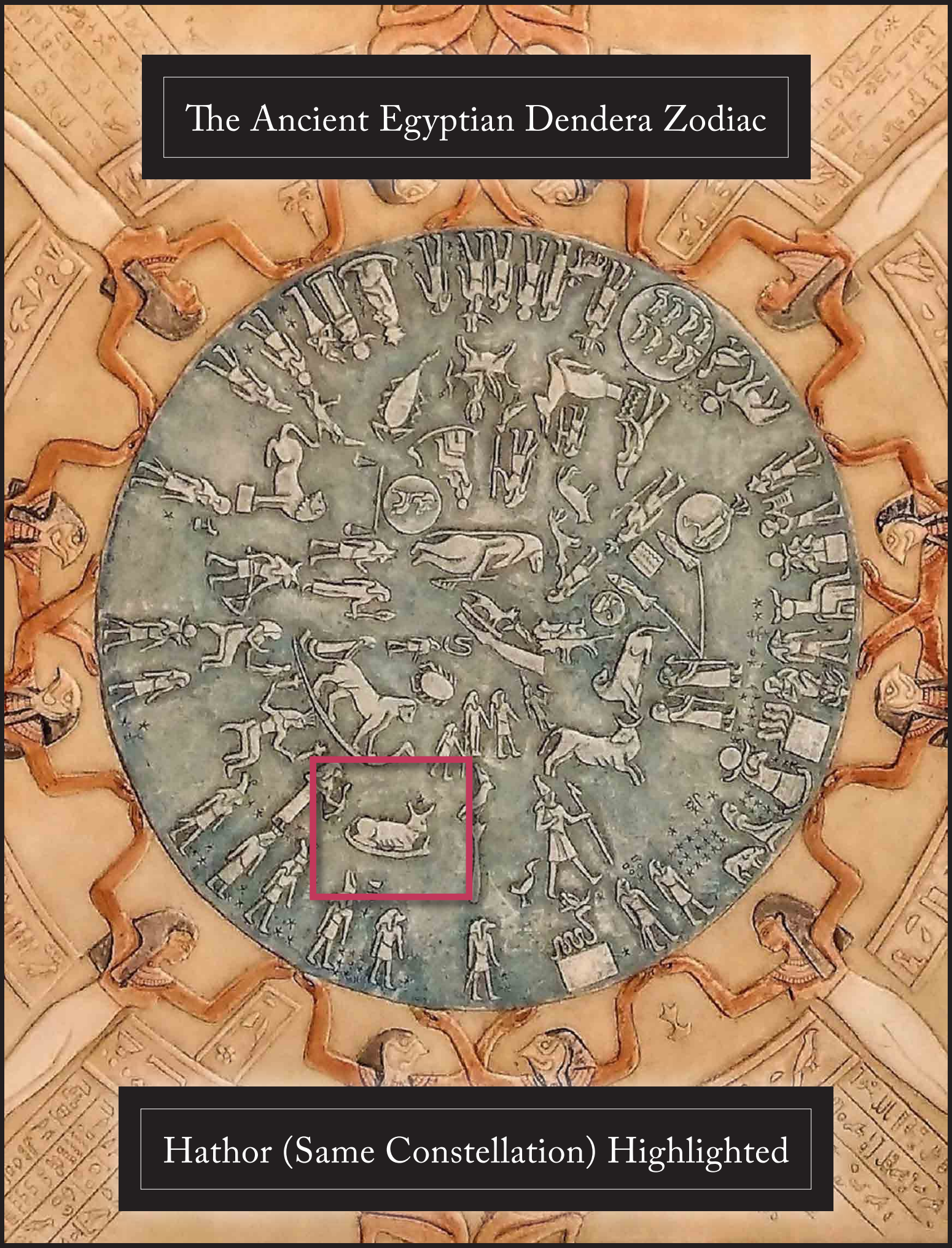
In ancient Egypt, the constellation that we call Monoceros was called Hathor.

The constellation Hathor is linked through specific symbolism to the sky goddess Hathor, who is depicted as either a woman, or a cow with a star between her horns.

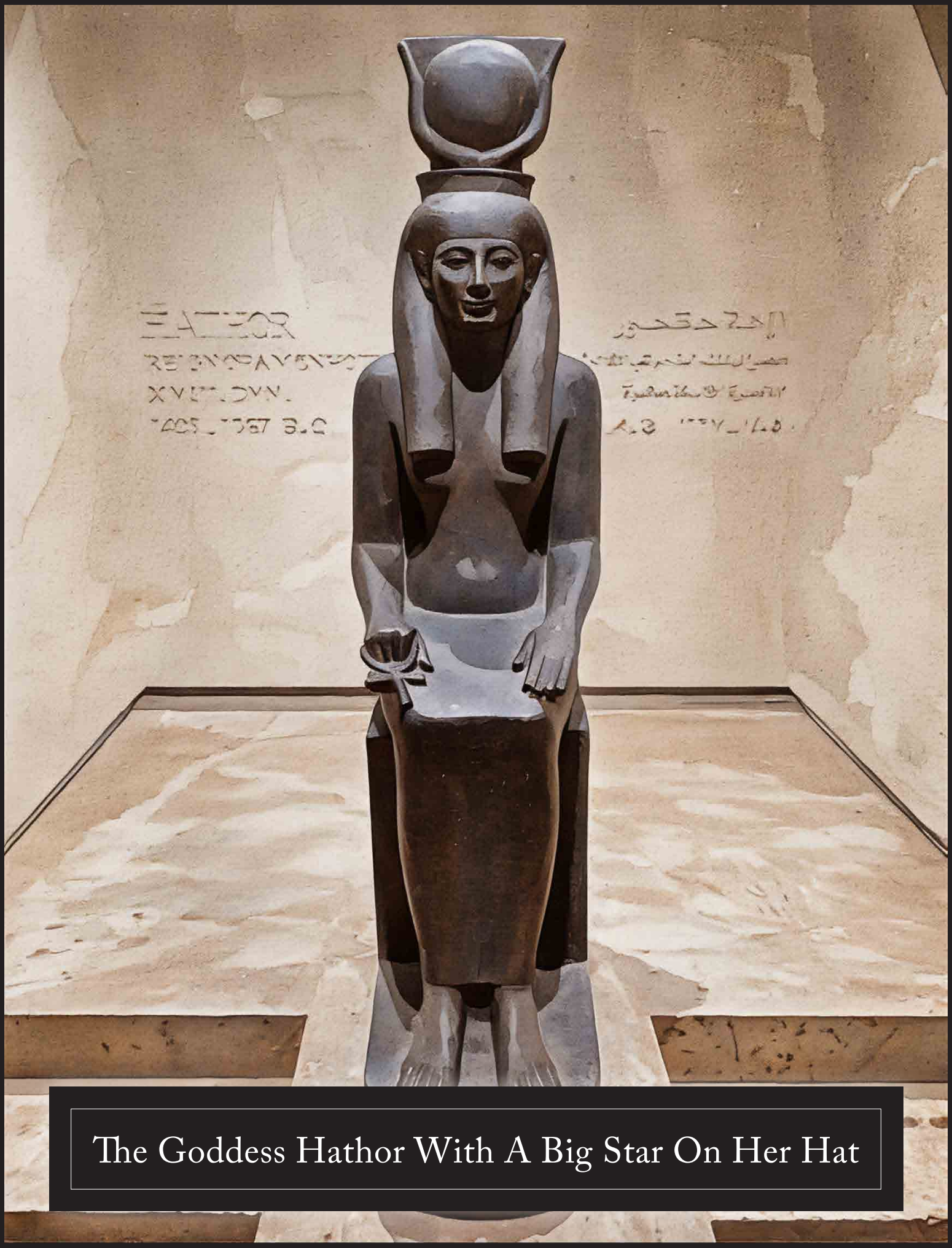
The Modern Western Zodiac

The Constellation Monoceros Highlighted

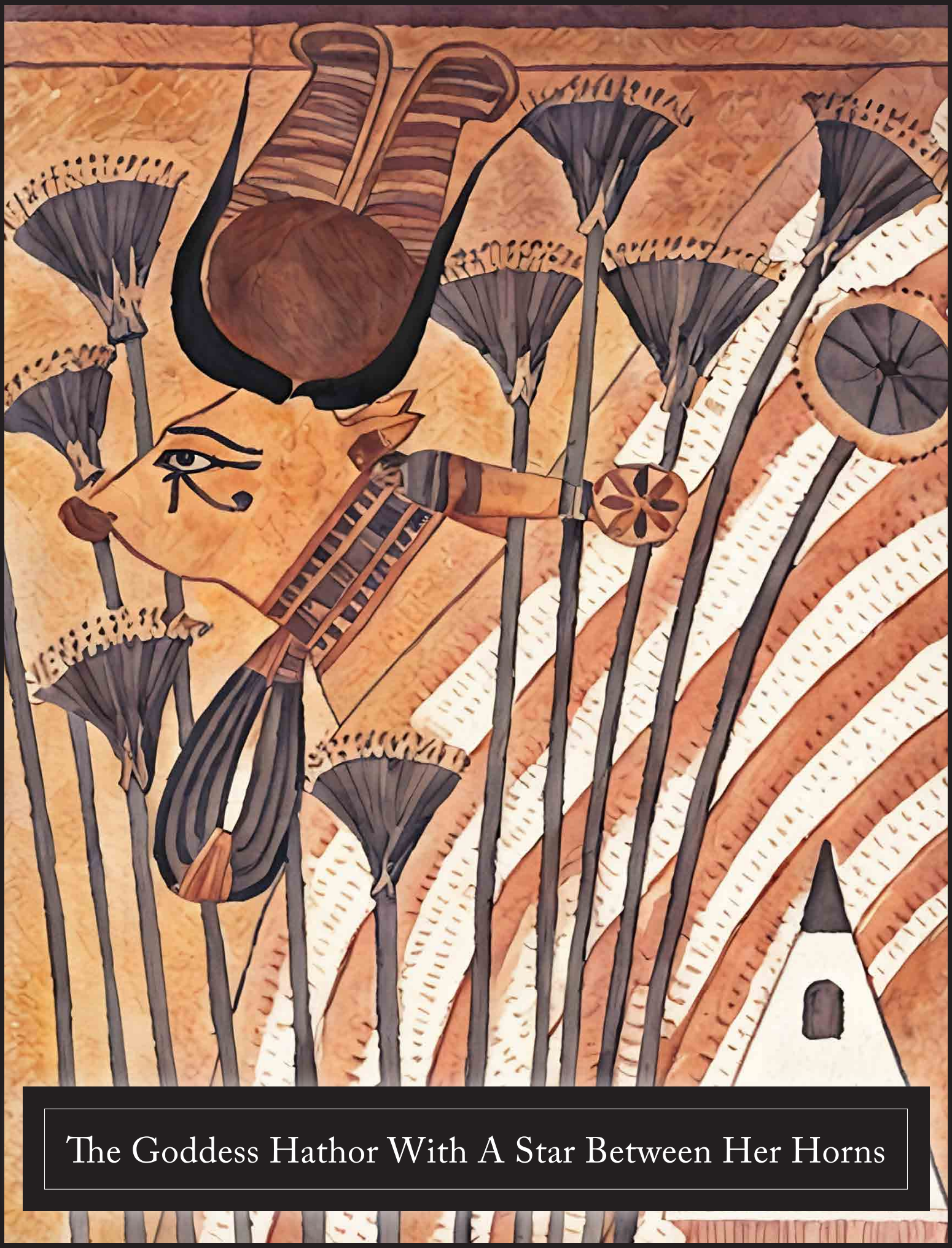
The Ancient Egyptian Dendera Zodiac



Hathor (Same Constellation) Highlighted

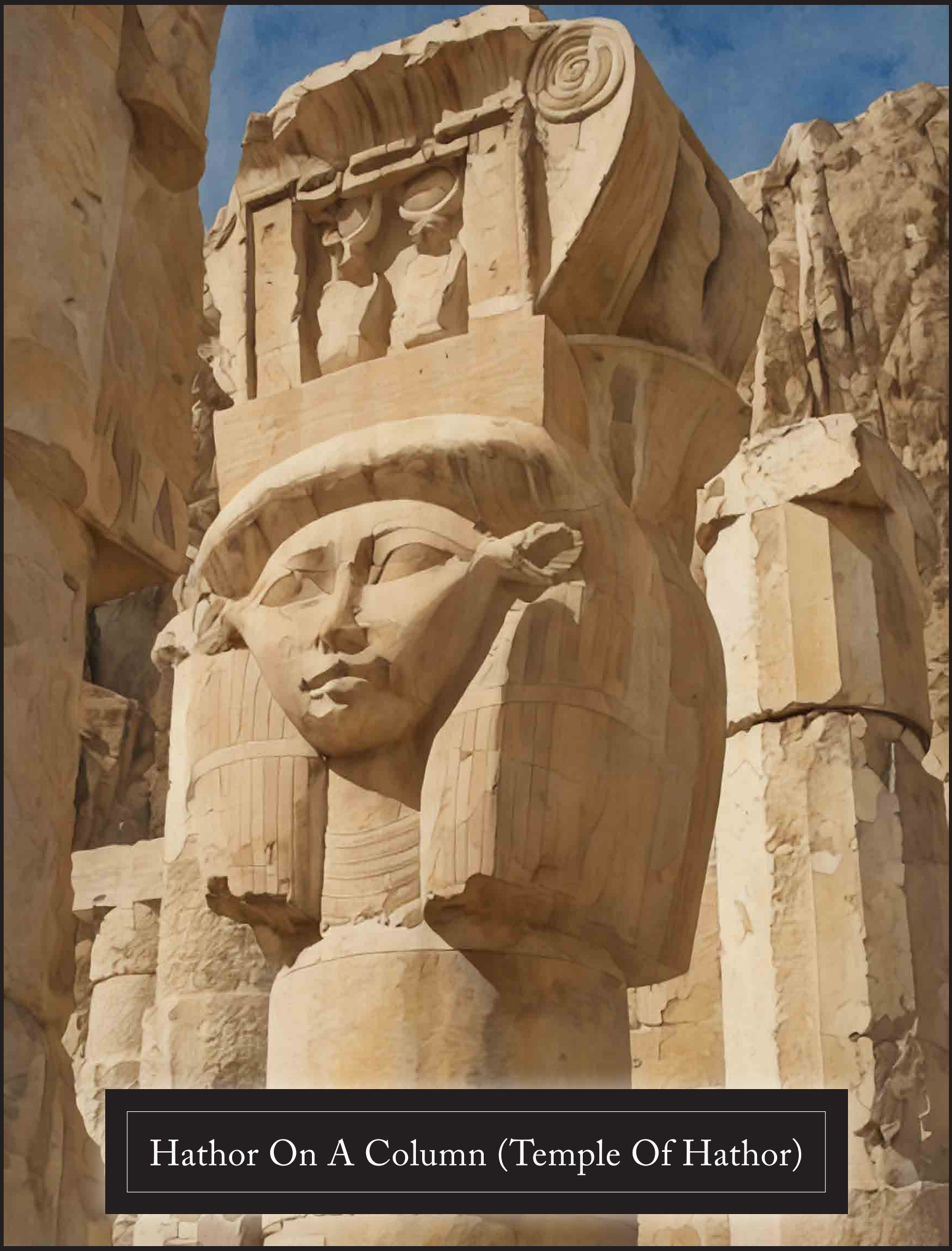


The Goddess Hathor With A Big Star On Her Hat



The Goddess Hathor With A Star Between Her Horns

Hathor On A Sistrum (Musical Instrument)



Hathor On A Column (Temple Of Hathor)

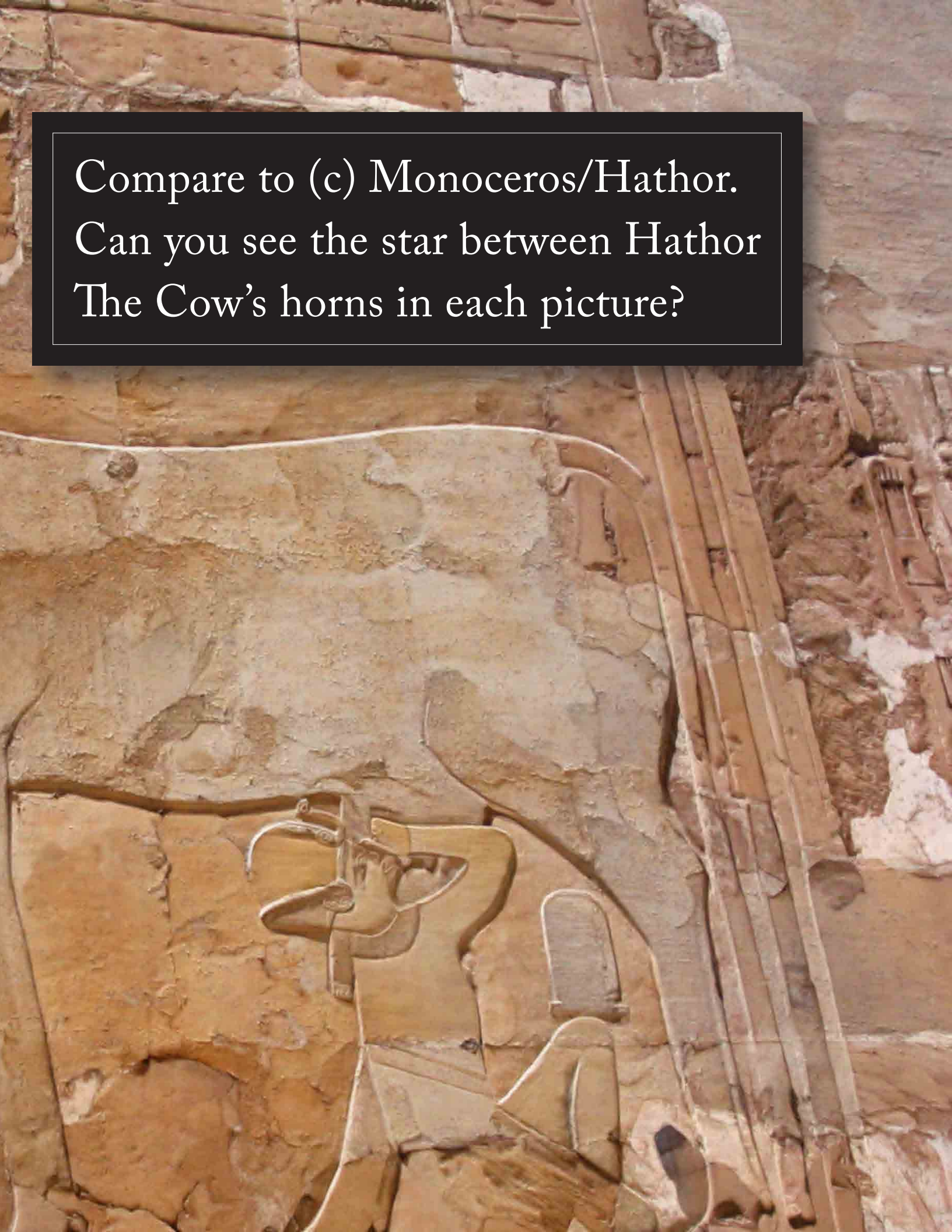
a. Hathor The Cow *
b. Hathor At Laas Geel
c. Monoceros/Hathor

* Hathor The Cow's daughter Hatshepsut is having a drink of milk from her mother!

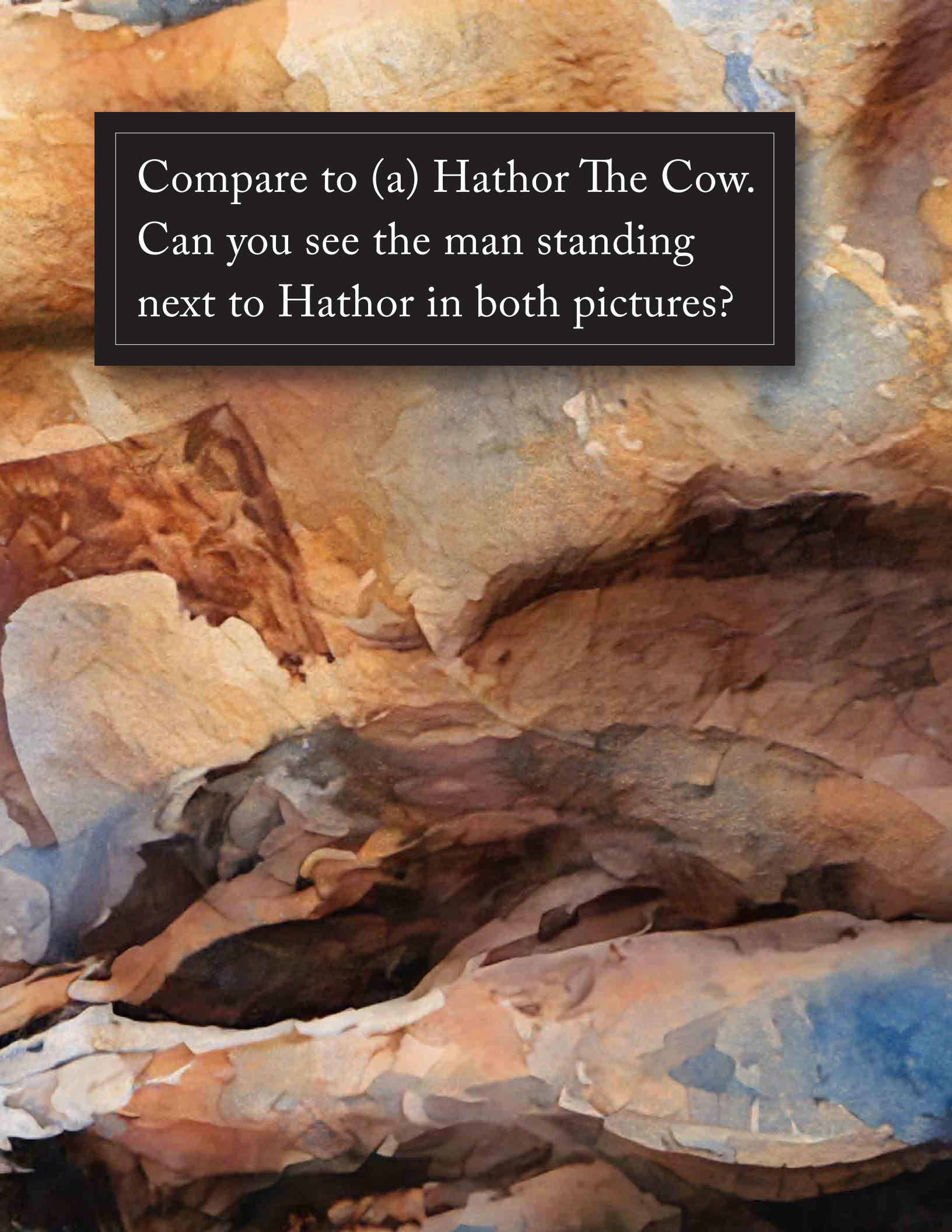
Compare to the Horse in (c) Monoceros/Hathor


c


b

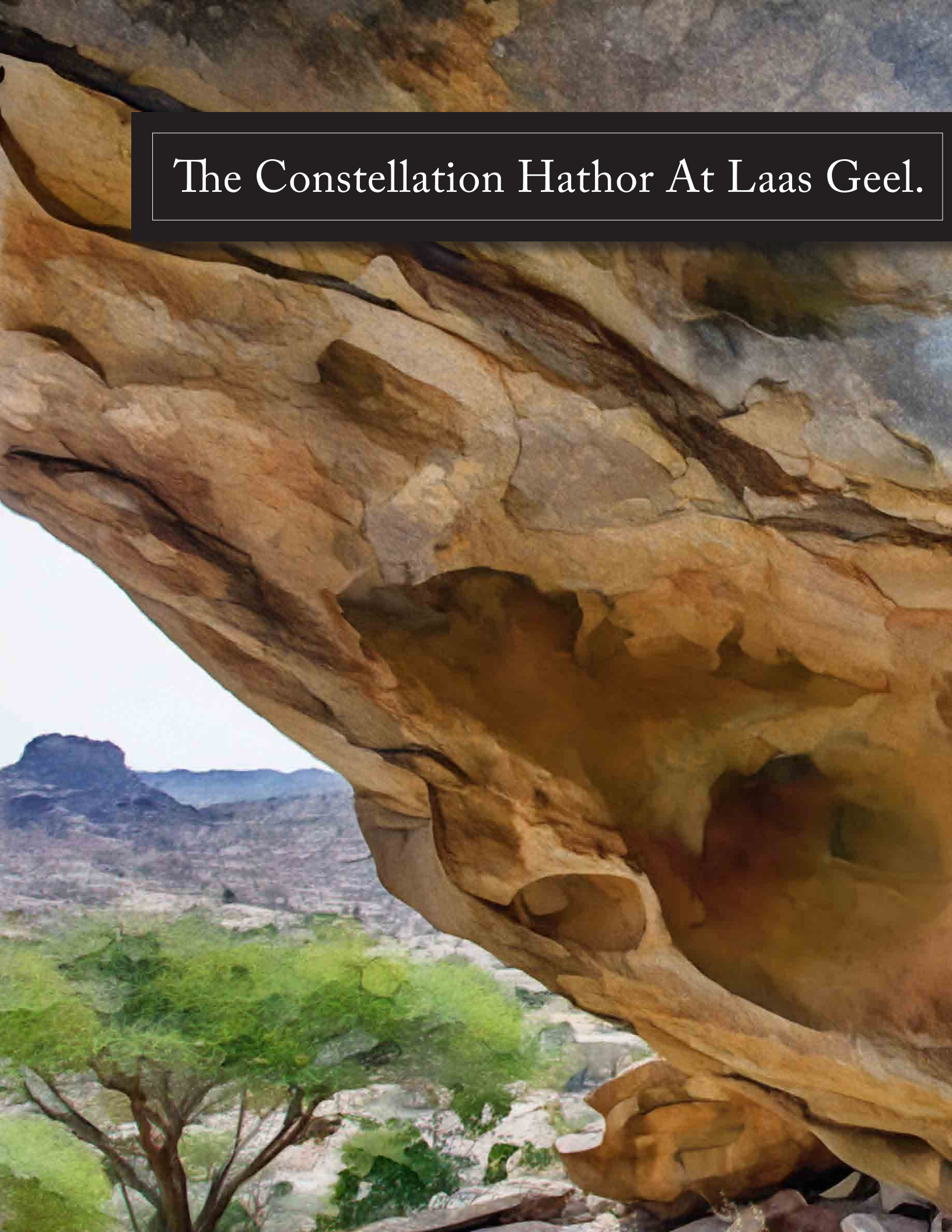


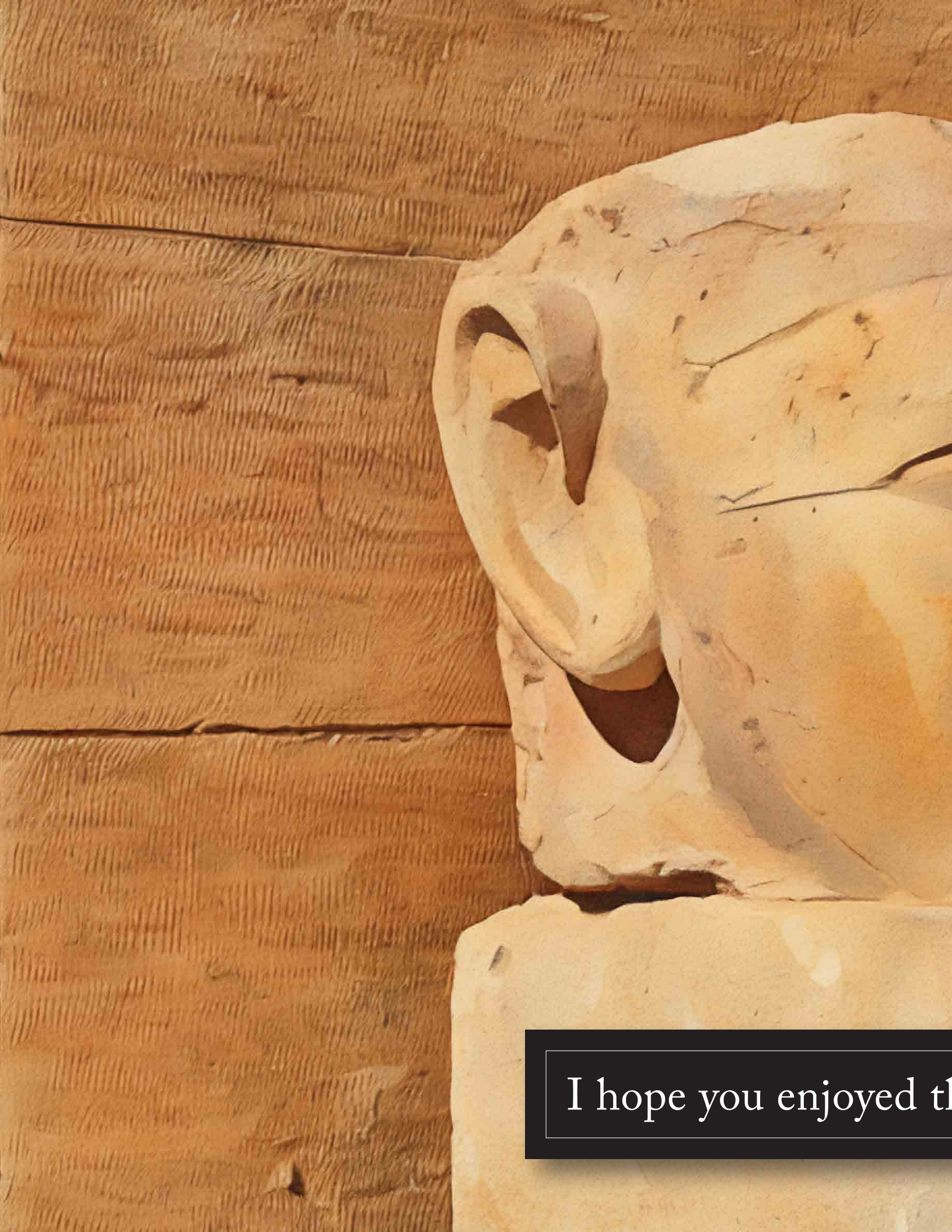
Compare to (c) Monoceros/Hathor.
Can you see the star between Hathor
The Cow's horns in each picture?

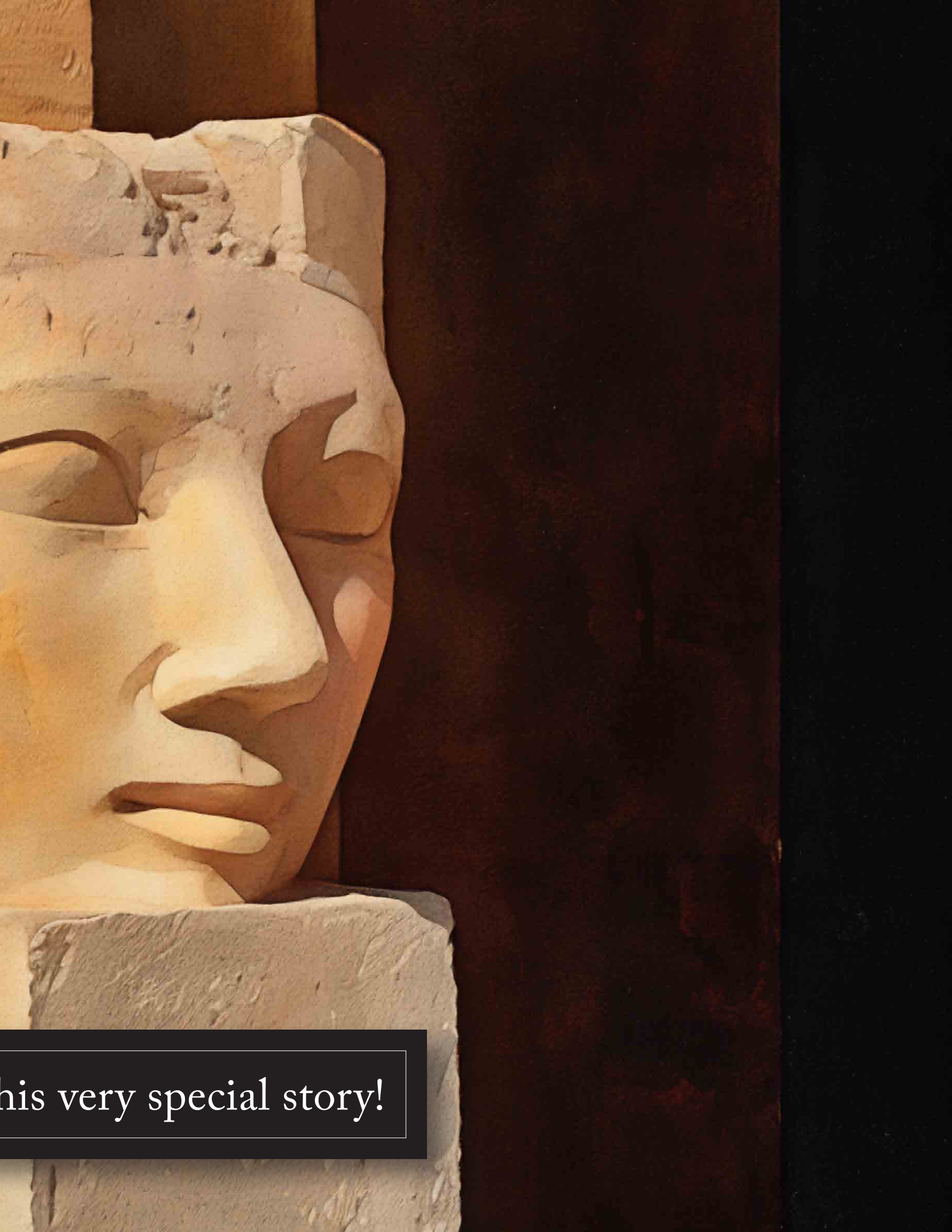

Compare to (a) Hathor The Cow.
Can you see the man standing
next to Hathor in both pictures?


Can you see the Christmas Tree Cluster (which looks like a horse) in this picture of Monoceros/Hathor?
Click here to see this constella

tion group on the Astrobin website


The Constellation Hathor At Laas Geel.


I hope you enjoyed t


his very special story!

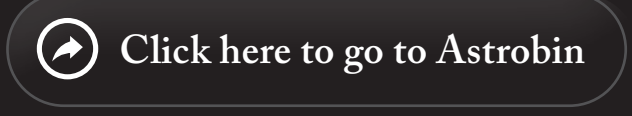
ASTROBIN 101

07

This chapter walks you through the steps necessary to see the images in this book on the website Astrobin.

Astrobin is a website that displays the work of hobyists who operate at near professional level taking pictures of stars, star clusters, and constellations.

The links provided will take you to each image on Astrobin, then show you the scientific information available there regarding every image.




app.astrobin.com/u/Avjur
Greater Monoceros region - Rosette, Cone, Christmas tree nebu
Monoceros/Hathor On Astrobin
Click here to see this constella

tion group on the Astrobin website

Greater Monoceros region - Rosette, Cone, Christmas tree nebulas, SNR G206.9+2.3, SHO with RGB Stars (and starless)

23 Jan 2024 · 442 views · 4060×2707 · 29.6 MB

Top Pick Nomination

Mark Petersen

62 8

Traveller · San Diego Coastal, San Diego (CA), US
Anza-Borrego Desert, Julian (CA), US

N · Mon · 6h 37m 29s · +8° 10′ 30″ · 9.88° × 6.59° · 8.76″/px · 282.53°N

Integration

R	10×180″	30′	Dec 22, 2022	1%
G	10×180″	30′	Dec 22, 2022	1%
B	10×180″	30′	Dec 22, 2022	1%
Hα	28×900″	7h	3 days in Dec 2022	8%
SII	14×900″	3h 30′	3 days in Dec 2022	4%
OIII	8×900″	2h	Dec 24, 2022	2%
Totals		14h	5 days in Dec 2022	4%

Equipment

Lens Rokinon 135mm f/2.0 ED UMC

Camera ZWO ASI2600MM Pro

Mount ZWO AM5

Filters Chroma Blue 31 mm · Chroma Green 31 mm · Chroma H-alpha 3nm Bandpass 31 mm · Chroma OIII 3nm Bandpass 31 mm · Chroma Red 31 mm · Chroma SII 3nm Bandpass 31 mm

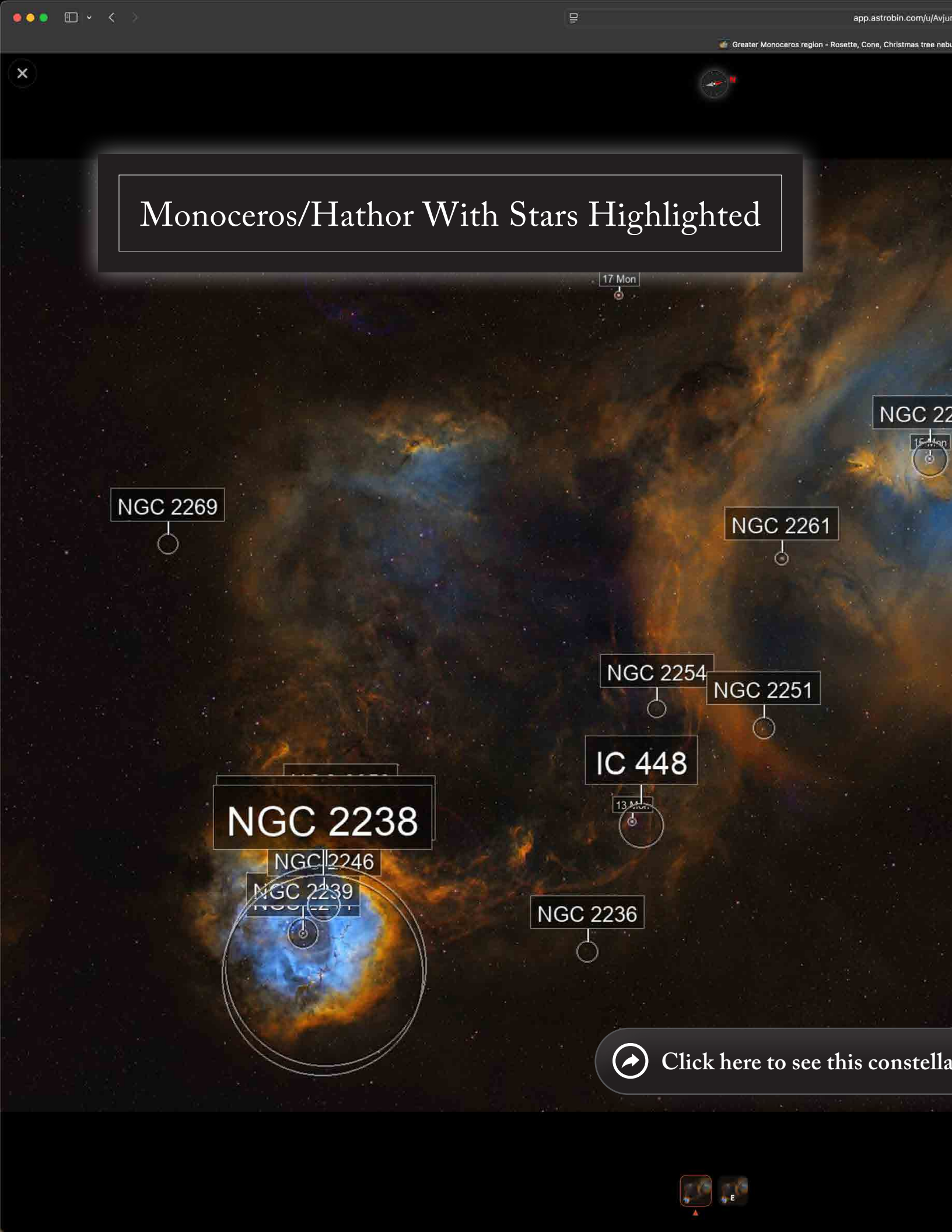
Software Adobe Photoshop · Open PHD Guiding Project PHD2 · Pleiades Astrophoto PixInsight · Russell Croman Astrophotography BlurXTerminator · Russell Croman Astrophotography NoiseXTerminator · Russell Croman Astrophotography StarXTerminator · Stefan Berg Nighttime Imaging 'N' Astronomy (N.I.N.A. / NINA)

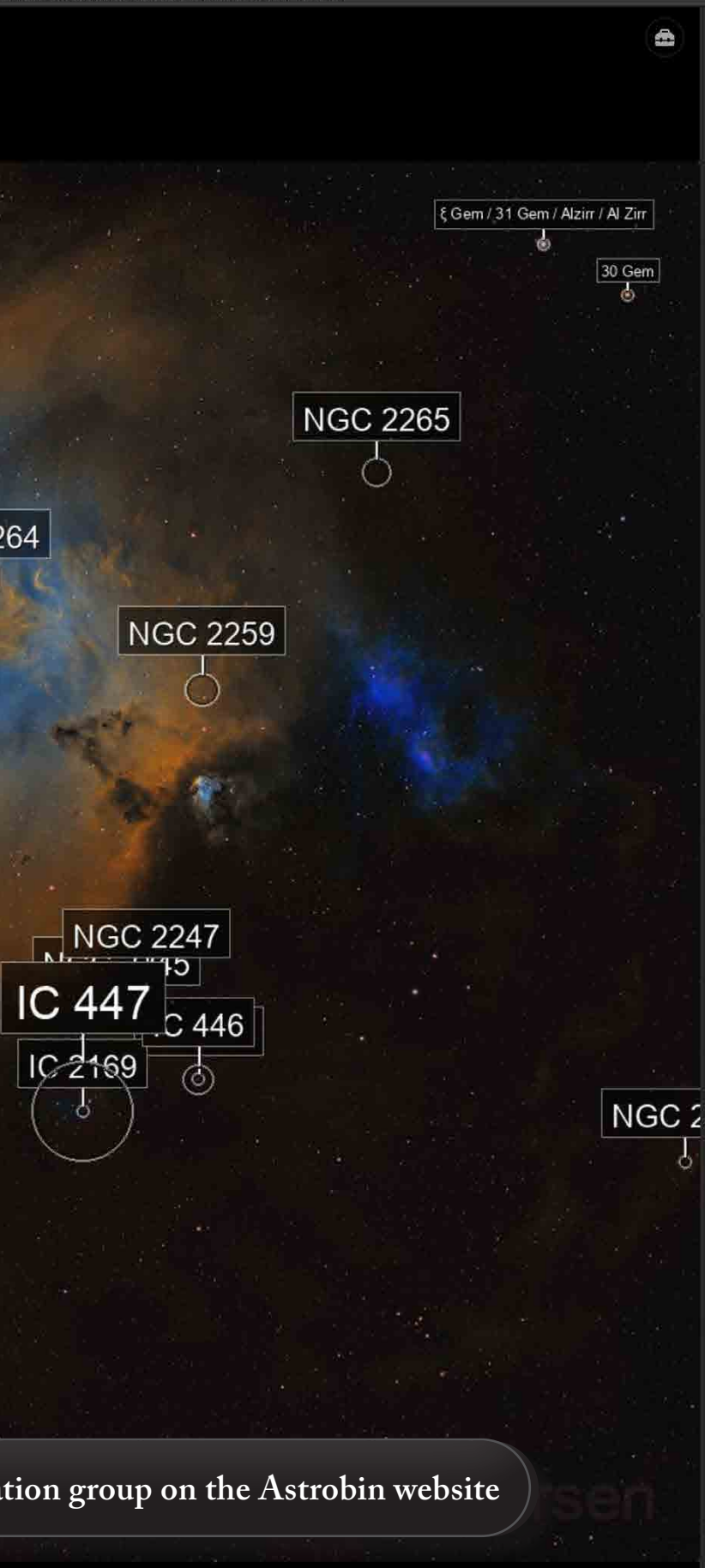
Objects

Christmas Tree Cluster · Rosette Nebula · NGC 2237 · NGC 2238 · NGC 2239 · NGC 2246 · NGC 2264 · IC 447 · IC 448 · 31 Gem) · *+ 12 more*

Description

The Rosette nebula is a challenge to image and process because it has long been a favorite of astrophotographers and there are many examples of well captured and processed images of this iconic beauty. I can only hope that this image does it justice. In a wide-field, the stem, Cone, and Christmas Tree nebulas add to it's beauty and shows how it is all inter-connected. As a bonus I was able to pull out some details of SNR G206.9+2.3. I hope to get more O3 next year and improve on the SNR.


app.astrobin.com/u/Avjur
Greater Monoceros region - Rosette, Cone, Christmas tree nebu
Monoceros/Hathor With Stars Highlighted
17 Mon
NGC 22
NGC 2269
NGC 2261
NGC 2254
NGC 2251
IC 448
NGC 2238
NGC 2246
NGC 2239
NGC 2236
Click here to see this constella



Greater Monoceros region - Rosette, Cone, Christmas tree nebulas, SNR G206.9+2.3, SHO with RGB Stars (and starless)

23 Jan 2024 · 442 views · 4060×2707 · 29.6 MB

Top Pick Nomination

Mark Petersen

62 8

Traveller · San Diego Coastal, San Diego (CA), US · Anza-Borrego Desert, Julian (CA), US

N · Mon · 6h 37m 29s · +8° 10′ 30″ · 9.88° × 6.59° · 8.76″/px · 282.53°N

Integration

R	10×180″	30′	Dec 22, 2022	1%
G	10×180″	30′	Dec 22, 2022	1%
B	10×180″	30′	Dec 22, 2022	1%
Hα	28×900″	7h	3 days in Dec 2022	8%
SII	14×900″	3h 30′	3 days in Dec 2022	4%
OIII	8×900″	2h	Dec 24, 2022	2%
Totals		14h	5 days in Dec 2022	4%

Equipment

Lens Rokinon 135mm f/2.0 ED UMC

Camera ZWO ASI2600MM Pro

Mount ZWO AM5

Filters Chroma Blue 31 mm · Chroma Green 31 mm · Chroma H-alpha 3nm Bandpass 31 mm · Chroma OIII 3nm Bandpass 31 mm · Chroma Red 31 mm · Chroma SII 3nm Bandpass 31 mm

Software Adobe Photoshop · Open PHD Guiding Project PHD2 · Pleiades Astrophoto PixInsight · Russell Croman Astrophotography BlurXTerminator · Russell Croman Astrophotography NoiseXTerminator · Russell Croman Astrophotography StarXTerminator · Stefan Berg Nighttime Imaging 'N' Astronomy (N.I.N.A. / NINA)

Objects

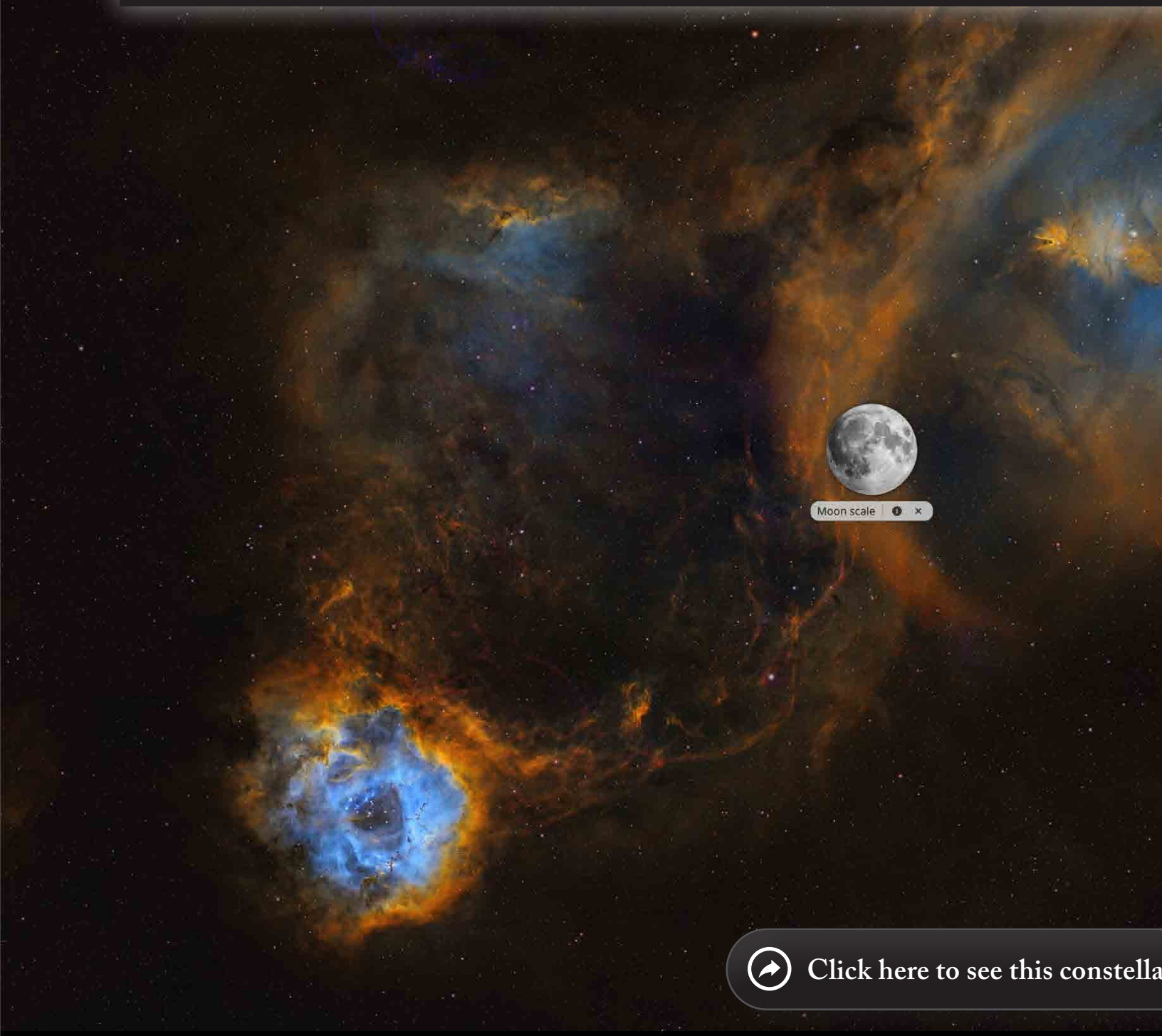
Christmas Tree Cluster · Rosette Nebula · NGC 2237 · NGC 2238 · NGC 2239 · NGC 2246 · NGC 2264 · IC 447 · IC 448 · 31 Gem) · *+ 12 more*

Description

The Rosette nebula is a challenge to image and process because it has long been a favorite of astrophotographers and there are many examples of well captured and processed images of this iconic beauty. I can only hope that this image does it justice. In a wide-field, the stem, Cone, and Christmas Tree nebulas add to it's beauty and shows how it is all inter-connected. As a bonus I was able to pull out some details of SNR G206.9+2.3. I hope to get more O3 next year and improve on the SNR.

tion group on the Astrobin website

Monoceros/Hathor With The Moon For Size Comparison



n

tion group on the Astrobin website

Greater Monoceros region - Rosette, Cone, Christmas tree nebulas, SNR G206.9+2.3, SHO with RGB Stars (and starless)

23 Jan 2024 · 442 views · 4060×2707 · 29.6 MB

Top Pick Nomination

Mark Petersen

62 8

Traveller · San Diego Coastal, San Diego (CA), US · Anza-Borrego Desert, Julian (CA), US

N · Mon · 6h 37m 29s · +8° 10′ 30″ · 9.88° × 6.59° · 8.76″/px · 282.53°N

Integration

R	10×180″	30′	Dec 22, 2022	1%
G	10×180″	30′	Dec 22, 2022	1%
B	10×180″	30′	Dec 22, 2022	1%
Hα	28×900″	7h	3 days in Dec 2022	8%
SII	14×900″	3h 30′	3 days in Dec 2022	4%
OIII	8×900″	2h	Dec 24, 2022	2%
Totals		14h	5 days in Dec 2022	4%

Equipment

Lens Rokinon 135mm f/2.0 ED UMC

Camera ZWO ASI2600MM Pro

Mount ZWO AM5

Filters Chroma Blue 31 mm · Chroma Green 31 mm · Chroma H-alpha 3nm Bandpass 31 mm · Chroma OIII 3nm Bandpass 31 mm · Chroma Red 31 mm · Chroma SII 3nm Bandpass 31 mm

Software Adobe Photoshop · Open PHD Guiding Project PHD2 · Pleiades Astrophoto PixInsight · Russell Croman Astrophotography BlurXTerminator · Russell Croman Astrophotography NoiseXTerminator · Russell Croman Astrophotography StarXTerminator · Stefan Berg Nighttime Imaging 'N' Astronomy (N.I.N.A. / NINA)

Objects

Christmas Tree Cluster · Rosette Nebula · NGC 2237 · NGC 2238 · NGC 2239 · NGC 2246 · NGC 2264 · IC 447 · IC 448 · 31 Gem) · *+ 12 more*

Description

The Rosette nebula is a challenge to image and process because it has long been a favorite of astrophotographers and there are many examples of well captured and processed images of this iconic beauty. I can only hope that this image does it justice. In a wide-field, the stem, Cone, and Christmas Tree nebulas add to it's beauty and shows how it is all inter-connected. As a bonus I was able to pull out some details of SNR G206.9+2.3. I hope to get more O3 next year and improve on the SNR.

The Christmas Tree Cluster On Astrobin

80 hours on the Christmas Tree

80 hours on the Christmas Tree (fixed stars)

3 years ago · 1.4k views · 6293×9485 · 41.31 MB · Link

Antoine Grelin

144 6

Remote observatory — Utah Desert Remote Observatories

N · Mon · 6h 40m 21s · +10° 14′ 20″ · 2.02° × 3.04° · 1.16″/px · 214.84°N

Integration

No filter	245×1200″	81h 40′	Feb 22, 2023	7%

Equipment

Telescope Stellarvue SVX130T

Camera QHYCCD QHY600PH M

Mount 10Micron GM1000 HPS

Filters Chroma Blue 50 mm · Chroma Green 50 mm · Chroma H-alpha 3nm Bandpass 50 mm · Chroma OIII 3nm Bandpass 50 mm · Chroma Red 50 mm · Chroma SII 3nm Bandpass 50 mm

Software Adobe Lightroom · Pleiades Astrophoto PixInsight

Objects

Christmas Tree Cluster · NGC 2259 · NGC 2264 · LDN 1609 · LDN 1610 · LDN 1613 · LBN 899 · LBN 902 · LBN 911 · LBN 912 · *+ 6 more*

Description

I captured this target throughout November, December, and January. It is NGC 2264, also known as the Christmas Tree cluster and Cone Nebula.

I spent more than 80 hours capturing this object, using 6 different filters (RGB for the stars, SHO for the gases).

The details are very crisp, the noise is basically non-existent, and the colors came out vibrant!

Revision: B

Title
80 hours on the Christmas Tree (fixed stars)

Description
Spent an eternity on Photoshop to fix the bad stars caused by tilt... one by one... Looked slightly better now.

Published 3 years ago

Comments

Add a comment

tmas Tree Cluster On Astrobin

The Christmas Tree Cluster With Stars Highlighted

80 hours on the Christmas Tree

80 hours on the Christmas Tree (fixed stars)

3 years ago · 1.4k views · 6293×9485 · 41.31 MB · Link

Antoine Grelin

144 6

Remote observatory — Utah Desert Remote Observatories

N · Mon · 6h 40m 21s · +10° 14′ 20″ · 2.02° × 3.04° · 1.16″/px · 214.84°N

Integration

No filter	245×1200″	81h 40′	Feb 22, 2023	7%

Equipment

Telescope Stellarvue SVX130T

Camera QHYCCD QHY600PH M

Mount 10Micron GM1000 HPS

Filters Chroma Blue 50 mm · Chroma Green 50 mm · Chroma H-alpha 3nm Bandpass 50 mm · Chroma OIII 3nm Bandpass 50 mm · Chroma Red 50 mm · Chroma SII 3nm Bandpass 50 mm

Software Adobe Lightroom · Pleiades Astrophoto PixInsight

Objects

Christmas Tree Cluster · NGC 2259 · NGC 2264 · LDN 1609 · LDN 1610 · LDN 1613 · LBN 899 · LBN 902 · LBN 911 · LBN 912 · *+ 6 more*

Description

I captured this target throughout November, December, and January. It is NGC 2264, also known as the Christmas Tree cluster and Cone Nebula.

I spent more than 80 hours capturing this object, using 6 different filters (RGB for the stars, SHO for the gases).

The details are very crisp, the noise is basically non-existent, and the colors came out vibrant!

Revision: B

Title
80 hours on the Christmas Tree (fixed stars)

Description
Spent an eternity on Photoshop to fix the bad stars caused by tilt... one by one... Looked slightly better now.

Published 3 years ago

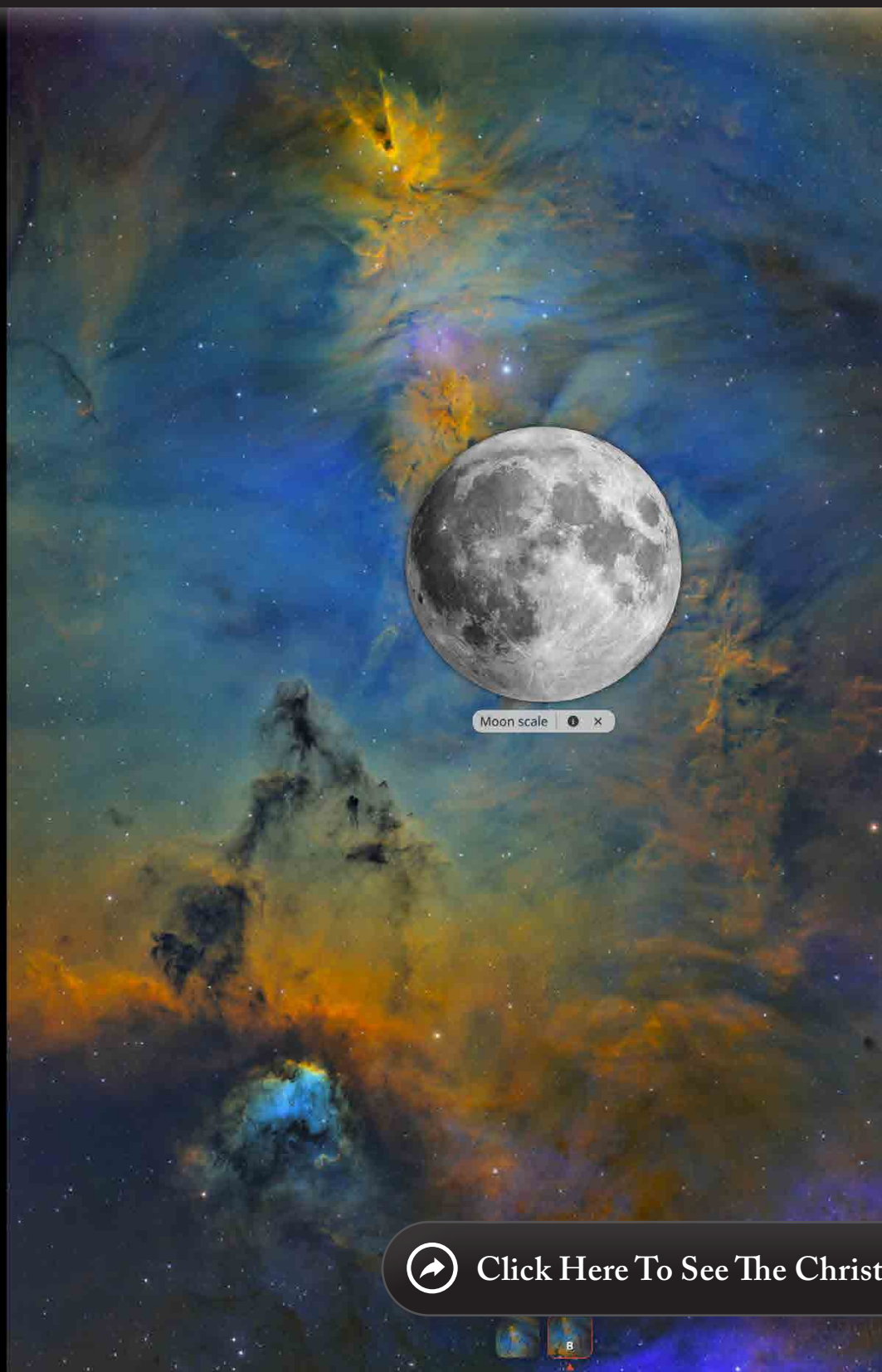
Comments

Add a comment

tmas Tree Cluster On Astrobin

07′ 52″ b: +02° 59′ 13″
PixInsight

The Christmas Tree Cluster With The Moon For Size Co



m/i/41pqbs?r=B

ristmas Tree - AstroBin

EN Log in Sign up

mparison

tmas Tree Cluster On Astrobin

80 hours on the Christmas Tree

80 hours on the Christmas Tree (fixed stars)

3 years ago · 1.4k views · 6293×9485 · 41.31 MB · Link

Antoine Grelin

144 6

Remote observatory — Utah Desert Remote Observatories

N · Mon · 6h 40m 21s · +10° 14′ 20″ · 2.02° × 3.04° · 1.16″/px · 214.84°N

Integration

No filter	245×1200″	81h 40′	Feb 22, 2023	7%

Equipment

Telescope Stellarvue SVX130T

Camera QHYCCD QHY600PH M

Mount 10Micron GM1000 HPS

Filters Chroma Blue 50 mm · Chroma Green 50 mm · Chroma H-alpha 3nm Bandpass 50 mm · Chroma OIII 3nm Bandpass 50 mm · Chroma Red 50 mm · Chroma SII 3nm Bandpass 50 mm

Software Adobe Lightroom · Pleiades Astrophoto PixInsight

Objects

Christmas Tree Cluster · NGC 2259 · NGC 2264 · LDN 1609 · LDN 1610 · LDN 1613 · LBN 899 · LBN 902 · LBN 911 · LBN 912 · *+ 6 more*

Description

I captured this target throughout November, December, and January. It is NGC 2264, also known as the Christmas Tree cluster and Cone Nebula.

I spent more than 80 hours capturing this object, using 6 different filters (RGB for the stars, SHO for the gases).

The details are very crisp, the noise is basically non-existent, and the colors came out vibrant!

Revision: B

Title
80 hours on the Christmas Tree (fixed stars)

Description
Spent an eternity on Photoshop to fix the bad stars caused by tilt... one by one... Looked slightly better now.

Published 3 years ago

Comments

Add a comment

ASTROMETRY 101

08

This chapter will walk you through the steps necessary to prove that the images used in this book are made of real stars.

Then, it will show you where each image sits in the night sky next to constellations.

This process is very easy and anyone can do it in about five minutes in any browser.

Click here to go to Astrometry (nova.astrometry.net)

Directions - Monoceros Image

1. Download the images: https://cdn.thunderheart.org/astrometry-images.zip.

2. Point your browser to https://nova.astrometry.net.

3. From the home page (A) click on **Upload** in the top menu.

4. From the Upload page (B) click **Choose File** and select “monoceros.jpg”.

5. Wait for upload and processing, until you see this screen (C) (may take 1-2 minutes).

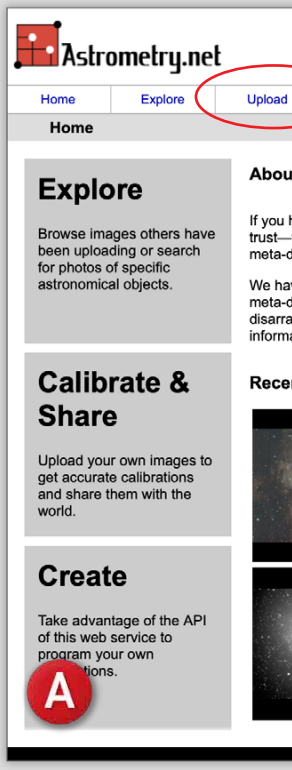
6. Click “**Go to results page**”.

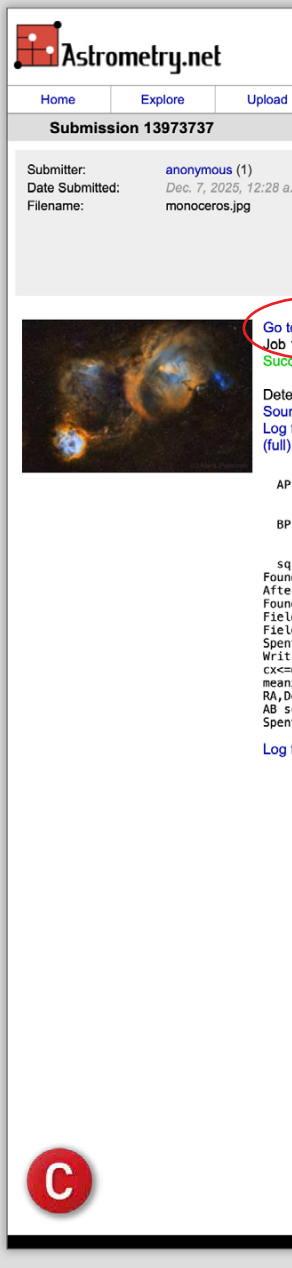
7. The results page (D) will show the analysis and list the stars identified.

8. Click on “**view in WorldWide Telescope**”.

9. Wait for the image to upload to WorldWide Telescope

10. Go to the next page to see what the results look like.





Not signed in | Sign In

API | Support | Search

t Astrometry.net

have astronomical imaging of the sky with celestial coordinates you do not know—or do not then Astrometry.net is for you. Input an image and we'll give you back astrometric calibration data, plus lists of known objects falling inside the field of view.

ve built this astrometric calibration service to create correct, standards-compliant astrometric data for every useful astronomical image ever taken, past and future, in any state of archival y. We hope this will help organize, annotate and make searchable all the world's astronomical ation.

ntly Submitted Images (See More)

Not signed in | Sign In

Astrometry.net

Home | Explore | Upload | API | Support | Search

Upload

Select a file or url to upload

Choose File | no file selected

- file
- url

The following file types are supported:

- **JPEG, GIF, PNG, or FITS image**
- **FITS binary table**, containing a BINTABLE of detected objects, with X and Y pixel positions in "D" (double) or "E" (float) columns, with one object per row
- **text list**, containing two columns of digits separated by commas or whitespace, listing the X,Y positions of sources, sorted with the brightest sources first
- **tarball (.tar, .gz)**, containing files of any of the above types

Upload

Advanced Settings [+]

B

Not signed in | Sign In

API | Support | Search

Upload Settings

Parity:	try both simultaneously
Scale Units:	width of the field (in degrees)
Scale Type:	bounds
Scale Lower Bound:	0.1
Scale Upper Bound:	180.0
Downsample Factor:	2

o results page
14807772:

cted 1107 stars
ce extraction image (fullsize)
ile tail [-]

```
     8.678e-10
=    0.0057756 -6.5654e-08    5.14e-08
    -4.908e-07 -3.7035e-08
     2.6046e-06
=   -0.00031456  3.0591e-06 -1.3589e-07
     3.8713e-07  2.6292e-06
    -2.8765e-10
rt(det(CD))=13.887 [arcsec]
d tag-along columns: MAG_BT, MAG_VT, MAG_HP, MAG
r removing duplicates: MAG_BT, MAG_VT, MAG_HP, MAG
d tag-along columns from field: FLUX BACKGROUND
d 1: solved with index index-4112.fits.
d 1: tried 12642 quads, matched 23782 codes.
t 2.08205 s user, 0.188335 s system, 2.27038 s total, 2.71042 s wall time.
ing 118 rows (of 1000 field and 148 index objects) to correspondence file.
dx constraints: 0
x constraints: 61696
ec constraints: 0
cale constraints: 0
t 3.15284 seconds on this field.
```

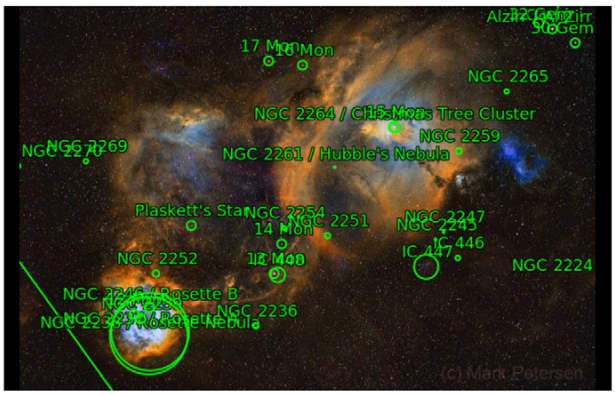
ile 2

Not signed in | Sign In

Astrometry.net

Home | Explore | Upload | API | Support | Search

Images > monoceros.jpg



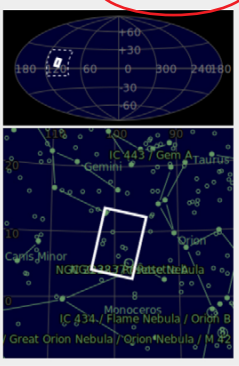
Submitted by anonymous (1)
on *Dec. 7, 2025, 12:28 a.m.*
as " monoceros.jpg " (Submission 13973737)
under *Attribution 3.0 Unported*

Job Status

Job 14807772:
Success

Calibration

Center (RA, Dec):	(99.368, 8.177)
Center (RA, hms):	$06^h\ 37^m\ 28.348^s$
Center (Dec, dms):	+08° 10' 35.916"
Size:	9.88 x 6.58 deg
Radius:	5.935 deg
Pixel scale:	13.9 arcsec/pixel
"Orientation", may be incorrect, use at your own risk:	Up is 282.8 degrees E of N
WCS file:	wcs.fits
New FITS image:	new-image.fits
Reference stars nearby (RA,Dec table):	rdls.fits
Stars detected in your images (x,y table):	axy.fits
Stars detected in your images, converted to RA,Dec (FITS table):	image-radec.fits
Correspondences between image and reference stars (table):	corr.fits
Legacy Surveys sky browser:	browse the sky
World Wide Telescope:	view in WorldWideTelescope



Nearby Images (View All)

Comments

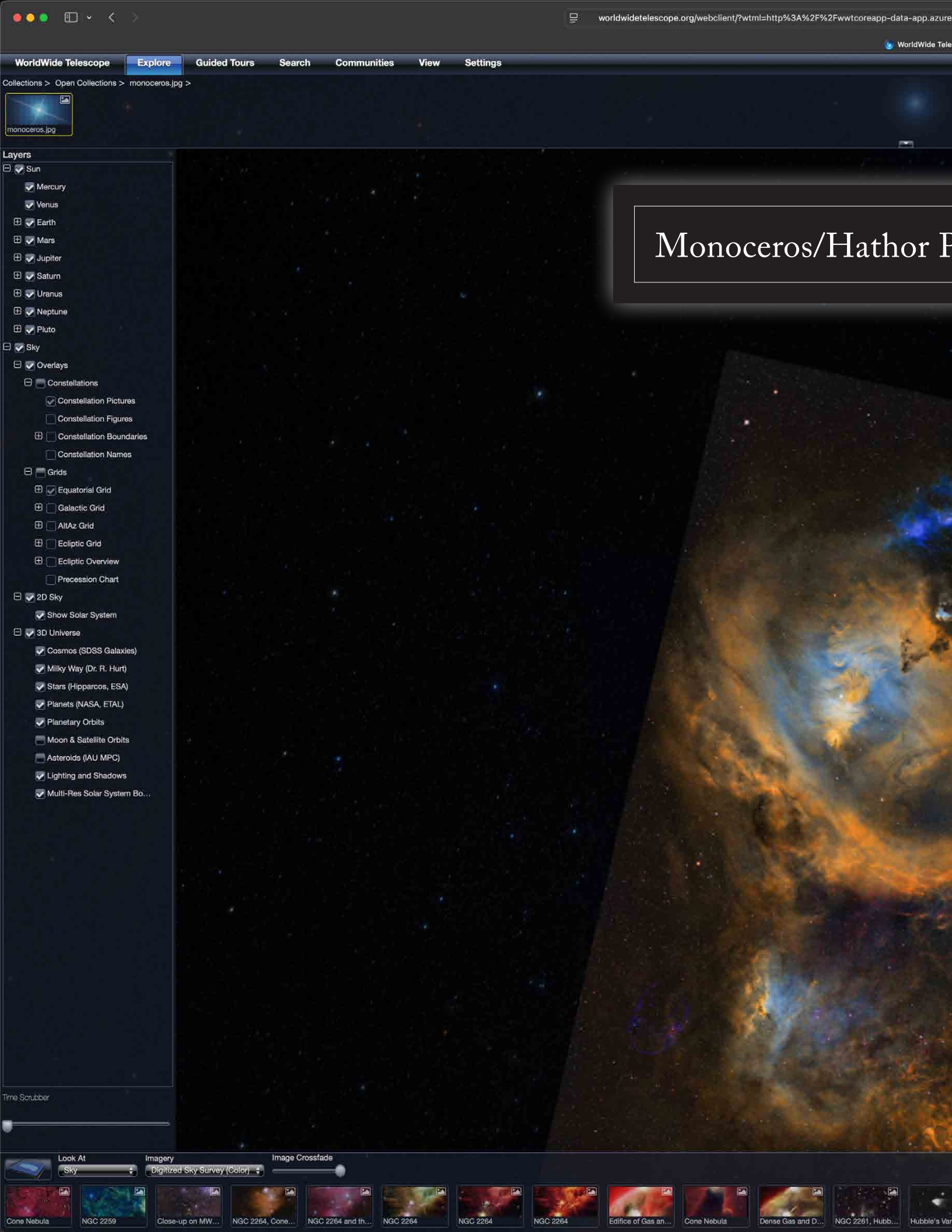
No comments.

Please Sign In to post comments.

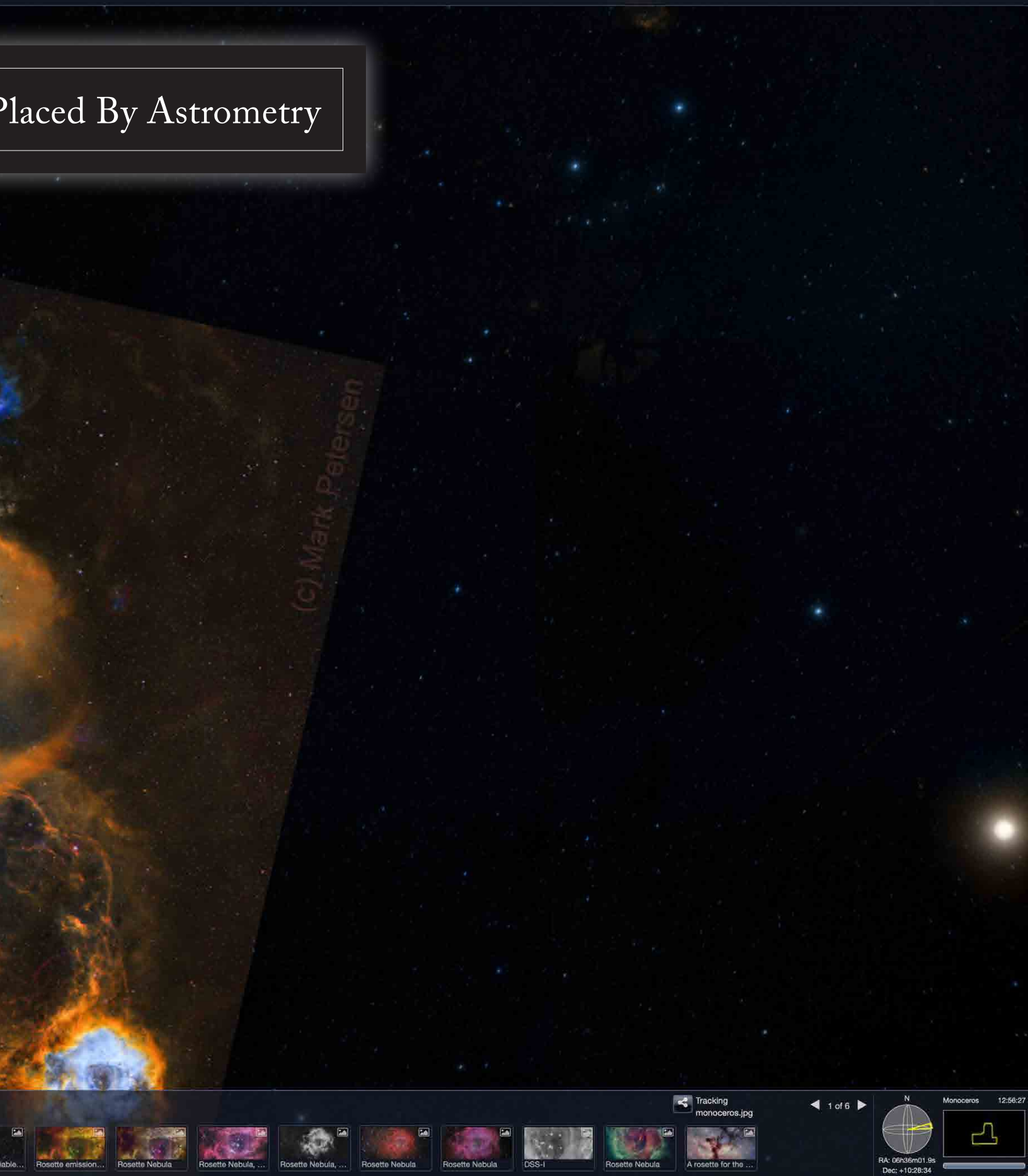
Tags

The star Alzirr
Al Zirr (ξ Gem...

D

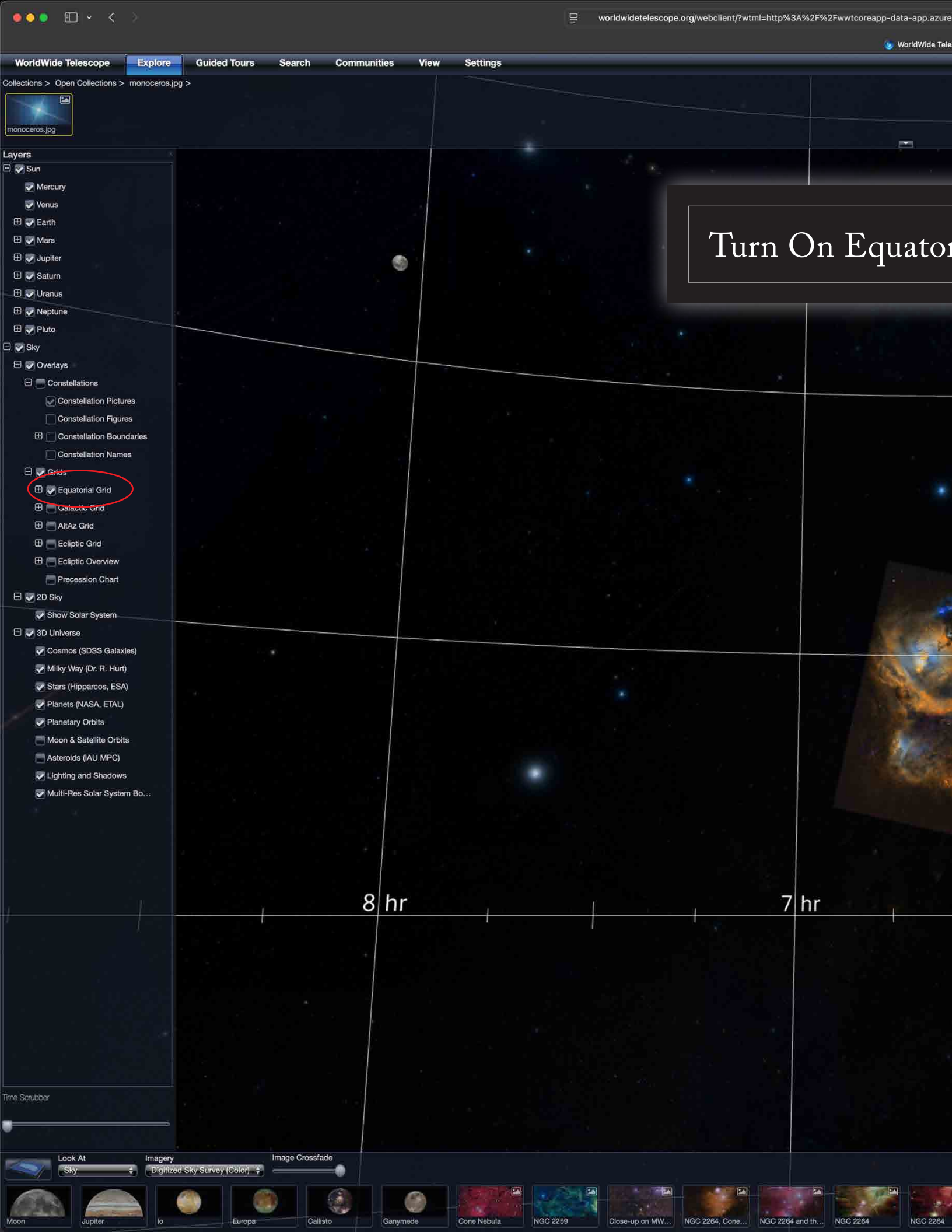

worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > monoceros.jpg >
monoceros.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Time Scrubber
Monoceros/Hathor
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Cone Nebula
NGC 2259
Close-up on MW…
NGC 2264, Cone…
NGC 2264 and th…
NGC 2264
NGC 2264
NGC 2264
Edifice of Gas an…
Cone Nebula
Dense Gas and D…
NGC 2261, Hubb…
Hubble's Var

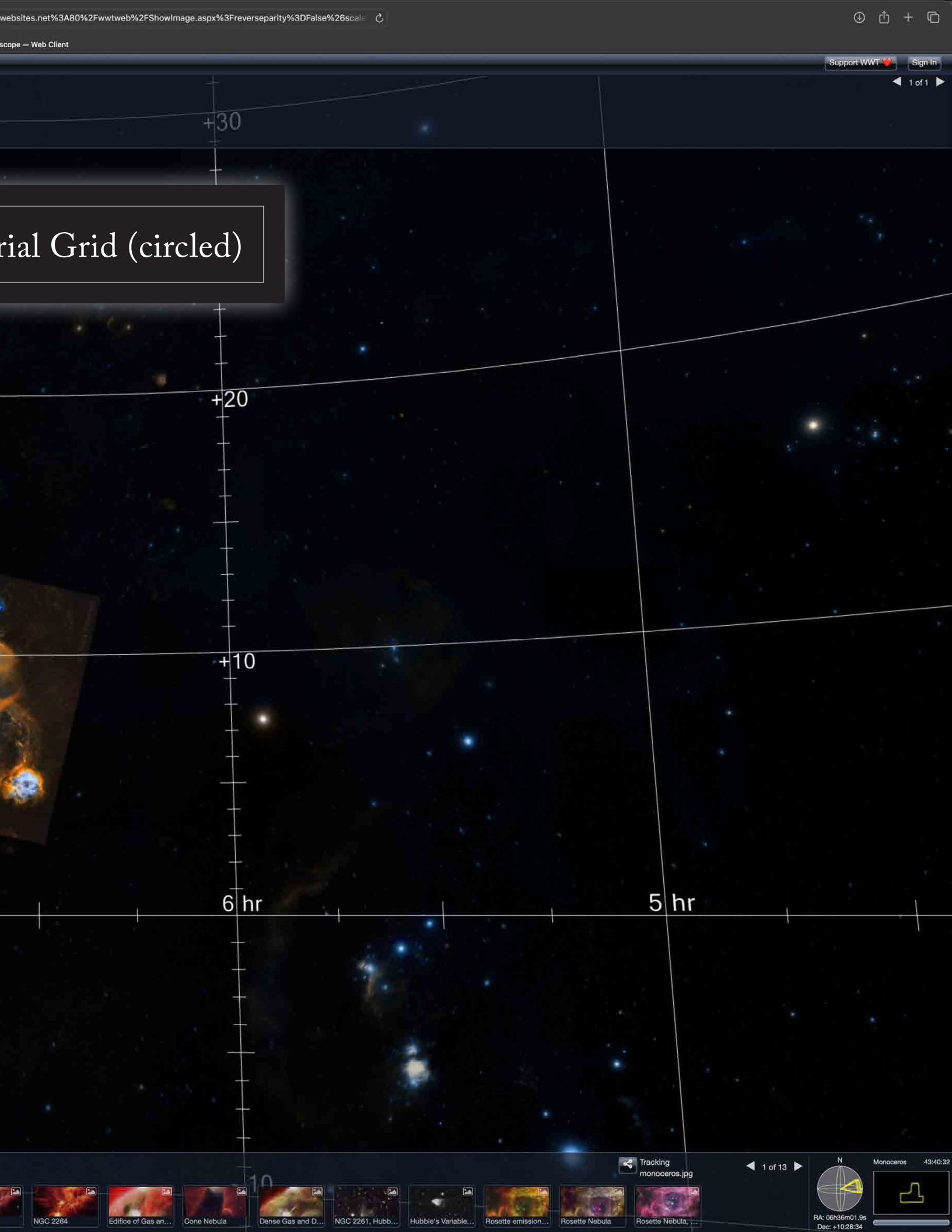
Placed By Astrometry




worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > monoceros.jpg >
monoceros.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Use Your Scroll Wheel o
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Moon
Jupiter
Io
Europa
Callisto
Ganymede
Cone Nebula
NGC 2259
Close-up on MW…
NGC 2264, Cone…
NGC 2264 and th…
NGC 2264
NGC 2264

r +/- Keys To Zoom Out


worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > monoceros.jpg >
monoceros.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Time Scrubber
Turn On Equator
8 hr
7 hr
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Moon
Jupiter
Io
Europa
Callisto
Ganymede
Cone Nebula
NGC 2259
Close-up on MW…
NGC 2264, Cone…
NGC 2264 and th…
NGC 2264
NGC 2264


websites.net%3A80%2Fwwtweb%2FShowImage.aspx%3Freverseparity%3DFalse%26scale
scope — Web Client
Support WWT
Sign In
1 of 1
rial Grid (circled)
+30
+20
+10
6 hr
5 hr
-10
Tracking
monoceros.jpg
1 of 13
N
Monoceros
43:40:32
RA: 06h36m01.9s
Dec: +10:28:34
NGC 2264
Edifice of Gas an...
Cone Nebula
Dense Gas and D...
NGC 2261, Hubb...
Hubble's Variable...
Rosette emission...
Rosette Nebula
Rosette Nebula, ...


Search or enter website name
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > monoceros.jpg >
monoceros.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Turn On Constellati
8 hr
7 hr
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Moon
Jupiter
Io
Europa
Callisto
Ganymede
Cone Nebula
NGC 2259
Close-up on MW…
NGC 2264, Cone…
NGC 2264 and th…
NGC 2264
NGC 2264


scope — Web Client
Support WWT
Sign In
1 of 1
+30
+20
+10
6 hr
5 hr
ion Pictures (circled)
Tracking
monoceros.jpg
1 of 13
N
Monoceros
43:40:32
RA: 06h36m01.9s
Dec: +10:28:34
NGC 2264
Edifice of Gas an...
Cone Nebula
Dense Gas and D...
NGC 2261, Hubb...
Hubble's Variable...
Rosette emission...
Rosette Nebula
Rosette Nebula, ...

Directions - Christmas Tree Cluster Image

1. Download the images: https://cdn.thunderheart.org/astrometry-images.zip.

2. Point your browser to https://nova.astrometry.net.

3. From the home page (A) click on **Upload** in the top menu.

4. From the Upload page (B) click **Choose File** and select “christmas-tree-cluster.jpg”.

5. Wait for upload and processing, until you see this screen (C) (may take 1-2 minutes).

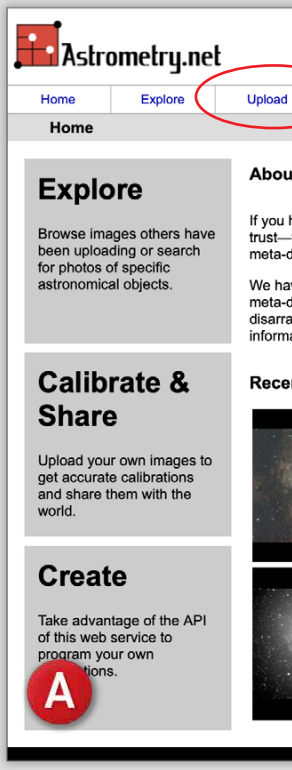
6. Click “**Go to results page**”.

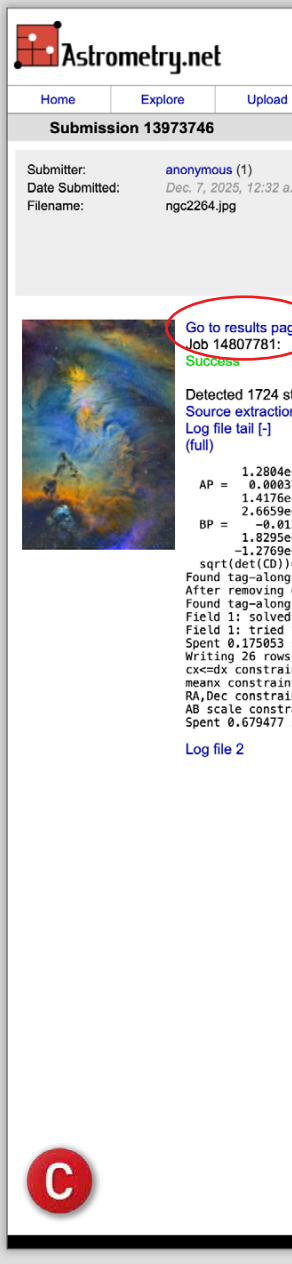
7. The results page (D) will show the analysis and list the stars identified.

8. Click on “**view in WorldWide Telescope**”.

9. Wait for the image to upload to WorldWide Telescope

10. Go to the next page to see what the results look like.





Not signed in | Sign In

API | Support | Search

t Astrometry.net

have astronomical imaging of the sky with celestial coordinates you do not know—or do not then Astrometry.net is for you. Input an image and we'll give you back astrometric calibration data, plus lists of known objects falling inside the field of view.

ve built this astrometric calibration service to create correct, standards-compliant astrometric data for every useful astronomical image ever taken, past and future, in any state of archival y. We hope this will help organize, annotate and make searchable all the world's astronomical ation.

ntly Submitted Images (See More)

Not signed in | Sign In

Astrometry.net

Home | Explore | Upload | API | Support | Search

Upload

Select a file or url to upload

Choose File | no file selected

- file
- url

The following file types are supported:

- **JPEG, GIF, PNG, or FITS image**
- **FITS binary table**, containing a BINTABLE of detected objects, with X and Y pixel positions in "D" (double) or "E" (float) columns, with one object per row
- **text list**, containing two columns of digits separated by commas or whitespace, listing the X,Y positions of sources, sorted with the brightest sources first
- **tarball (.tar, .gz)**, containing files of any of the above types

Upload

Advanced Settings [+]

B

Not signed in | Sign In

API | Support | Search

Upload Settings

Parity:	try both simultaneously
Scale Units:	width of the field (in degrees)
Scale Type:	bounds
Scale Lower Bound:	0.1
Scale Upper Bound:	180.0
Downsample Factor:	2

ge

lars
n image (fullsize)

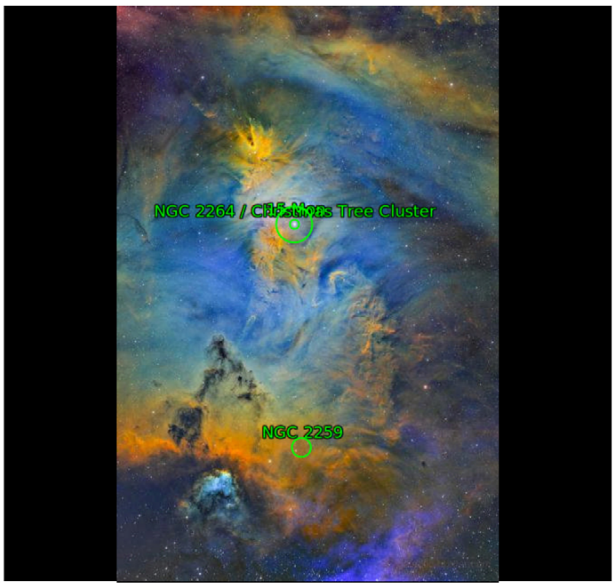
```
-06
7024  5.0664e-06 -2.9117e-07
-05 -1.9306e-06
-07
2038  4.3521e-05 -2.8834e-06
-06 -5.7425e-08
-06
=2.8448 [arcsec]
 columns: MAG_BT, MAG_VT, MAG_HP, MAG
duplicates: MAG_BT, MAG_VT, MAG_HP, MAG
 columns from field: FLUX BACKGROUND
 with index index-4111.fits.
14 quads, matched 759 codes.
s user, 0.014977 s system, 0.19003 s total, 0.239396 s wall time.
 (of 1000 field and 30 index objects) to correspondence file.
nts: 0
ts: 40
nts: 0
aints: 0
seconds on this field.
```

Not signed in | Sign In

Astrometry.net

Home | Explore | Upload | API | Support | Search

Images > ngc2264.jpg



Submitted by anonymous (1)
on *Dec. 7, 2025, 12:32 a.m.*
as " ngc2264.jpg " (Submission 13973746)
under *Attribution 3.0 Unported*

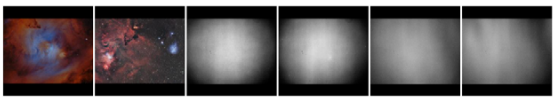
Job Status

Job 14807781:
Success

Calibration

Center (RA, Dec):	(100.090, 10.237)
Center (RA, hms):	$06^h\ 40^m\ 21.623^s$
Center (Dec, dms):	+10° 14' 13.738"
Size:	2.02 x 3.05 deg
Radius:	1.830 deg
Pixel scale:	2.84 arcsec/pixel
"Orientation", may be incorrect, use at your own risk:	Up is 214.9 degrees E of N
WCS file:	wcs.fits
New FITS image:	new-image.fits
Reference stars nearby (RA,Dec table):	rdls.fits
Stars detected in your images (x,y table):	axy.fits
Stars detected in your images, converted to RA,Dec (FITS table):	image-radec.fits
Correspondences between image and reference stars (table):	corr.fits
Legacy Surveys sky browser:	browse the sky
World Wide Telescope:	view in WorldWideTelescope

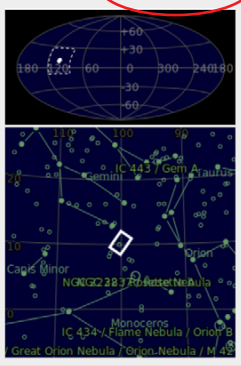
Nearby Images (View All)



Comments

No comments.

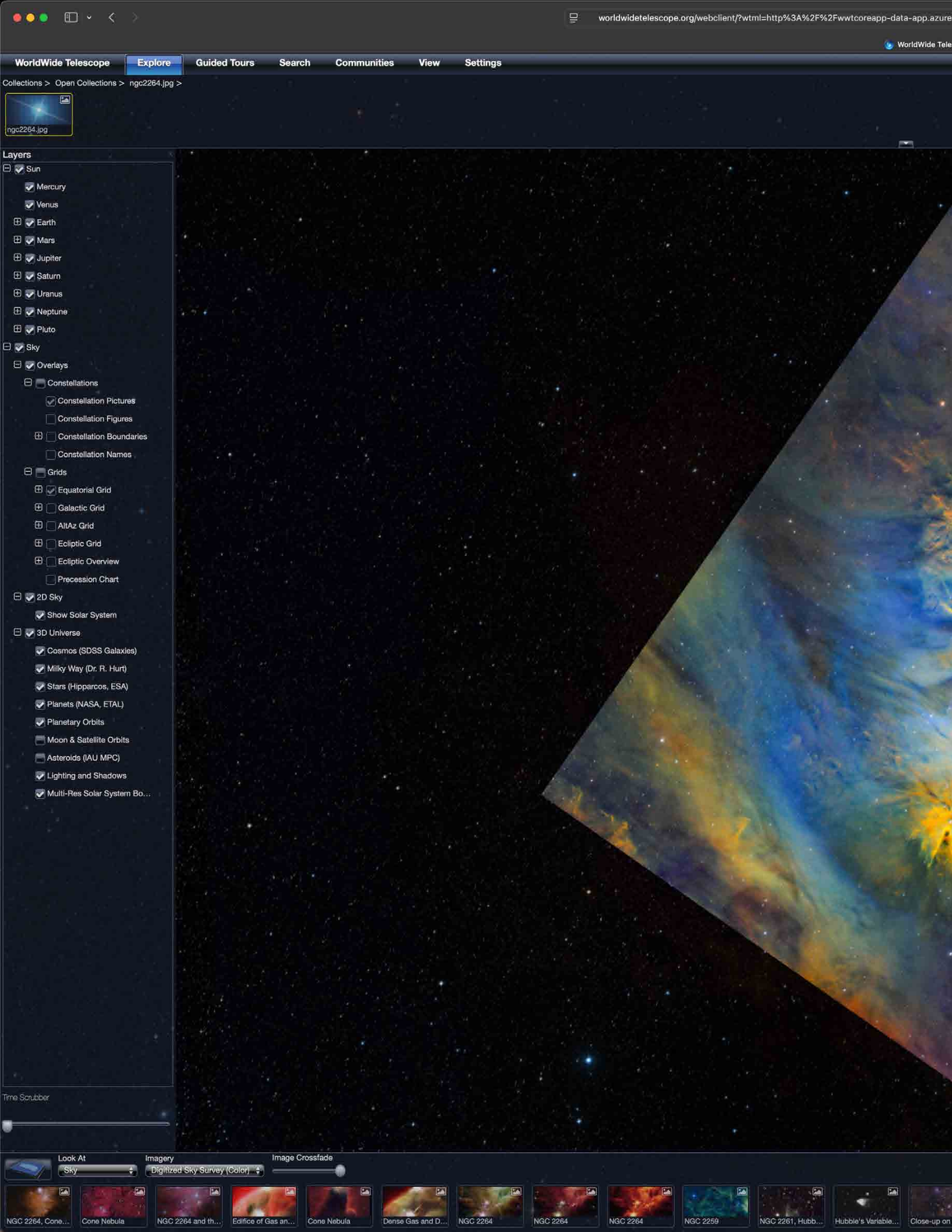
Please Sign In to post comments.

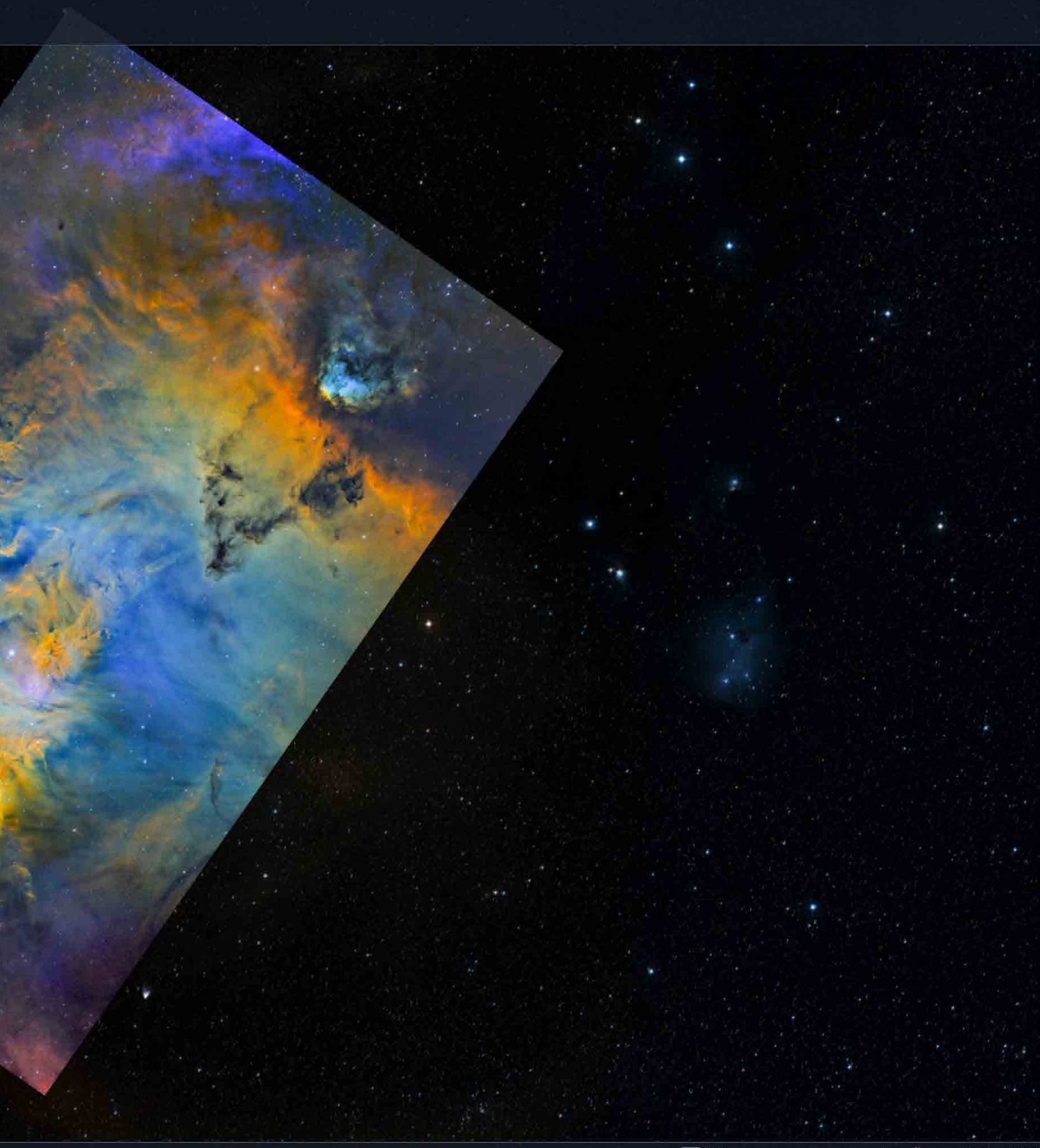


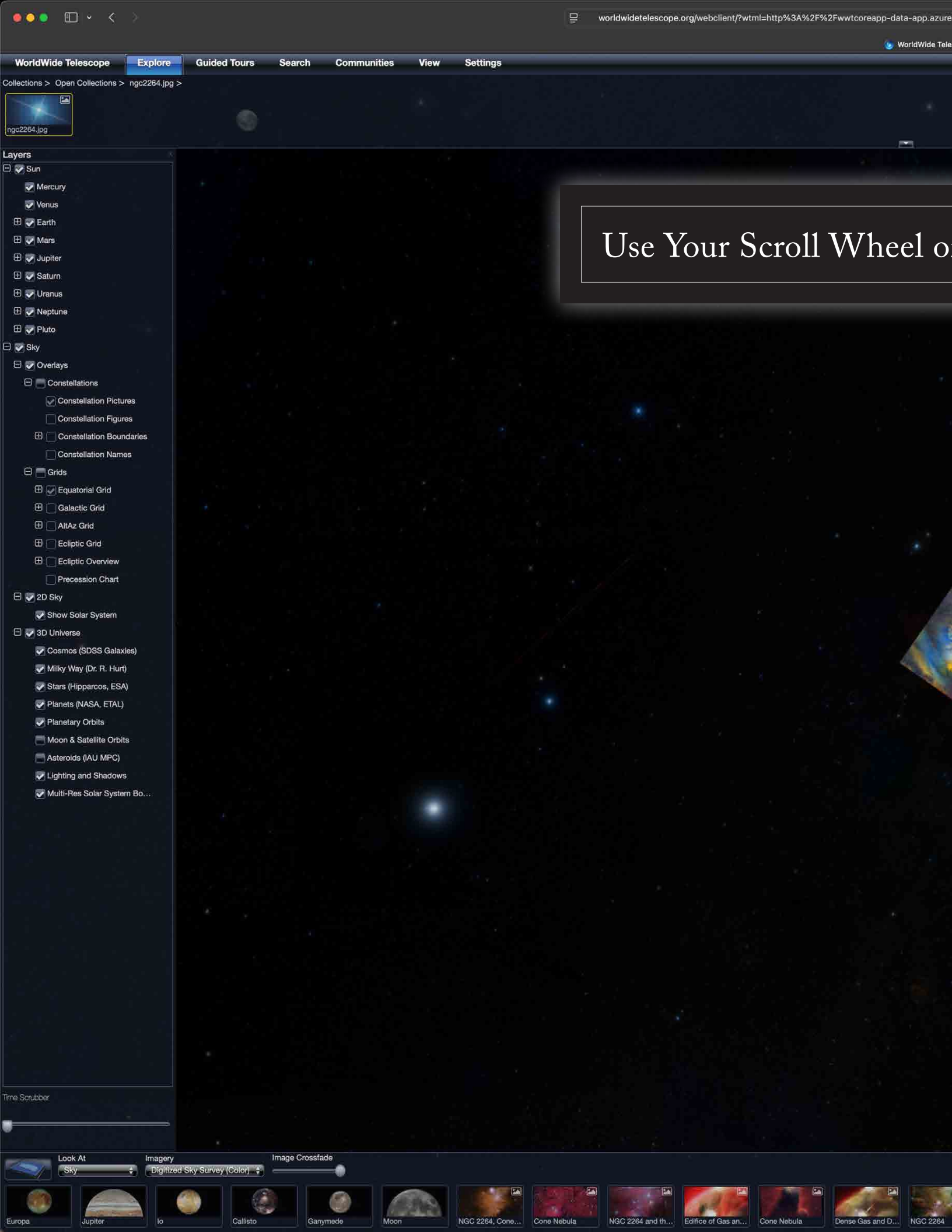
Tags

The star 15 Mon
NGC 2259
NGC 2264

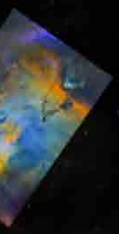
D

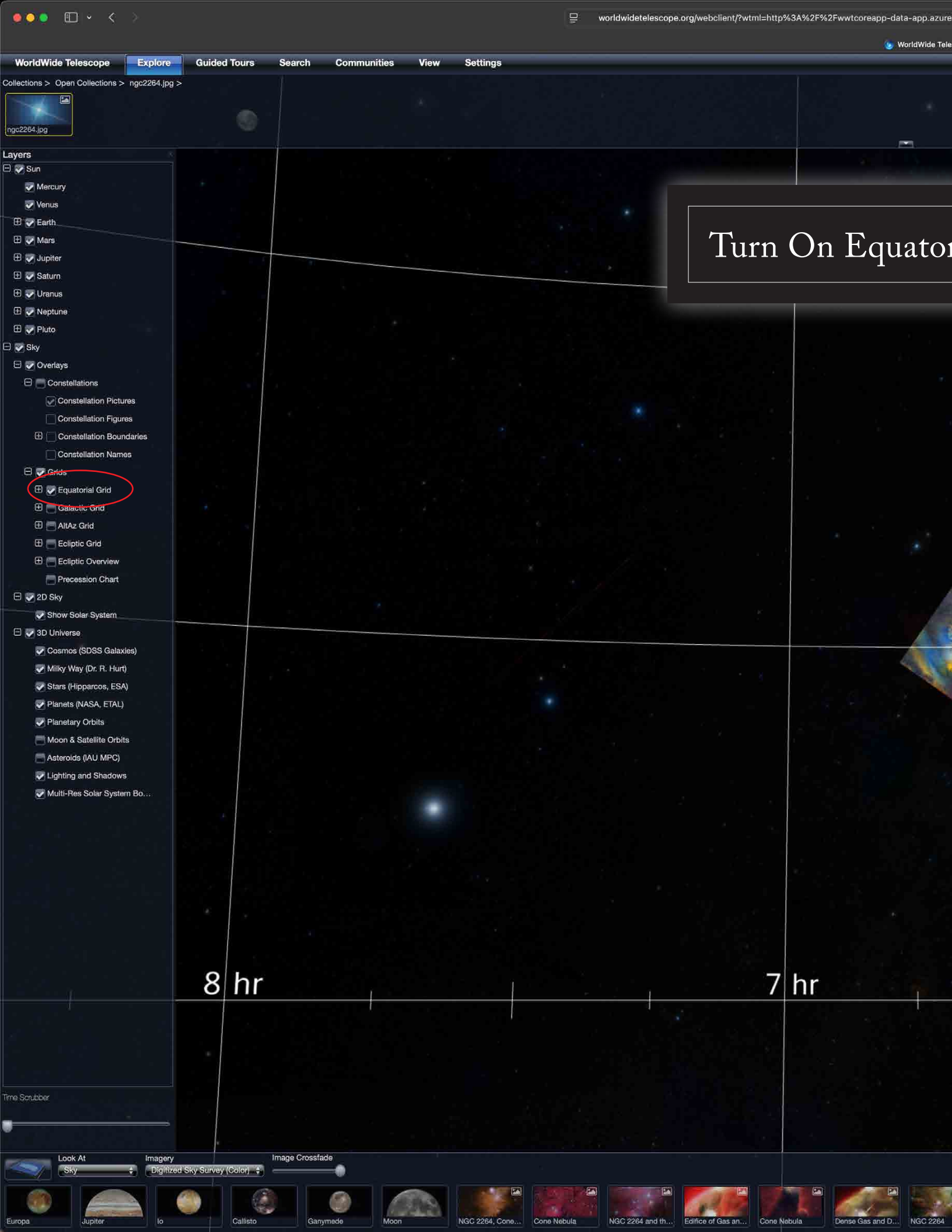

worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > ngc2264.jpg >
ngc2264.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
NGC 2264, Cone…
Cone Nebula
NGC 2264 and th…
Edifice of Gas an…
Cone Nebula
Dense Gas and D…
NGC 2264
NGC 2264
NGC 2264
NGC 2259
NGC 2261, Hubb…
Hubble's Variable…
Close-up on

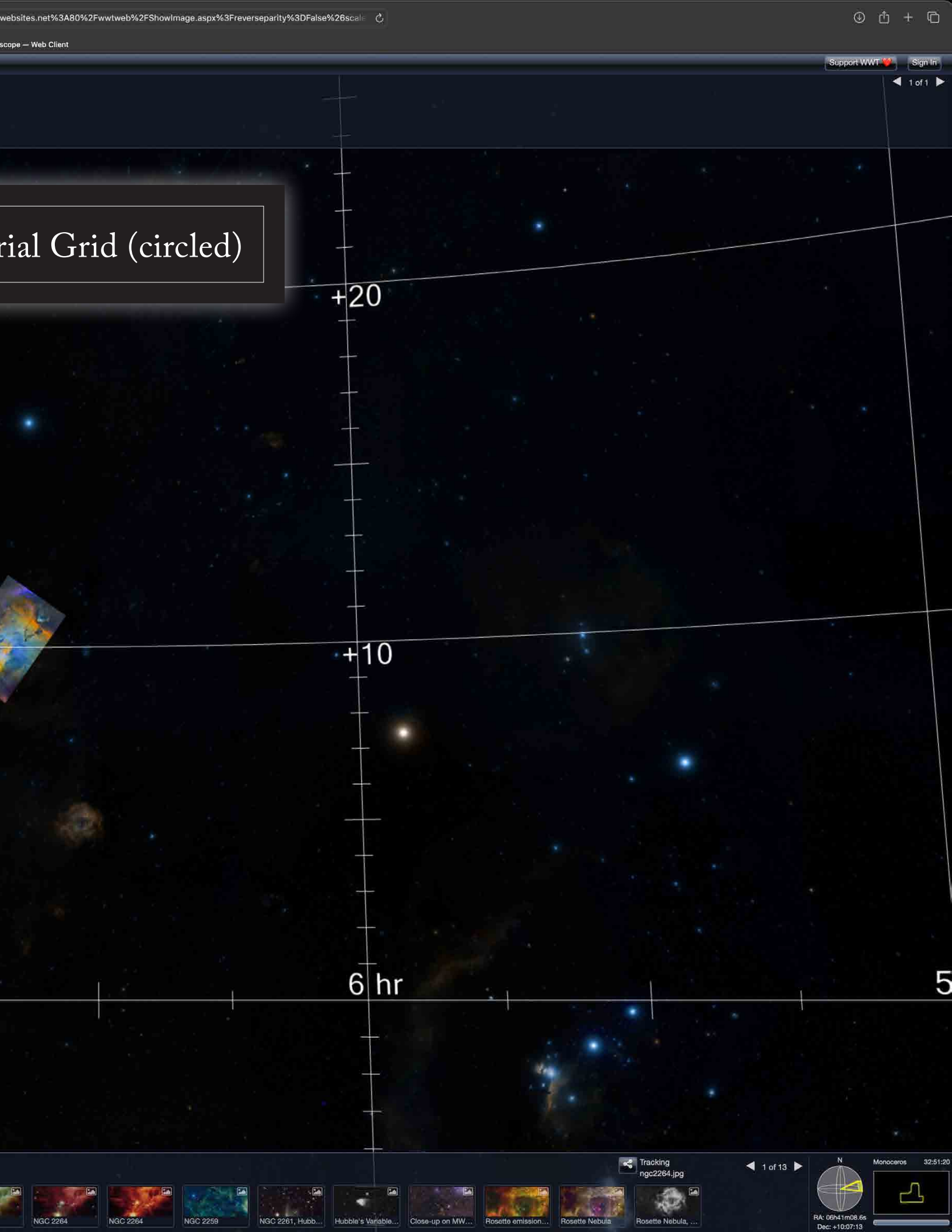



worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > ngc2264.jpg >
ngc2264.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Use Your Scroll Wheel o
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Europa
Jupiter
Io
Callisto
Ganymede
Moon
NGC 2264, Cone…
Cone Nebula
NGC 2264 and th…
Edifice of Gas an…
Cone Nebula
Dense Gas and D…
NGC 2264

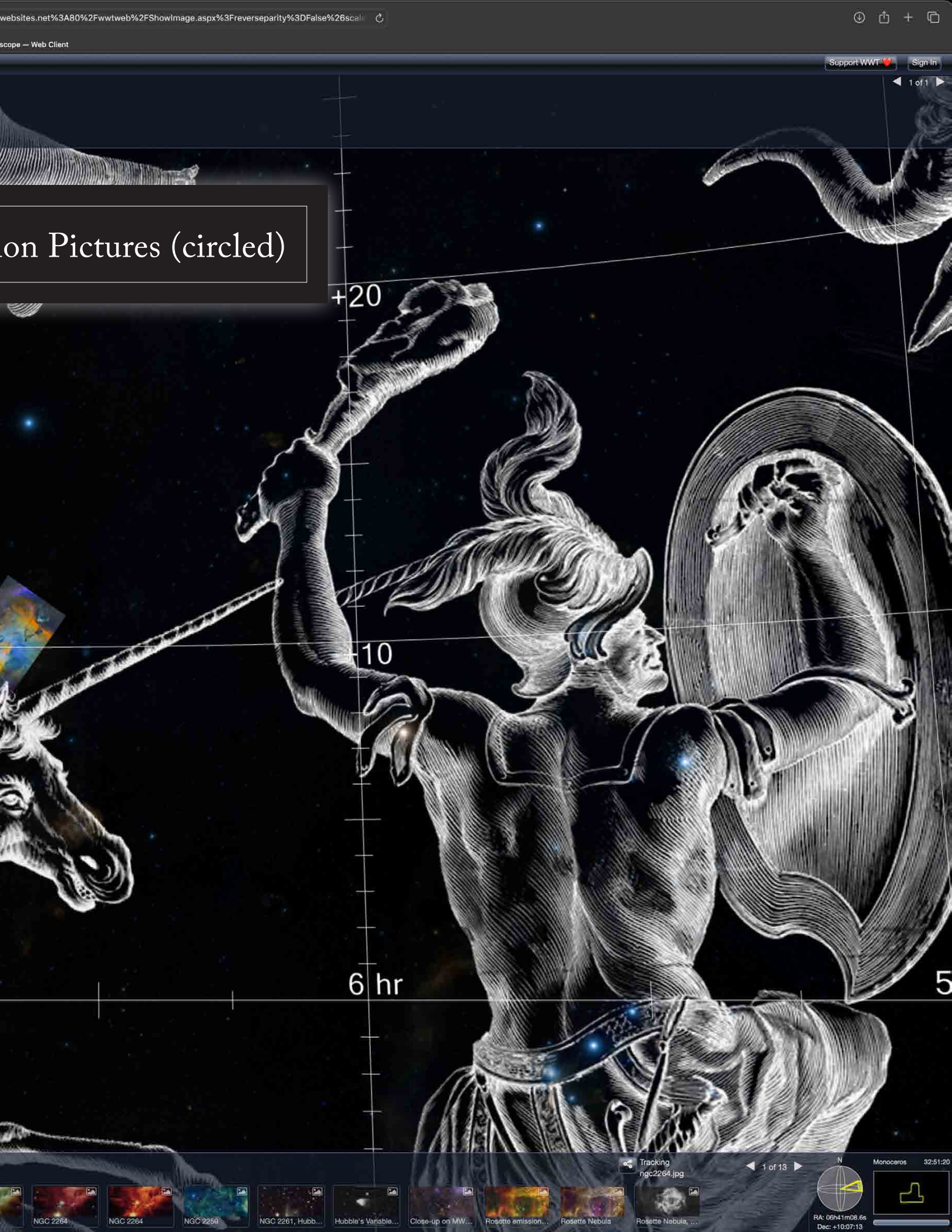
r +/- Keys To Zoom Out




worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > ngc2264.jpg >
ngc2264.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Turn On Equator
8 hr
7 hr
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Europa
Jupiter
Io
Callisto
Ganymede
Moon
NGC 2264, Cone…
Cone Nebula
NGC 2264 and th…
Edifice of Gas an…
Cone Nebula
Dense Gas and D…
NGC 2264


websites.net%3A80%2Fwwtweb%2FShowImage.aspx%3Freverseparity%3DFalse%26scale
scope — Web Client
Support WWT
Sign In
1 of 1
rial Grid (circled)
+20
+10
6 hr
5
Tracking
ngc2264.jpg
1 of 13
N
Monoceros
32:51:20
RA: 06h41m08.6s
Dec: +10:07:13
NGC 2264
NGC 2264
NGC 2259
NGC 2261, Hubb...
Hubble's Variable...
Close-up on MW...
Rosette emission...
Rosette Nebula
Rosette Nebula, ...


worldwidetelescope.org/webclient/?wtml=http%3A%2F%2Fwwtcoreapp-data-app.azure
WorldWide Tele
WorldWide Telescope
Explore
Guided Tours
Search
Communities
View
Settings
Collections > Open Collections > ngc2264.jpg >
ngc2264.jpg
Layers
Sun
Mercury
Venus
Earth
Mars
Jupiter
Saturn
Uranus
Neptune
Pluto
Sky
Overlays
Constellations
Constellation Pictures
Constellation Figures
Constellation Boundaries
Constellation Names
Grids
Equatorial Grid
Galactic Grid
AltAz Grid
Ecliptic Grid
Ecliptic Overview
Precession Chart
2D Sky
Show Solar System
3D Universe
Cosmos (SDSS Galaxies)
Milky Way (Dr. R. Hurt)
Stars (Hipparcos, ESA)
Planets (NASA, ETAL)
Planetary Orbits
Moon & Satellite Orbits
Asteroids (IAU MPC)
Lighting and Shadows
Multi-Res Solar System Bo…
Turn On Constellati
8 hr
7 hr
Time Scrubber
Look At
Sky
Imagery
Digitized Sky Survey (Color)
Image Crossfade
Europa
Jupiter
Io
Callisto
Ganymede
Moon
NGC 2264, Cone…
Cone Nebula
NGC 2264 and th…
Edifice of Gas an…
Cone Nebula
Dense Gas and D…
NGC 2264


websites.net%3A80%2Fwwtweb%2FShowImage.aspx%3Freverseparity%3DFalse%26scale
scope — Web Client
Support WWT
Sign In
1 of 1
ion Pictures (circled)
+20
+10
6 hr
5
Tracking
ngc2264.jpg
1 of 13
N
Monoceros
32:51:20
RA: 06h41m08.6s
Dec: +10:07:13
NGC 2264
NGC 2264
NGC 2259
NGC 2261, Hubb...
Hubble's Variable...
Close-up on MW...
Rosette emission...
Rosette Nebula
Rosette Nebula, ...

STELLARIUM 101

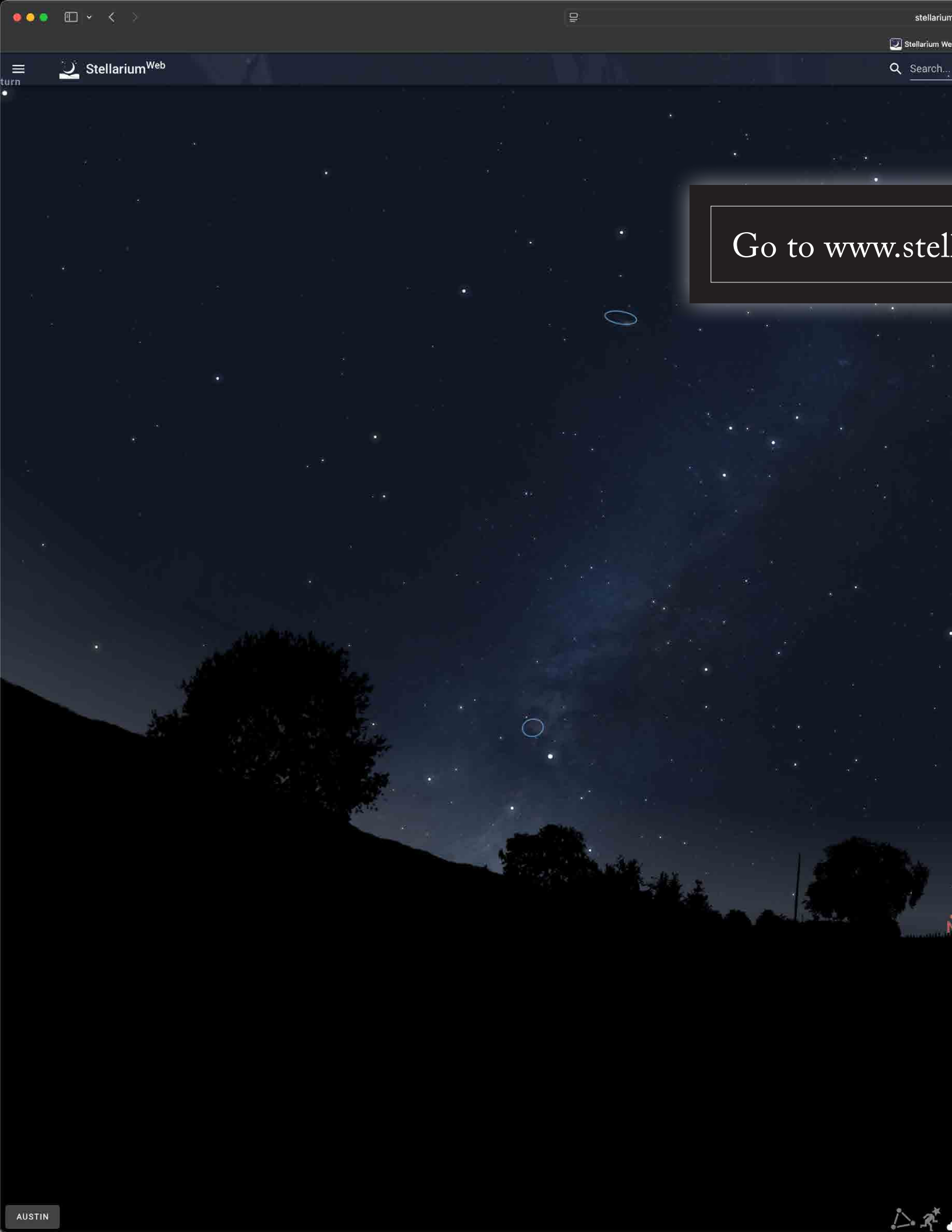
09

This chapter will show you how to find the Christmas Tree Cluster in the online version of Stellarium. Stellarium is both an online planetarium (Stellarium-Web) and a downloadable app (Stellarium).

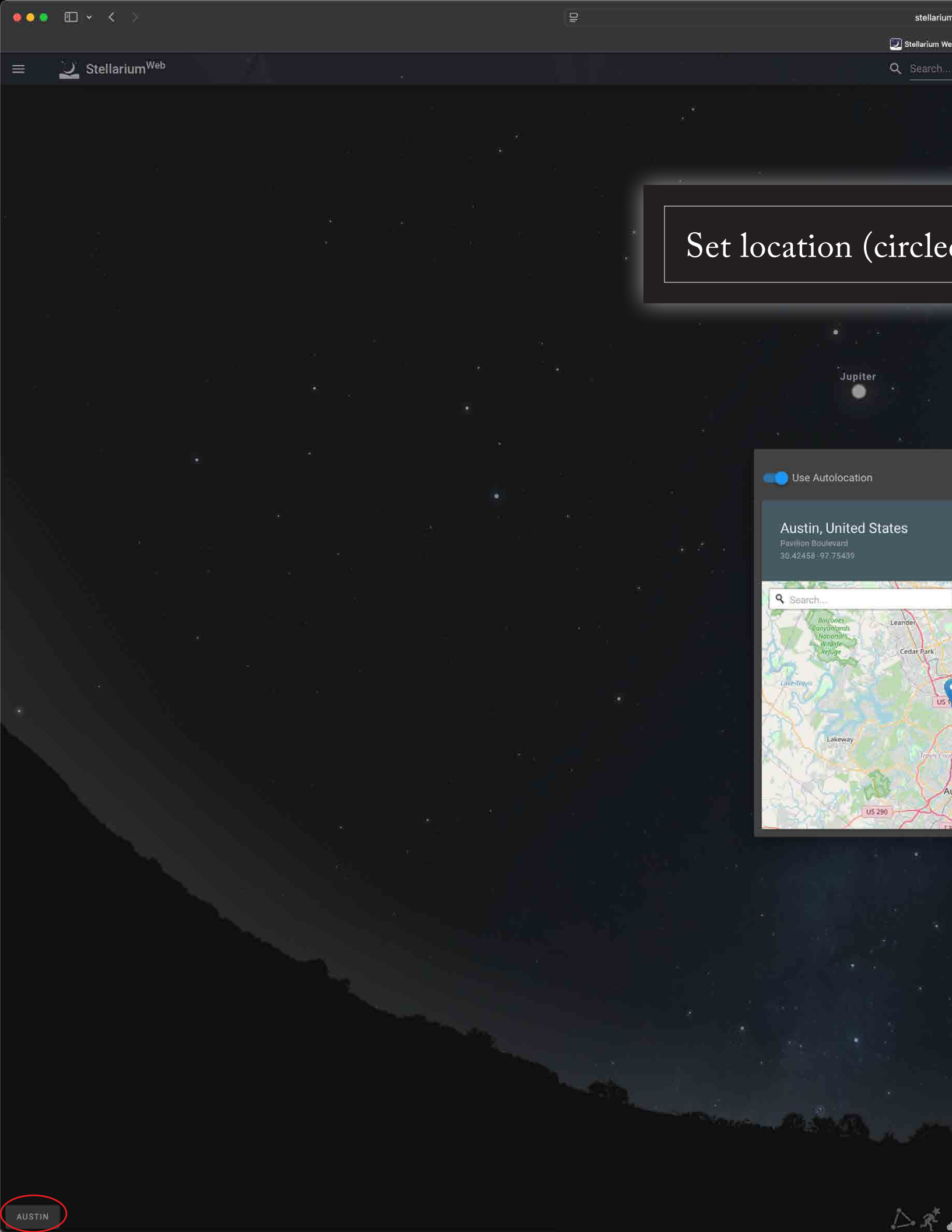
In the process, you will see how to use the essential features of the online version of Stellarium including setting your location, setting the time period in which you want to observe the sky and the Search function.

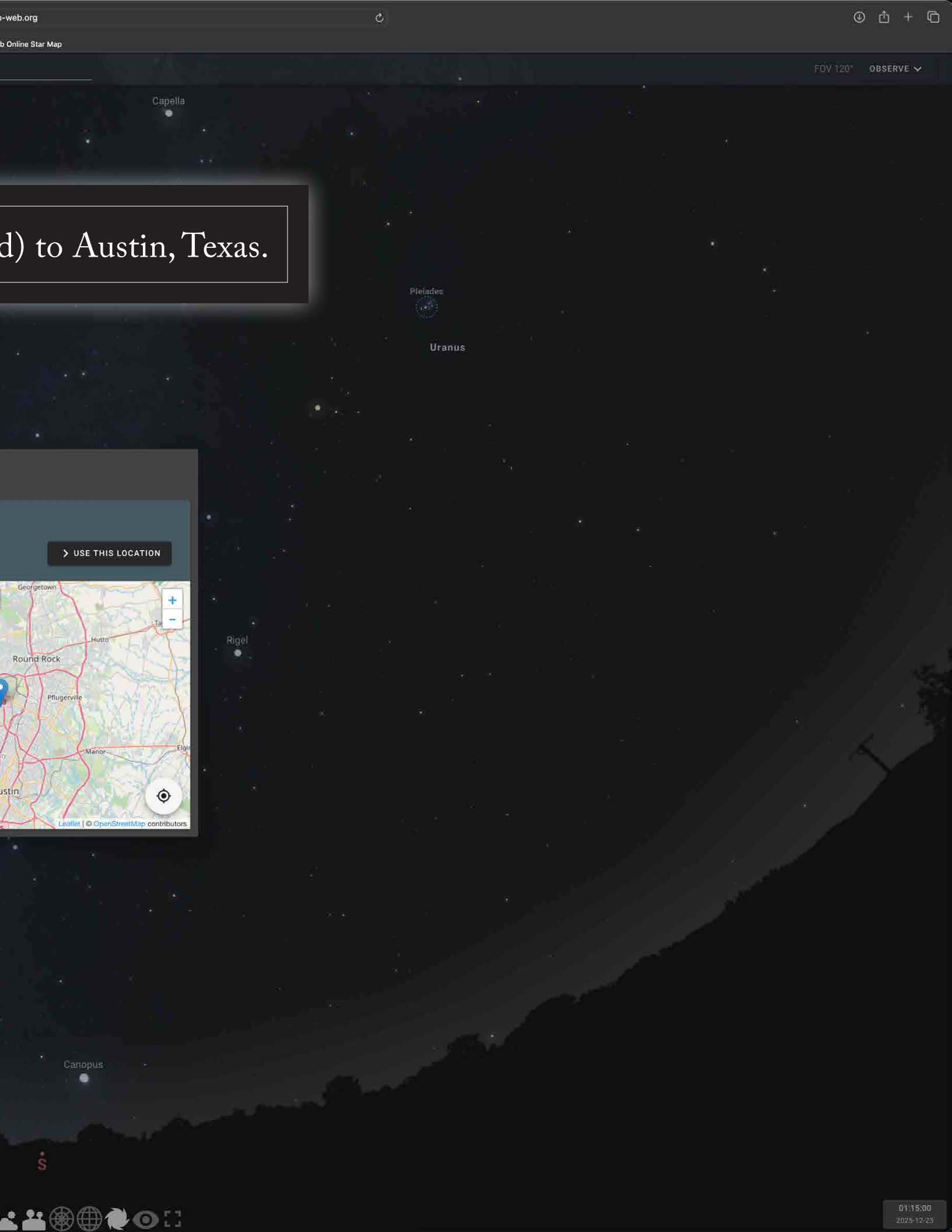
Click here to go to Stellarium (www.stellarium.org)

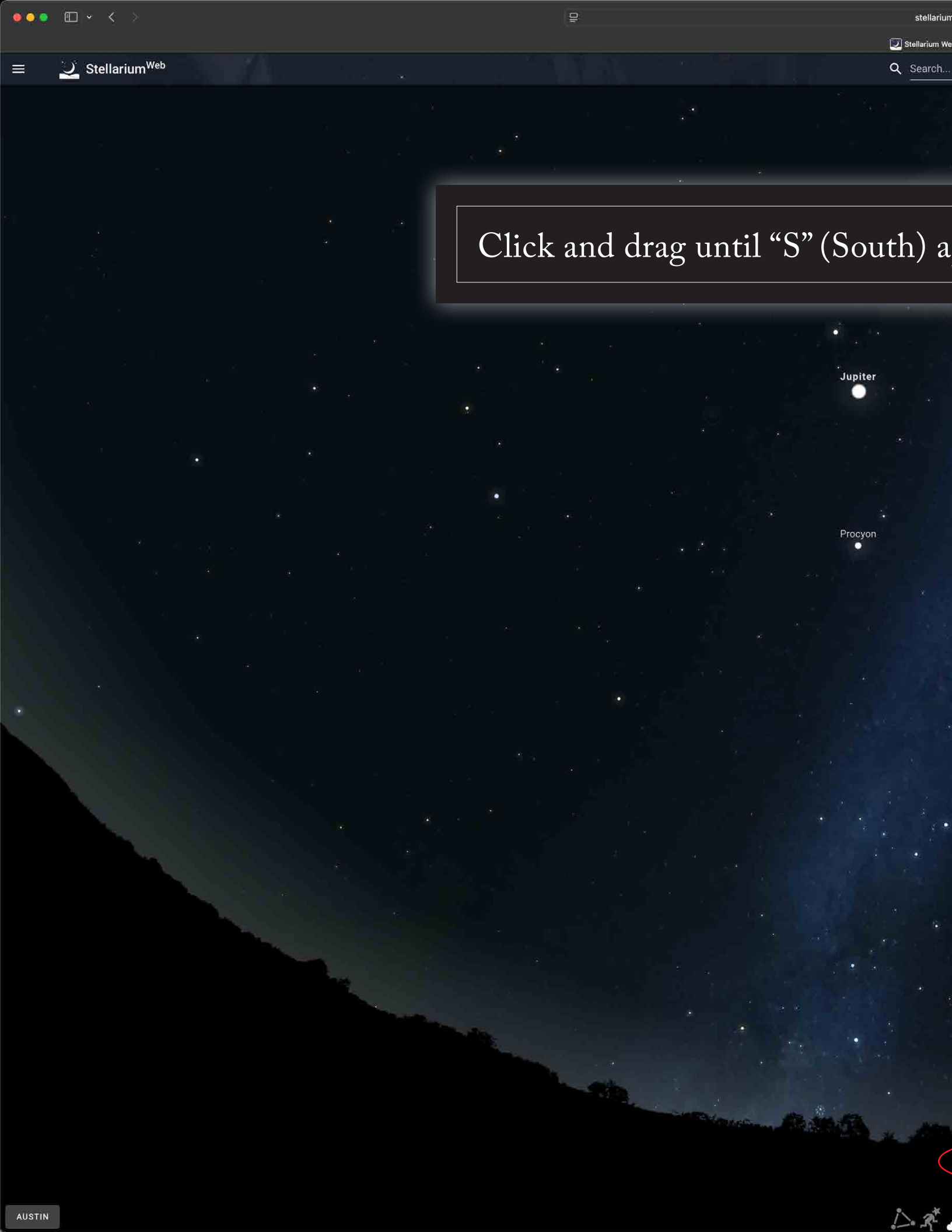
Click here to download the Stellarium application

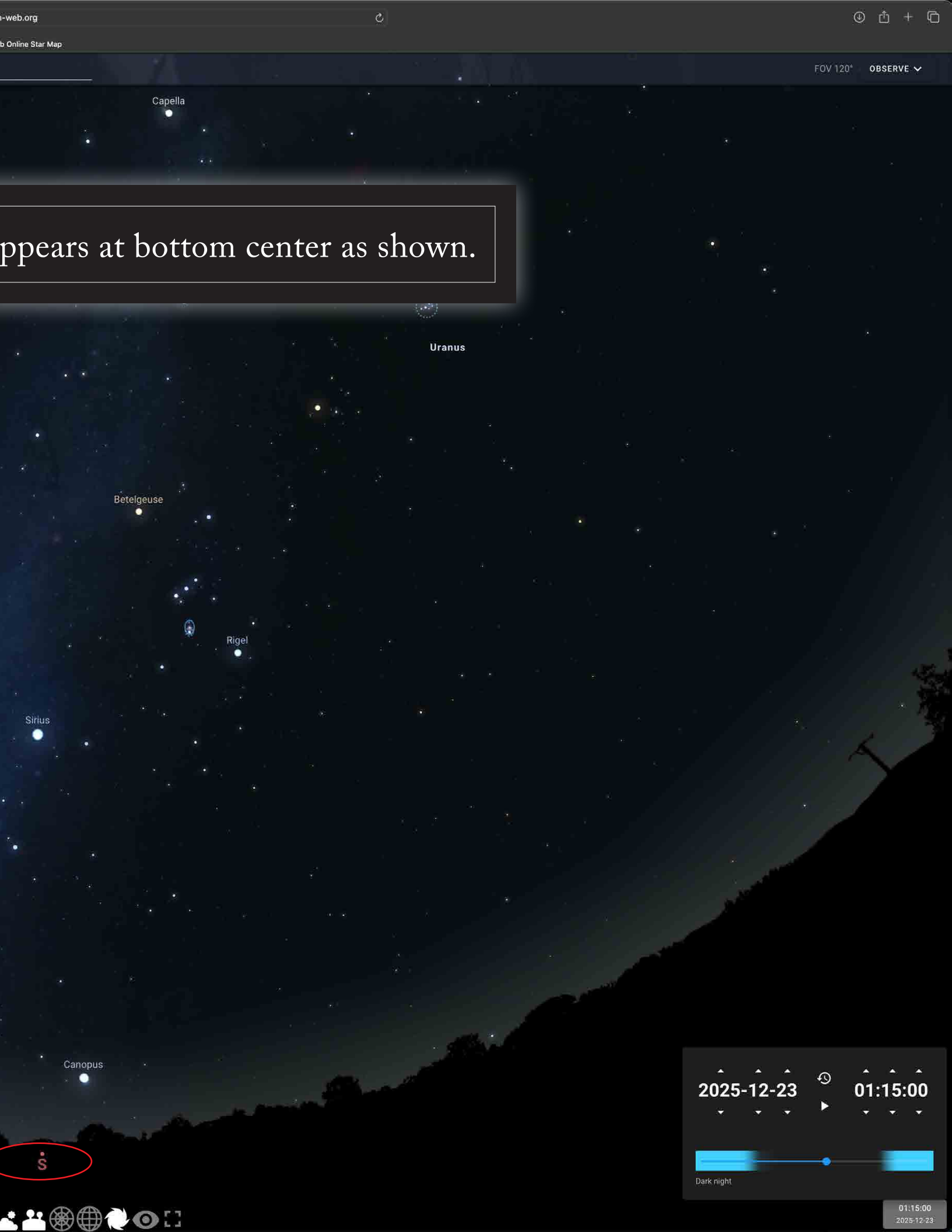

stellarium
Stellarium We
Stellarium Web
Search...
Go to www.stell
AUSTIN

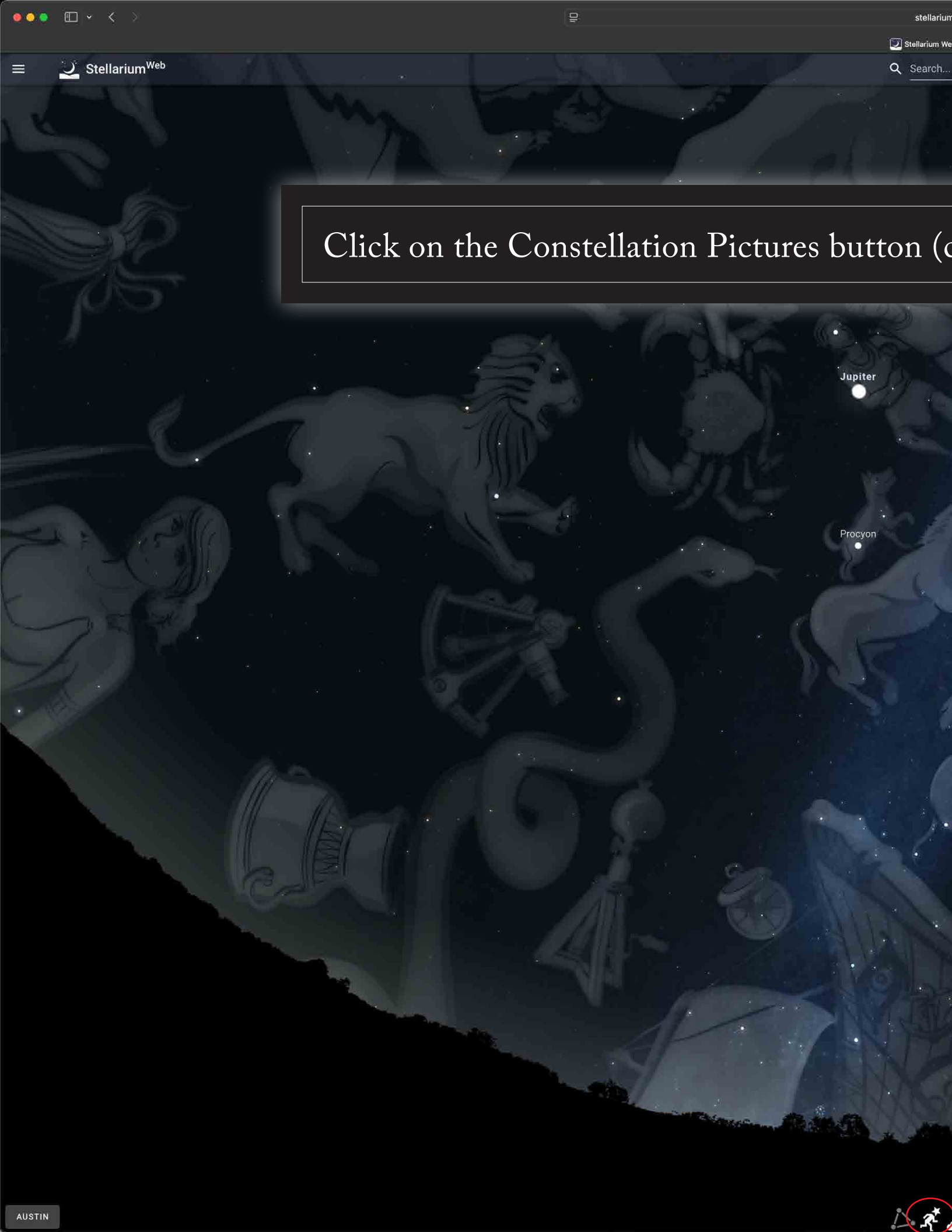

-web.org
b Online Star Map
FOV 120°
OBSERVE
Procyon
Jupiter
larium-web.org.
22:10:40
2025-12-22


Stellarium Web
Search...
Set location (circle
Jupiter
Use Autolocation
Austin, United States
Pavilion Boulevard
30.42458 -97.75439
Search...
Leander
Cedar Park
Lake Travis
Lakeway
US 290
AUSTIN

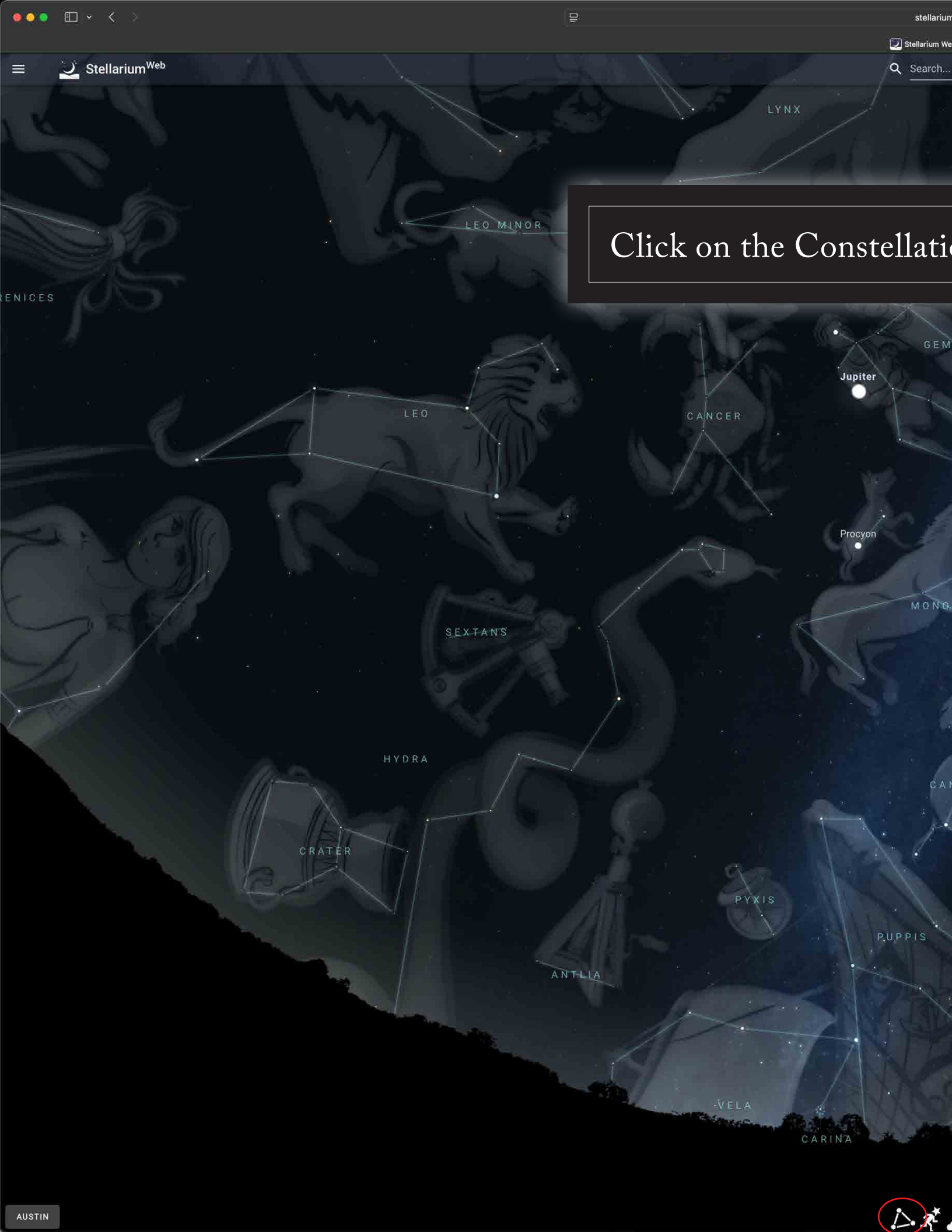

n-web.org
b Online Star Map
FOV 120°
OBSERVE
Capella
d) to Austin, Texas.
Pleiades
Uranus
USE THIS LOCATION
Georgetown
Hutto
Round Rock
Pflugerville
Manor
Rigel
Canopus
Leaflet | © OpenStreetMap contributors
01:15:00
2025-12-23

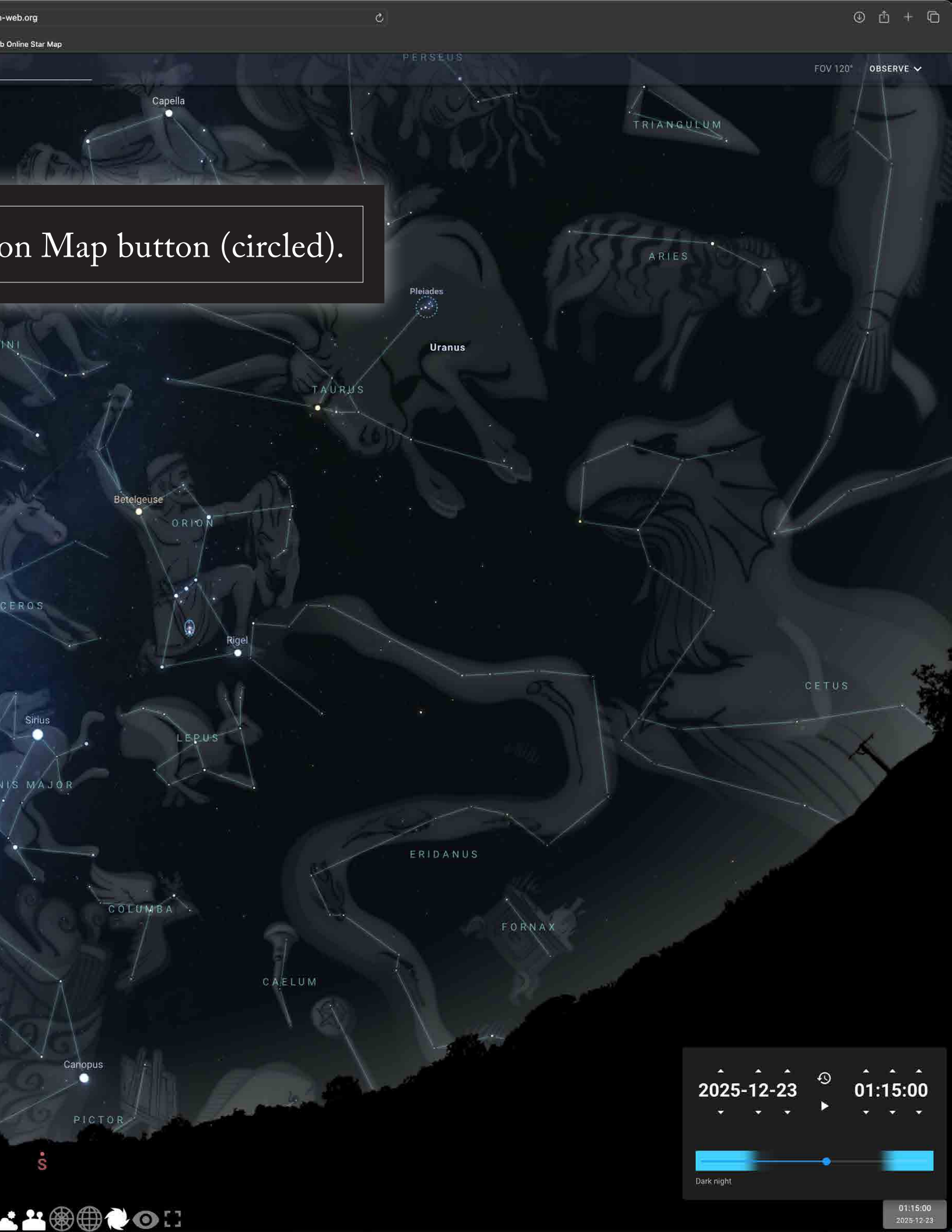

stellarium
Stellarium We
StellariumWeb
Search...
Click and drag until “S” (South) a
Jupiter
Procyon
AUSTIN

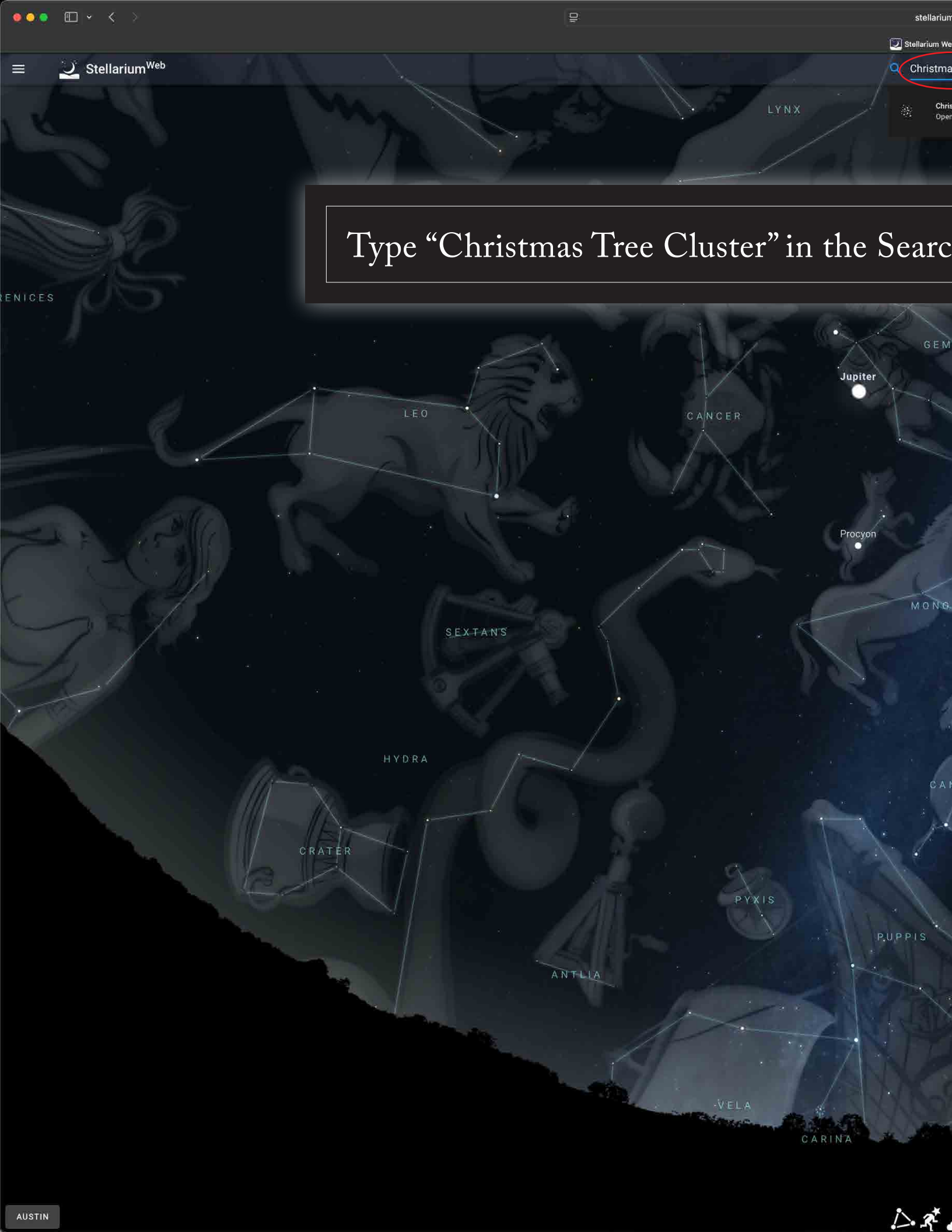

-web.org
b Online Star Map
FOV 120°
OBSERVE
Capella
ppears at bottom center as shown.
Uranus
Betelgeuse
Rigel
Sirius
Canopus
S
2025-12-23
01:15:00
Dark night
01:15:00
2025-12-23

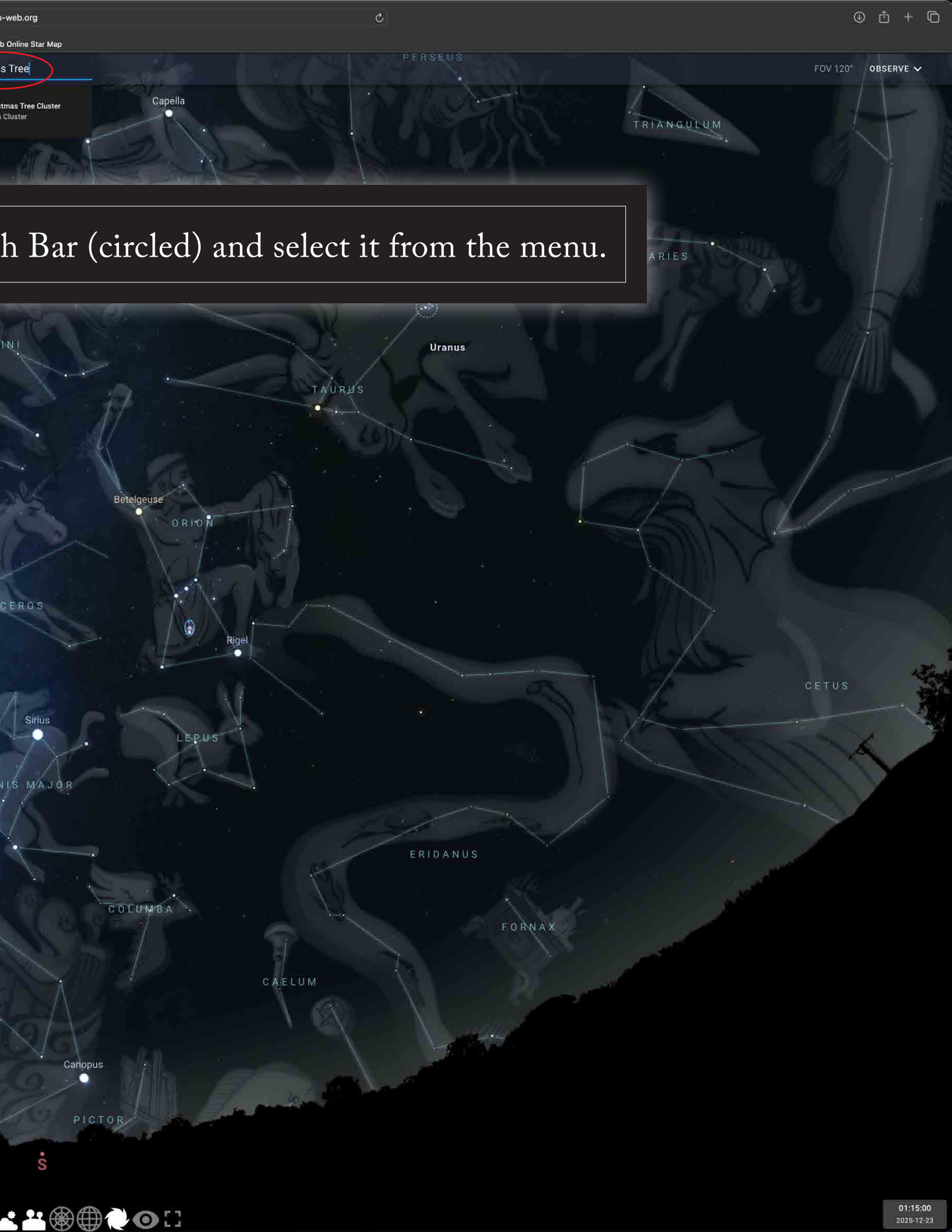

stellarium
Stellarium We
Stellarium Web
Search...
Click on the Constellation Pictures button (c
Jupiter
Procyon
AUSTIN


-web.org
b Online Star Map
FOV 120°
OBSERVE
Capella
circled) and set Day/Time as shown (circled).
Uranus
Betelgeuse
Rigel
Sirius
Canopus
2025-12-23
01:15:00
Dark night
01:15:00
2025-12-23

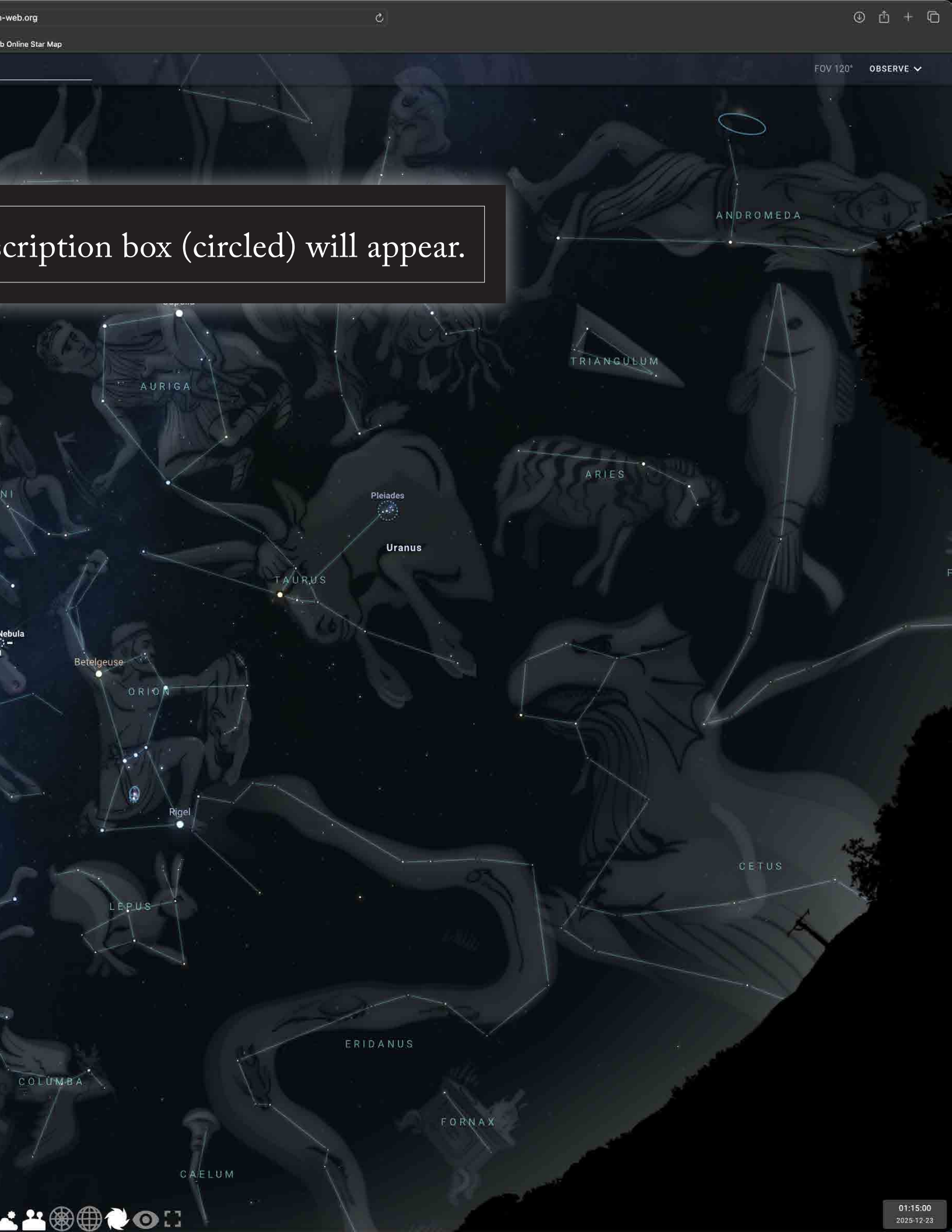

stellarium
Stellarium Web
Stellarium Web
Search...
LYNX
LEO MINOR
Click on the Constellati
LEO
CANCER
Jupiter
Procyon
SEXTANS
HYDRA
CRATER
PYXIS
PUPPIS
ANTLIA
VELA
CARINA
AUSTIN

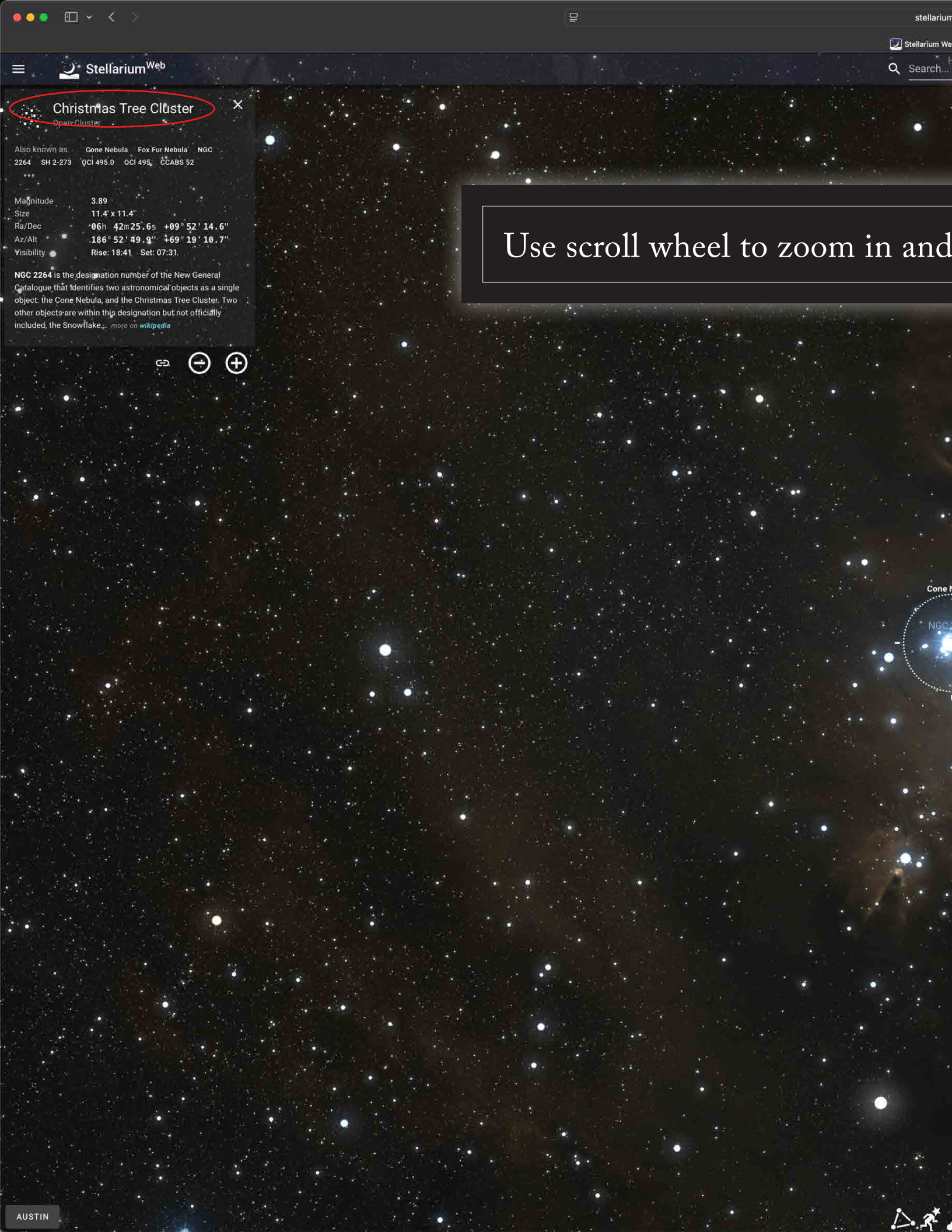

n-web.org
b Online Star Map
PERSEUS
FOV 120°
OBSERVE
Capella
TRIANGULUM
on Map button (circled).
ARIES
Pleiades
Uranus
TAURUS
Betelgeuse
ORION
CEROS
Rigel
CETUS
Sirius
LEPUS
NIS MAJOR
ERIDANUS
COLUMBA
FORNAX
CAELUM
Canopus
PICTOR
2025-12-23
01:15:00
Dark night
01:15:00
2025-12-23


Stellarium Web
Christma
LYNX
Type “Christmas Tree Cluster” in the Searc
LEO
CANCER
Jupiter
Procyon
SEXTANS
HYDRA
CRATER
PYXIS
PUPPIS
ANTLIA
VELA
CARINA
AUSTIN


n-web.org
b Online Star Map
s Tree
tmas Tree Cluster
Cluster
PERSEUS
FOV 120°
OBSERVE
Capella
TRIANGULUM
h Bar (circled) and select it from the menu.
ARIES
Uranus
TAURUS
Betelgeuse
ORION
CEROS
Rigel
CETUS
Sirius
LEPUS
NIS MAJOR
ERIDANUS
COLUMBA
FORNAX
CAELUM
Canopus
PICTOR
01:15:00
2025-12-23


Stellarium Web
Search...
Christmas Tree Cluster
Open Cluster
Also known as: Cone Nebula Fox Fur Nebula NGC 2264 SH 2-273 OCl 495.0 OCl 495 CCABS 52
Magnitude 3.89
Size 11.4' x 11.4'
Ra/Dec 06h 42m25.6s +09° 52' 14.6"
Az/Alt 186° 52' 49.9" +69° 19' 10.7"
Visibility Rise: 18:41 Set: 07:31
NGC 2264 is the designation number of the New General Catalogue that identifies two astronomical objects as a single object: the Cone Nebula, and the Christmas Tree Cluster. Two other objects are within this designation but not officially included, the Snowflake... more on wikipedia
The "Christmas Tree Cluster" des
LEO
CANCER
Jupiter
SEXTANS
Procyon
HYDRA
MONOCEROS
CRATER
Sirius
CANIS MAJOR
PYXIS
ANTLIA
RUPPIS
AUSTIN


n-web.org
b Online Star Map
FOV 120°
OBSERVE
scription box (circled) will appear.
ANDROMEDA
TRIANGULUM
AURIGA
ARIES
Pleiades
Uranus
TAURUS
Nebula
Betelgeuse
ORION
Rigel
CETUS
LEPUS
ERIDANUS
COLUMBA
FORNAX
CAELUM
01:15:00
2025-12-23


stellarium
Stellarium Web
Stellarium Web
Search...
Christmas Tree Cluster
Open Cluster
Also known as Cone Nebula Fox Fur Nebula NGC 2264 SH 2-273 OCl 495.0 OCl 495 CCABS 52
Magnitude 3.89
Size 11.4' x 11.4'
Ra/Dec 06h 42m25.6s +09° 52' 14.6"
Az/Alt 186° 52' 49.9" +69° 19' 10.7"
Visibility Rise: 18:41 Set: 07:31
NGC 2264 is the designation number of the New General Catalogue that identifies two astronomical objects as a single object: the Cone Nebula, and the Christmas Tree Cluster. Two other objects are within this designation but not officially included, the Snowflake... more on wikipedia
Use scroll wheel to zoom in and
Cone N
NGC
AUSTIN


n-web.org
b Online Star Map
HD 47886
FOV 2.31°
OBSERVE
see the Christmas Tree Cluster.
Nebula
2264
V641
V684
HD 46709
01:15:00
2025-12-23

We Are The Rising Tide

This paper is available at https://independent.academia.edu/ChristopherRawley

The rising tide that lifts all boats is **Universal Free Education**.

We are three Austin, Texas based nonprofits, all under The Federation banner:

The Academy
The Federation (**www.federationatx.com**)
Thunderheart.org (**www.thunderheart.org**)

The Academy
The Academy will serve as the distribution mechanism for our open source curriculum in the form of Teacher Guides, Lesson Plans, and Classroom Projection Aids. As we develop our community programs, they will also be distributed through The Academy.

The Federation
The Federation will develop an open source curriculum focused on science, the natural world, space, and space exploration. This curriculum, and additional programs designed so that every member of our communities can contribute, will be available to any teacher in the world to download and implement, free of charge.

Thunderheart.org
Thunderheart is dedicated to research and analysis focused on Native American archeological research, with particular emphasis on archeoastronomy.

Universal Free Education
We are united around the concept of bringing Universal Free Education to Native American reservations, and to people around the globe.