



2022

Native American Environmental Awareness Summer Youth Practicum

Native American Fish and Wildlife Society



Acknowledgment

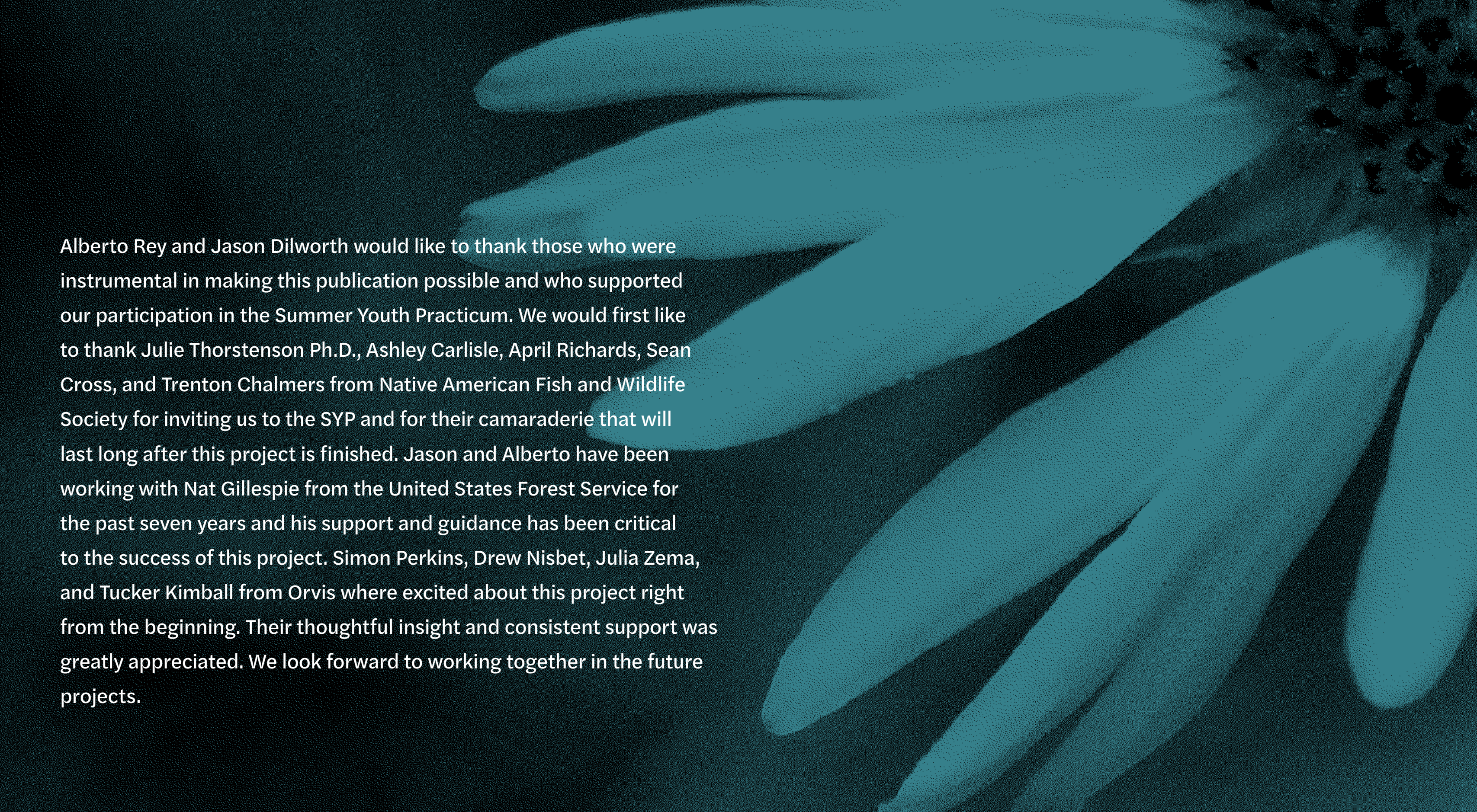
The Summer Youth Practicum occurred at the Colorado State University Mountain and Main Campus in the Fort Collins region, Rocky Mountain National Park and the YMCA of the Rockies near Estes Park. These lands were the home of the Arapaho, Apache, Cheyenne, Ute, Pawnee, Shoshone Nations and many other Native Tribes. They were the stewards of the lands before they were forced to relocate by government policies and western migration by European settlers.



Gratitude

Native American Fish and Wildlife Society (NAFWS) would like to thank the following sponsors for their support of the 2022 National Summer Youth Practicum:

- Bureau of Indian Affairs (BIA) for awarding the NAFWS the BIA Youth Initiative Grant
- Bass Pro Shops and Cabela's Outdoor Fund for awarding the NAFWS a grant to support the 2022 National Summer Youth Practicum
- Orvis for providing monetary support including equipment that allowed students and staff to learn the art of fly fishing
- United States Forest Service (USFS) for awarding the NAFWS monetary funding to aid in the implementation of National SYP
- Colorado State University Native American Cultural Center (NACC) for providing their time and sponsoring our lunch in Pawnee Grasslands Dining Room in Corbett Hall
- Additionally, the NAFWS would love to thank all of the guest lecturers for spending their time, experience and knowledge with the National SYP students



Alberto Rey and Jason Dilworth would like to thank those who were instrumental in making this publication possible and who supported our participation in the Summer Youth Practicum. We would first like to thank Julie Thorstenson Ph.D., Ashley Carlisle, April Richards, Sean Cross, and Trenton Chalmers from Native American Fish and Wildlife Society for inviting us to the SYP and for their camaraderie that will last long after this project is finished. Jason and Alberto have been working with Nat Gillespie from the United States Forest Service for the past seven years and his support and guidance has been critical to the success of this project. Simon Perkins, Drew Nisbet, Julia Zema, and Tucker Kimball from Orvis were excited about this project right from the beginning. Their thoughtful insight and consistent support was greatly appreciated. We look forward to working together in the future projects.

Native American Fish & Wildlife Society Summer Youth Practicum

The Native American Fish & Wildlife Society (NAFWS) is a national nonprofit Tribal organization incorporated in 1983 to assist Native American and Alaska Native Tribes with the conservation, protection, and enhancement of their fish, wildlife, habitat and cultural resources.



The 574 federally-recognized Native American and Alaska Native Tribes within the United States own or influence the management of nearly 140 million acres, far exceeding that of the National Park Service. This land includes more than 730,000 acres of lakes and reservoirs, 10,000 miles of streams and rivers, and 18 million acres of forests that provide habitat for fish and wildlife, including more than 500 species listed as threatened or endangered. To Native Americans this land also serves cultural, spiritual, economic, and subsistence purposes.

Native Americans have been successful managers of species and habits for thousands of years. However, in today's changing world, Tribes are faced with a complexity of conservation and management issues such as climate change, habitat degradation, and the loss of biodiversity. Despite underfunding and a lack of Native representation in natural resource professions, Tribes are leaders in tackling these issues. Integrating traditional management practices and western science, Tribes conserve, protect, and restore fish and wildlife on their lands.

The Native American Fish & Wildlife Society (NAFWS) strives to provide assistance to Tribes in support of their self-determined march towards a secure natural resource future for generations to come.

Consequently, the purpose of the NAFWS are charitable, educational, scientific and cultural as well as the following:

- To assist in the facilitation and coordination of inter-Tribal communication in regards to fish and wildlife matters, including treaty rights issues, court cases related to fish and wildlife, hunting, or fishing regulations
- To protect, preserve and conserve the wise use and management of Tribal fish, wildlife and recreational resources
- To education Native Americans involved in fish and wildlife management, policy, decision-makers, community members and others similarly dedicated to tribal natural resource management of the best natural resource management practices
- To provide administrative support, expertise and advice to Tribal governments, relating to Tribal fish, wildlife enhancement activities
- To improve the general welfare of Tribal people through educational, charitable, as well as fish and wildlife enhancement activities
- To provide professional publications and promotional activities for disseminating pertinent information regarding Native American fish and wildlife resources to Society members, Indian and non-Indian organizations, public officials and the general public

Native American Environmental Awareness Summer Youth Practicum (SYP)



A fundamental goal of the NAFWS is to facilitate the education of Native Americans and Alaskan Natives about Tribal fish, wildlife and natural resource stewardship. Although the NAFWS conducted periodic regional training and workshops on various aspects of natural resource management, these training opportunities were for individuals working as professional natural resource managers. Thinking of the future, the NAFWS developed the Environmental Awareness Summer Youth Practicum (SYP) with the goal of empowering and educating Native Youth about the preservation, conservation, and protection of Mother Earth.

As our future conservation practitioners, decision-makers and stewards, the NAFWS SYP is designed to introduce Native students to Tribal natural resource management and career opportunities available in natural resource professions. The first SYP was held at Ranch A Education Center in Beulah, Wyoming in 1991. With few exceptions, the SYP has become an annual event with both national and regional practicums hosted at sites across the country including the University of

Wisconsin-Stevens Point, Mt. Evans Outdoor Lab School in Greenwood, CO, Mississippi Band of Choctaw Indians Reservation, Camp Chapparral in Yakama Nation, and YMCA of the Rockies in Estes Park, CO.



2003 SYP Mt Evans, Colorado

The SYP is a unique and vital program that incorporates the cultural and historical aspects of natural resource management as well as Traditional Ecological Knowledge. A strong emphasis is placed on the involvement of Tribal elders and professionals who share their wisdom and knowledge of environmental stewardship. The staff provides a safe, caring, and inclusive atmosphere which creates an optimum environment for learning.

The 2022 National Summer Youth Practicum (SYP) occurred from Saturday, July 9 – Saturday, July 16, 2022. This week-long program was held at the beautiful Colorado State University (CSU) Mountain Campus, CSU Main Campus (Fort Collins, CO), YMCA of the Rockies (Estes Park, (CO)), and the Rocky Mountain National Park. Ten students from 6 Tribes attended the practicum and heard presentations from 23 speakers and participated in workshops on field-sketching, fisheries, forestry, wildlife corridors, and Tribal conservation law enforcement. They tackled the CSU Mountain Campus ropes course, developed trust through team building exercises, learned to flyfish, and competed in a Tribal wildlife management challenge. The SYP concluded with the students presenting their wildlife management plans to an audience of their peers, instructors, parents, and NAFWS board and staff members.

How to participate:

The NAFWS National SYP is an annual program open to incoming 10-12 grade Native students. The organization covers students' travel (airfare, round trip mileage to their closest airport, luggage fees), food and lodging.

Typically, the National SYP is held in July and application period is announced between February and March. Tribal students are encouraged to apply for future SYPs at: www.nafws.org/youth-pre-professional/summer-youth-practicum/.

Follow us on social media for updates, announcements, and Tribal natural resources highlights at



Facebook: [@nativeamericanfishandwildlifesociety](https://www.facebook.com/nativeamericanfishandwildlifesociety)



Instagram: [@nafws_insta](https://www.instagram.com/nafws_insta)



Twitter: [@native_wildlife](https://twitter.com/native_wildlife)



LinkedIn: [Native American Fish & Wildlife Society](https://www.linkedin.com/company/Native American Fish & Wildlife Society)

NAFWS Staff And Intern



Ashley Carlisle

*Native American Fish & Wildlife Society
Education Coordinator*



Sean Cross

*Native American Fish & Wildlife Society Fish
and Wildlife Biologist*



April Richards

*Native American Fish & Wildlife Society
Public Information Officer*



Trenton Chalmers

*Native American Fish & Wildlife Society
Conservation Law Enforcement Intern*

Invited Artists and Workshop Leaders



Alberto Rey

*State University of New York at Fredonia
Distinguished Professor
Orvis Endorsed Fly Fishing Guide*



Jason Dilworth

*State University of New York at Fredonia
Associate Professor*

States of 2022 Students and Staff

ALASKA

WASHINGTON

MONTANA

N. DAKOTA

IDAHO

WISCONSIN

PENNSYLVANIA

ARIZONA

NEW MEXICO

NAFWS | SYP

Nations and Tribes of Staff and Students

Nondalton-Dena'ina Athabaskan

Village of Kotlik

**Shoshone-Bannock Tribes of the Fort Hall
Reservation of Idaho**

**Confederated Salish and Kootenai Tribes
of the Flathead Reservation**

Navajo Nation

Standing Rock Sioux

Menominee Indian Tribe of Wisconsin

Cherokee Nation

Students



Tristan

Nondalton-Dena'ina Athabaskan
Alaska



Owen

Navajo Nation
Arizona



Cathaline

Navajo Nation
Arizona

Students



Alana

Navajo Nation

Arizona



Danika

Native Village of Kotlik

Washington



Dylane

Navajo Nation

New Mexico



Emma

Menominee Indian

Tribe of Wisconsin

Wisconsin

Students



Hailee

Navajo Nation

Arizona



Jovanii

Shoshone-Bannock Tribes of the
Fort Hall Reservation of Idaho

Idaho



Kate

Cherokee Nation

Pennsylvania

BRIEF OVERVIEW OF 2022 NATIONAL SUMMER YOUTH PRACTICUM AGENDA

<div>PAGES 17-24</div> <div>JULY 9, 2022 – SATURDAY</div> <div> <p>Students arrive at Denver International Airport, Denver, CO</p> <p>Depart DIA & Drive to Colorado State University Mountain Campus</p> <p>Staff & Student Meet & Greet</p> <p>Student Orientation & Introduction to Wildlife Management Challenge</p> <p>Ashley Carlisle, NAFWS Education Coordinator</p> </div>	<div>PAGES 25-34</div> <div>JULY 10, 2022 – SUNDAY</div> <div>CSU MOUNTAIN CAMPUS</div> <div> <p>NAFWS 101</p> <p>Ashley Carlisle, NAFWS Education Coordinator</p> <p>Wildlife Management Challenge: Elk Life History and Migration, Land Management and Stakeholders</p> <p>Ashley Carlisle, NAFWS Education Coordinator</p> <p>In-the-Field Sketchbook Workshop,</p> <p>Alberto Rey, SUNY Fredonia</p> <p>Mountain Campus Challenge Course</p> <p>Talking Circle</p> </div>	<div>PAGES 35-56</div> <div>JULY 11, 2022 – MONDAY</div> <div>CSU MOUNTAIN CAMPUS</div> <div> <p>Electrofishing and Biotic Indexing</p> <p>Christopher Carroll, USFS Alberto Rey, SUNY Fredonia</p> <p>Fly Fishing</p> <p>Alberto Rey, SUNY Fredonia Jason Dilworth, SUNY Fredonia Christopher Carroll, USFS Aaron Altier, USFS</p> <p>What Do Conservation Law Enforcement Officers Do?</p> <p>Sean Cross, NAFWS Fish and Wildlife Biologist Trenton Chalmers, NAFWS Conservation Law Enforcement Intern</p> <p>Tips/Tricks for Your Future</p> <p>Ashley Carlisle, NAFWS Education Coordinator</p> <p>Talking Circle & S'mores</p> </div>	<div>PAGES 57-74</div> <div>JULY 12, 2022 – TUESDAY</div> <div>CSU MOUNTAIN CAMPUS</div> <div> <p>Wildlife Corridors</p> <p>Ashley Carlisle, NAFWS Education Coordinator</p> <p>College Experience</p> <p>Trenton Chalmers, NAFWS Conservation Law Enforcement Intern</p> <p>Green Jobs</p> <p>Ethan Bucholz, Ph.D., CSU Faculty</p> <p>Leave No Trace & Watershed Science</p> <p>Steven Fassnacht Ph.D., CSU Faculty, Sunshine Swetnam Ph.D., CSU Faculty</p> <p>Talking Circle</p> </div>
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<div>PAGES 75-83</div> <div> <p>JULY 13, 2022 – WEDNESDAY CSU FORT COLLINS CAMPUS</p> <p>Depart CSU Mountain Campus and travel to Fort Collins, CO</p> <p><i>Trees Water People (TWP)</i> James Calabaza, TWP and TWP Staff</p> <p><i>CSU Native American Cultural Center (NACC)</i> Ty Smith, NACC Director and Tiffani Kelly, NACC Assistant Director</p> <p><i>Warner College of Natural Resources Tour & Talk</i> Jake Agletti, CSU Warner College Recruitment and Engagement Coordinator</p> <p><i>USGS connecting Human Dimensions with Natural Resources Research</i> Nicholas Cole Ph.D., USGS Research Social Scientist, Social & Economic Analysis</p> <p>Depart to YMCA of the Rockies in Estes Park, CO</p> <p><i>YMCA of the Rockies Orientation & Room Assignments</i>, Ashley Carlisle, NAFWS Education Coordinator</p> <p>Talking Circle</p> </div>	<div>PAGES 84-90</div> <div> <p>JULY 14, 2022 – THURSDAY YMCA OF THE ROCKIES</p> <p><i>Elk Management in Rocky Mountain National Park</i> Christie Wilkins, Ranger Team RMNP</p> <p><i>Presentation Skills</i> Ashley Carlisle, NAFWS Education Coordinator</p> <p>Talking Circle</p> </div>	<div>PAGES 91-100</div> <div> <p>JULY 15, 2022 – FRIDAY YMCA OF THE ROCKIES</p> <p><i>Greenwood Wildlife Rehabilitation Center (GWRC)</i> Claudia Laprise, GWRC and GWRC Volunteers</p> <p><i>Bird Conservancy of the Rockies (BCR)</i> Sherry Nikolaus, BCR Education Director</p> <p><i>Elk Management Plan, Final Student Presentations</i></p> <p>Souvenir Shopping</p> <p><i>What Now? & Awards Ceremony</i></p> </div>	<div> <p>JULY 16, 2022 – SATURDAY</p> <p>Load up Vans and depart for airport.</p> </div>
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Arapaho & Roosevelt National Forests

Pawnee National Grasslands

Colorado State University

USGS

CSU Mountain Campus

Beaver Meadows

YMCA of the Rockies

Denver International Airport

Medicine Bow-Routt
National Forests

ROCKY
MOUNTAIN
NATIONAL
PARK

Arapaho & Roosevelt National Forests

White River National Forests

0 10 20 mi

- Route SYP
- CameronPeakFire
- National Forests and Grasslands
- National Park Service



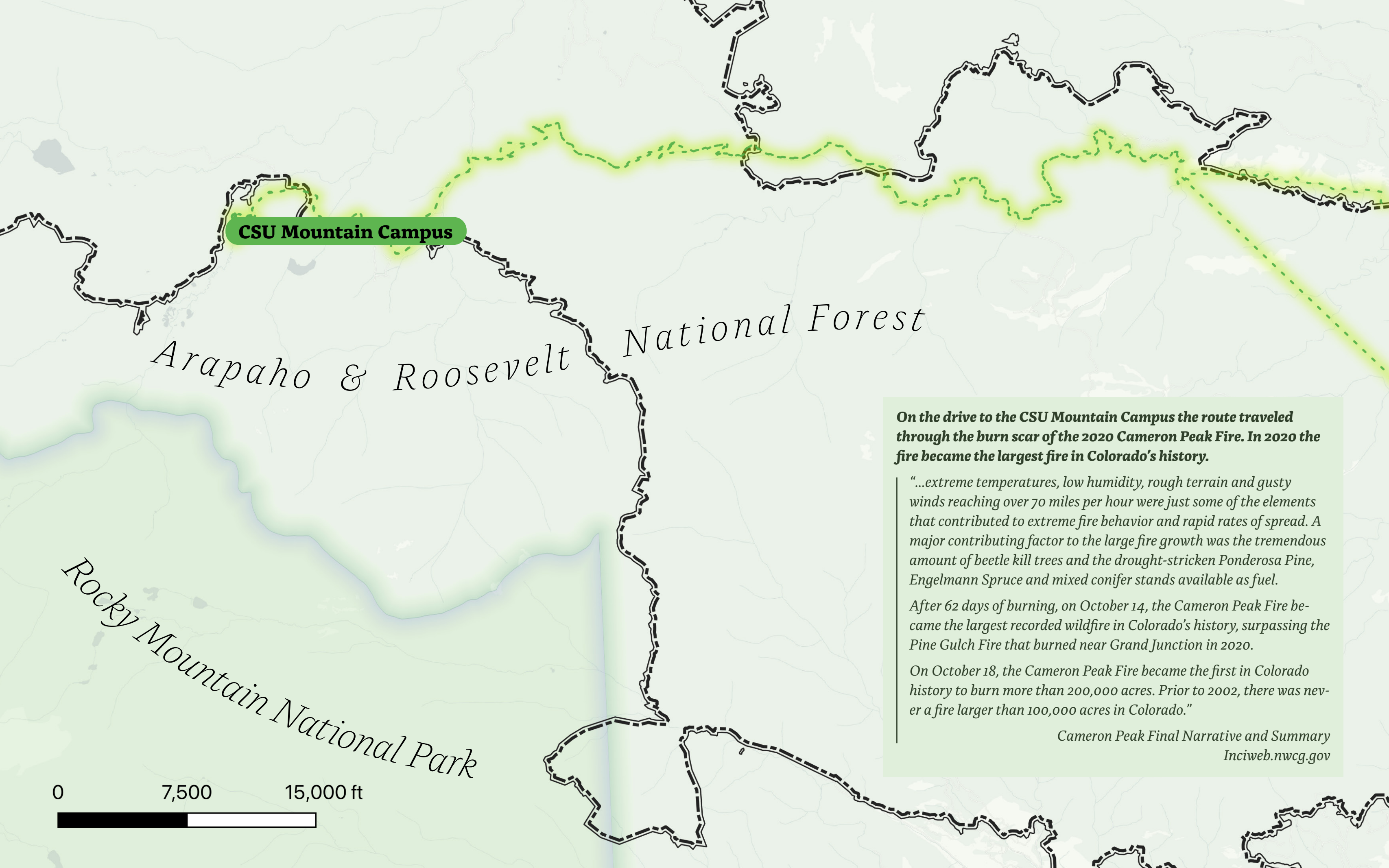


nafws_insta Students arrived in Denver and drove up to the Colorado State University Mountain Campus for the 2022 National Student Youth Practicum. Education Coordinator Ashley Carlisle has a lot of exciting field, educational, and team building activities planned for this week.

4:55pm - July 13, 2022 - Wednesday - moved from CSU Mountain Campus to CSU main campus for presentations - helped April with Instagram & facebook post on fly fishing - in van on the way to Estes Park. Started 5:28 pm



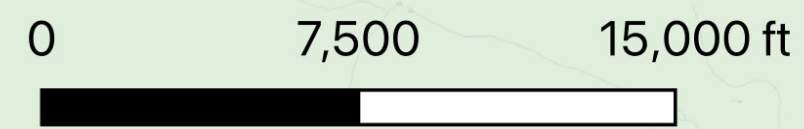




CSU Mountain Campus

Arapaho & Roosevelt National Forest

Rocky Mountain National Park



On the drive to the CSU Mountain Campus the route traveled through the burn scar of the 2020 Cameron Peak Fire. In 2020 the fire became the largest fire in Colorado's history.

"...extreme temperatures, low humidity, rough terrain and gusty winds reaching over 70 miles per hour were just some of the elements that contributed to extreme fire behavior and rapid rates of spread. A major contributing factor to the large fire growth was the tremendous amount of beetle kill trees and the drought-stricken Ponderosa Pine, Engelmann Spruce and mixed conifer stands available as fuel.

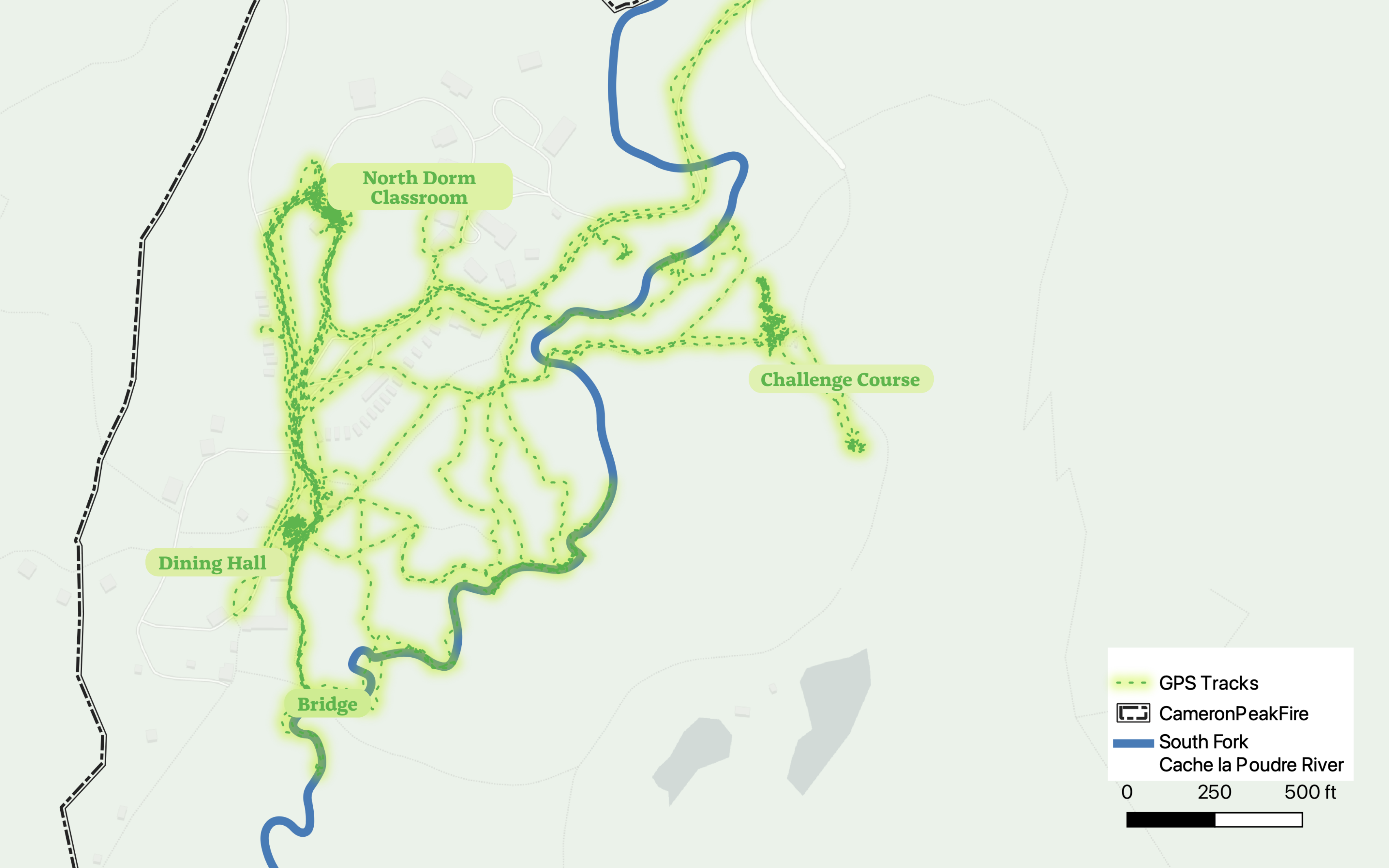
After 62 days of burning, on October 14, the Cameron Peak Fire became the largest recorded wildfire in Colorado's history, surpassing the Pine Gulch Fire that burned near Grand Junction in 2020.

On October 18, the Cameron Peak Fire became the first in Colorado history to burn more than 200,000 acres. Prior to 2002, there was never a fire larger than 100,000 acres in Colorado."

*Cameron Peak Final Narrative and Summary
Inciweb.nwcg.gov*



...Students were introduced to NAFWS, the work we do, our National Initiatives, and the NAFWS Wildlife toolkit which was created to assist Tribes in developing their fish and wildlife programs. The toolkit will aid students in a management challenge that they will present at the end of the practicum. The students with the best presentation will have the opportunity to present their management plan at an NAFWS Conference.



North Dorm
Classroom

Challenge Course

Dining Hall

Bridge

GPS Tracks

Cameron Peak Fire

South Fork
Cache la Poudre River

0250500 ft

In-Field Sketchbook Workshop

- Natural resources are best protected when local people play an active role in their conservation & management.
- Preserving local ecosystems is essential for the ongoing social, economic, cultural, & environmental...
 - Identify Community needs
 - Success in community-based development means understanding local needs. Working with the community members, we help the group address their concerns and

Alberto Rey, Distinguished Professor, Artist and Orvis Fly Fishing Guide and Jason Dilworth, Associate Professor from SUNY - The State University of New York Fredonia are joining us for the 2022 National Summer Youth Practicum. This morning Rey taught an outdoor drawing and journaling workshop. Students will continue to draw in their notebooks throughout the practicum.



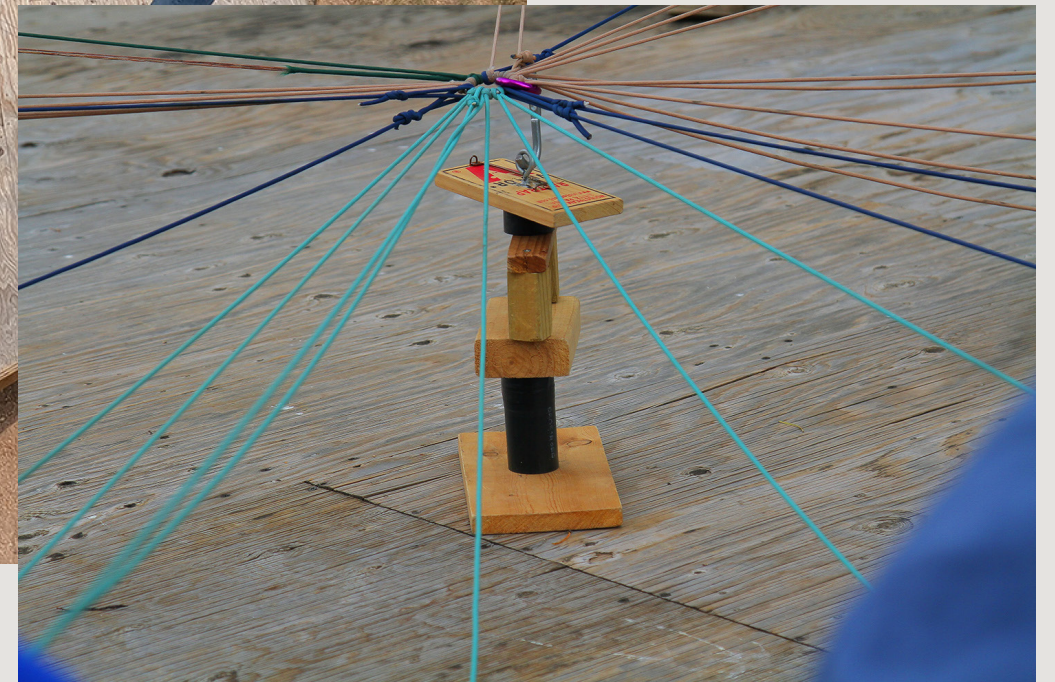
Drawing by Jovanii



7/10/22 take 2 - 90°F CSU Mt.



Drawing by Kate



Students tackled the Colorado State University Mountain Campus ropes course yesterday. The low ropes course included challenges like the mars build, search & rescue, bear/salmon/mosquito, and the wire walk. These activities required team work, communication, and trust building that was important when they moved on to the high ropes course and throughout the rest of the practicum.



* Photos April R



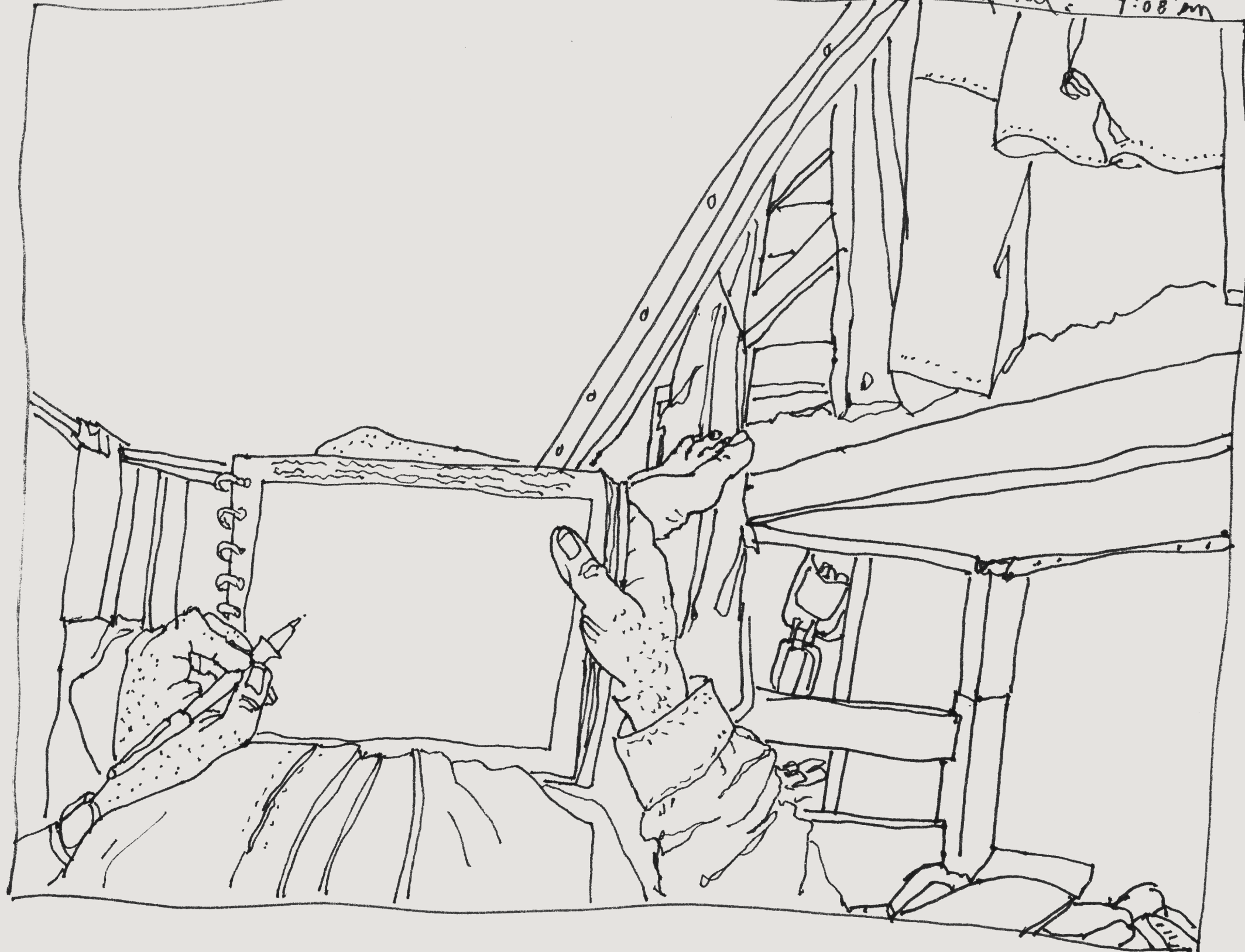
On the high ropes course climbing the 30ft rock wall and swinging down on the giant swing. They also walked across the high cat walk and climbed to the top of a 20 foot pole, balancing on the top, and taking a leap of faith reaching to a swing. The students supported each other by belaying climbers and cheering each other on



Osprey, in background, has relocated from nearby power lines to a safer newly-erected pole and nest platform.



Room 531 - North Down - Colorado State University Mountain Campus -
July 11, 2022 - 6:35 am - 73° - went fly fishing for first time on South
Fork of Poudre River - used caddis - caught several Brook Trout - went with Jason D.
and April - spinners & white caddis were working out. 7:08 am



SYP students were introduced the fisheries management and U.S. Forest Service. In the morning, Fisheries Biologist Chris Carroll and Fisheries Technician Aaron Altier taught students about the ecology of Colorado fishes, aquatic ecosystems, and forest service careers. They also discussed sampling methods and gave an electrofishing demonstration.









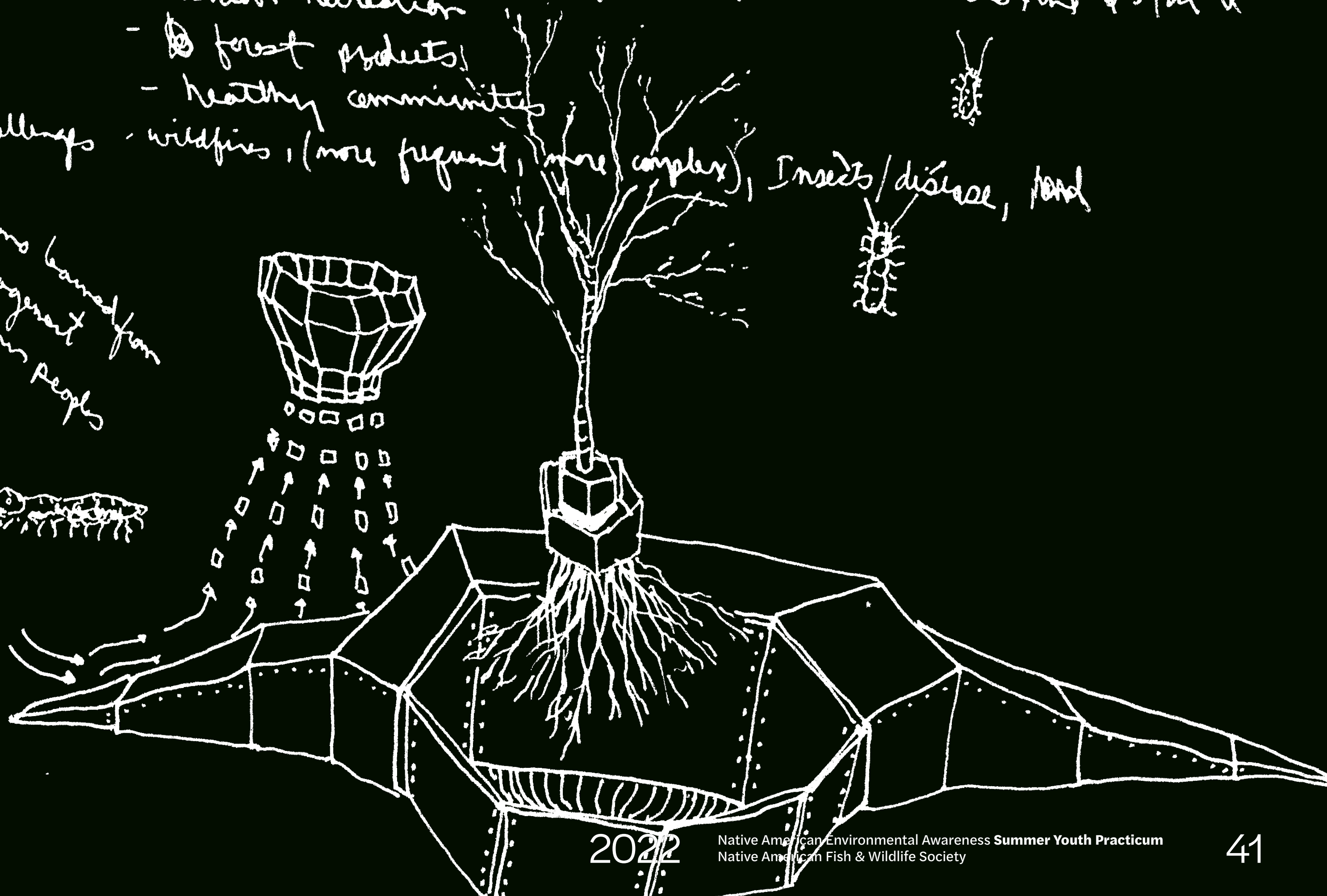




- clean air & produce oxygen - capture carbon dioxide & store it
- outdoor recreation
- forest products
- healthy communities

- challenges - wildfires, (more frequent, more complex), Insects/disease, road

lessons learned from
land management
of indigenous people



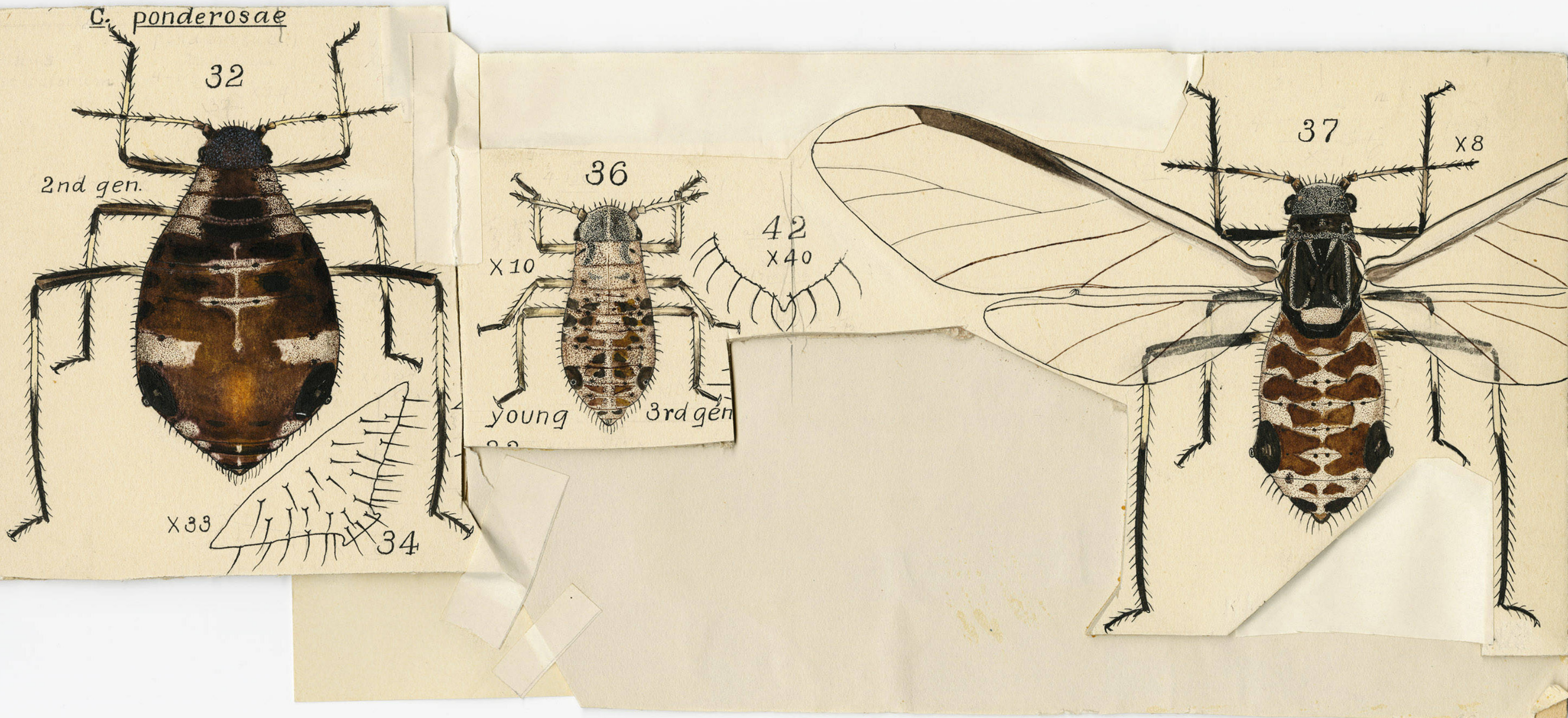


Students also learned about the smaller creatures important to fisheries such as caddis flies and mayflies that spend their larval stage in the water and can often be found attached to rocks. This knowledge went on to aid students during the fly fishing workshop as fishers create flies to mimic the favorite foods of target fish species.

Students find a nest-building caddis while turning over rocks in the South Fork Cache la Poudre River









Alberto Rey, the 2021 Orvis Guide of the Year, joined SYP this year and led a workshop on fly fishing on the South Branch of the Cache la Poudre River. Alberto taught the students how to cast, to read the water for where the fish would be found, to present the flies to the fish, and which flies would be most effective for the river and the life cycle of the insects found in the river. Alberto wanted to teach the student how to connect to their environment through a sport that they could continue with their whole lives.
























 **Native American ...** @native_... • Just now
A huge thank you to @TheOrvisCompany & @OrvisFlyFishing who donated the waders, boots, and rod outfits to NAFWS for this event and for future use by the organization.

USFS Art Projects

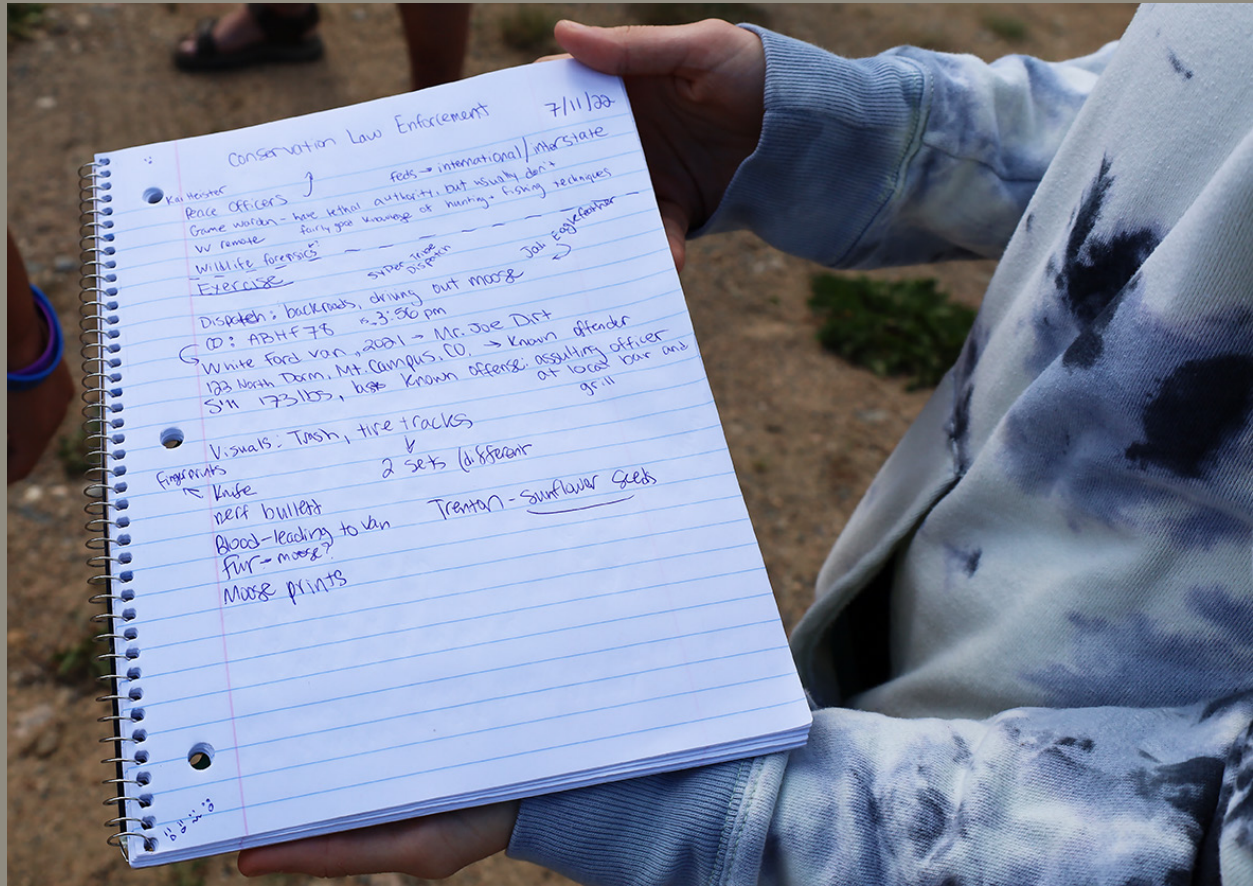
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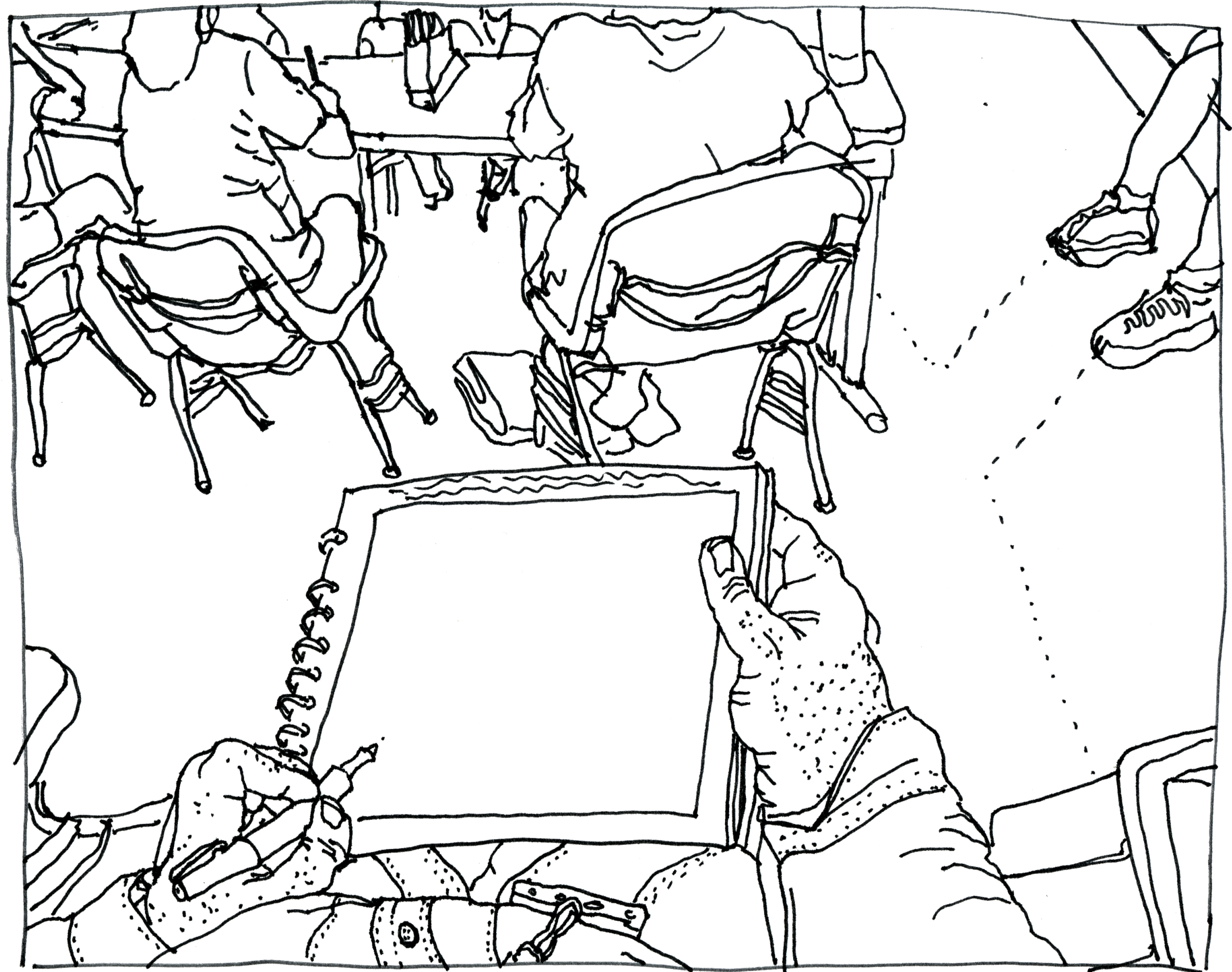
Rey / Dilworth

Mushrooms
from
145 camp
around
just
South
of
Camp

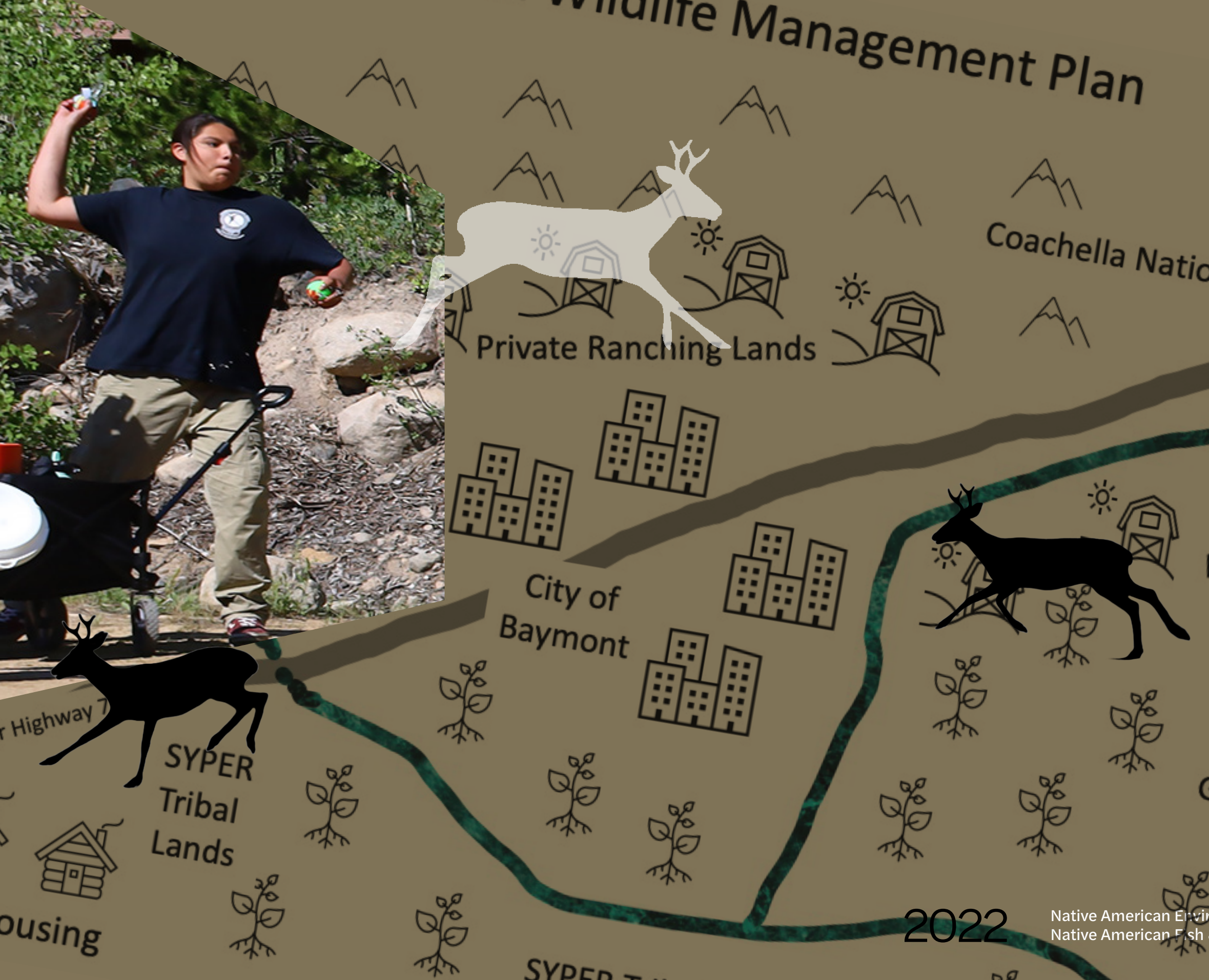


Fish & Wildlife Biologist Sean Cross and CLEO Intern Trenton Chalmers led a role playing activity where students playing Conservation Law Enforcement Officers investigated a moose poaching. Students took notes, collected evidence, interrogated the suspect, and eventually found him guilty.





Map for Tribal Wildlife Management Plan



Map Ashley C Photos April R

2022

Native American Environmental Awareness **Summer Youth Practicum**
Native American Fish & Wildlife Society

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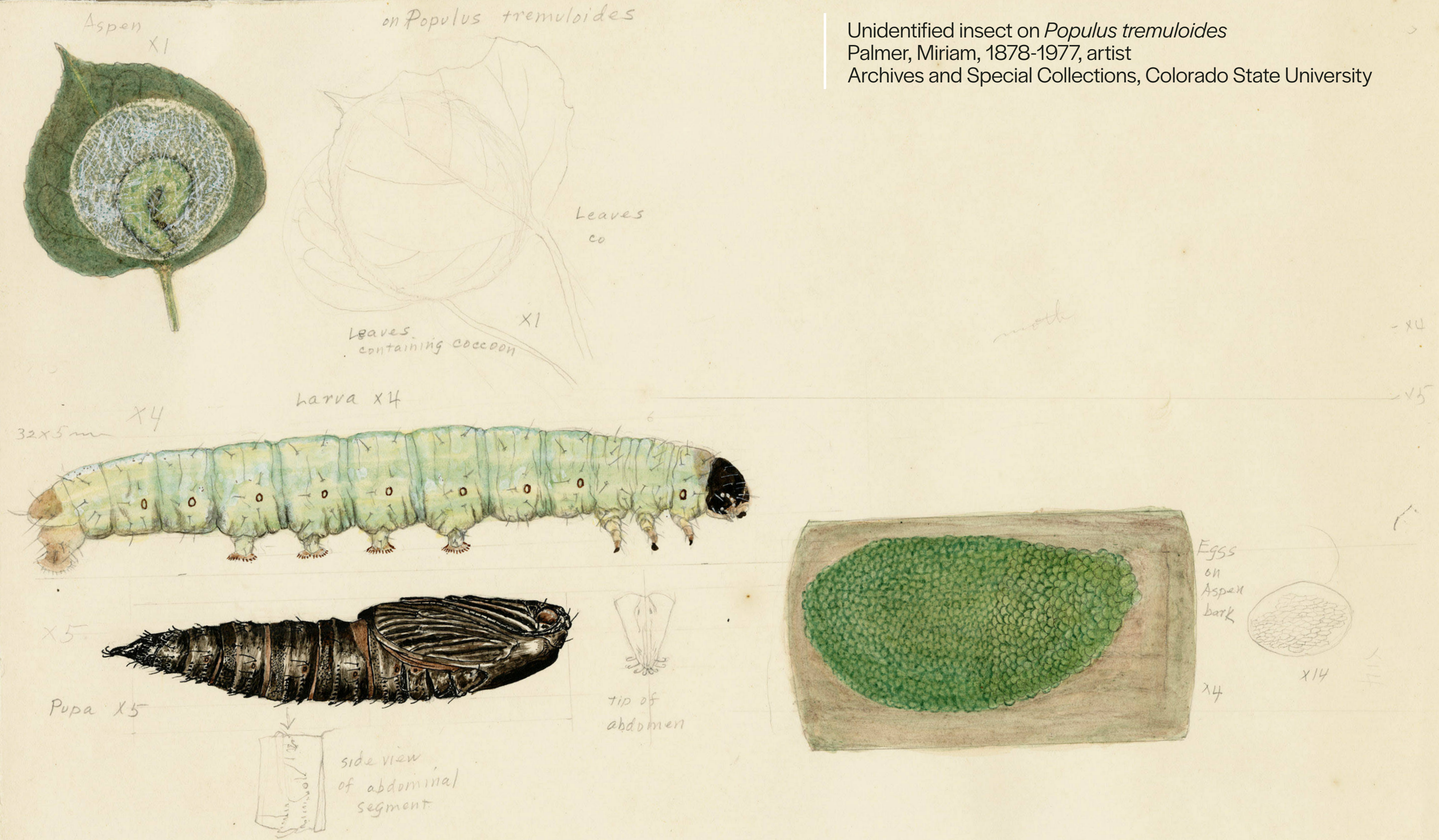


NAFWS
July 13 at 3:00 PM · 🌐

SYP students learned about the difficulty many animals face crossing roads and the importance of wildlife corridors. In this activity, they crossed the road as elk, rabbits, amphibians, and possums while trying to avoid on coming traffic (splash balls). Throughout the week, students are also working on developing elk management plans with an emphasis on Tribal Wildlife Corridors, an NAFWS Initiative.

Photos April R

Unidentified insect on *Populus tremuloides*
Palmer, Miriam, 1878-1977, artist
Archives and Special Collections, Colorado State University





Tuesday, July 12

NAFWS

- Wildlife Corridors - natural & man made - ^{under} ~~road~~ ^{passes} ~~passes~~
- 'importance



10 am - Non traditional college experience -

- 5 kids - father -

- dropped out of United Tribes Technical College

- went into military service

- returned to college for environmental sciences - wildlife biology

- Internships - TWS, AISES, NAFWS

- research: Elk, Bat, Piping Plover, Least Tern

- differences & between tribal colleges & Universities

- military

10:30 - "green jobs" customized to each student per worksheet students fill out

Ethan Bucholz - Academic Liaison & Experiential Learning
Colorado State Forest Service

Difference National Park Service - focus on people who use parks

Colorado State Forest Service - multi use - ~~wildlife~~ management



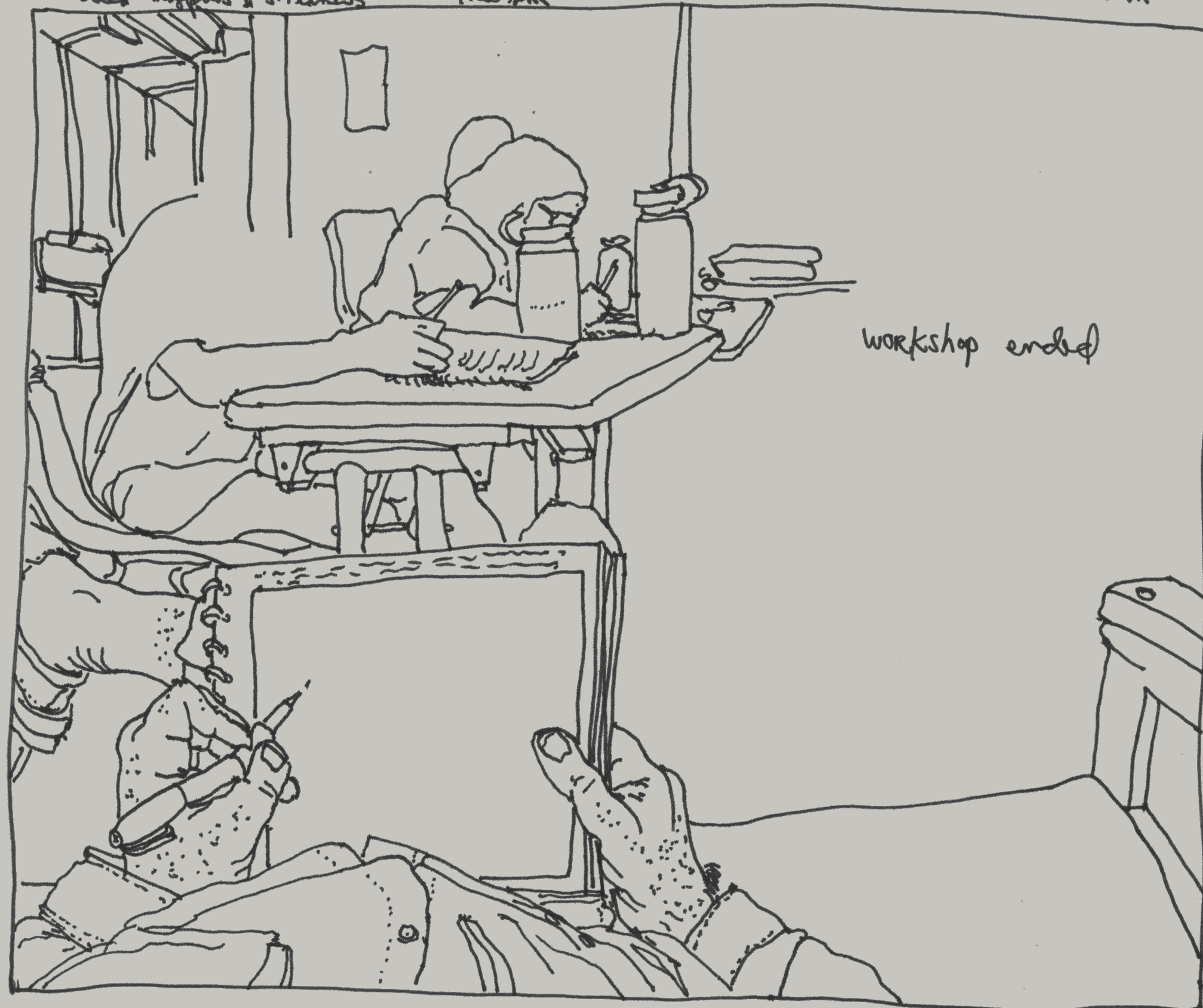
CLEO Intern

Trenton Chalmers

Hello all! I am the 2022 Conservation Law Enforcement Officer (CLEO) Intern for the NAFWS. I am an enrolled member of the Standing Rock Sioux Tribe I am currently in my senior year of my undergraduate degree of Environmental Science and Research at the United Tribes Technical College in Bismarck, North Dakota. I am a service member with the North Dakota Army National Guard. My children are the main inspiration for me to continue to be better each and every day.



July 10, Tuesday - 9:02 am - got up at 5 am to go fishing - took Daniela but too cold 48° - not hatched until we were about to leave for breakfast - fished 6:15 - 7:45 am - tried nymphs & streamers 9:25 am



Dr. Steven Fassnacht, professor at Warner College of Natural Resources taught about watershed science and students learned how to measure precipitation and water flow. Dr. Sunshine Swetnam, Associate Professor at CSU, and Chloe Arduino, a recent graduate, taught skills on how to lessen their impacts while in the outdoors. Some of these skills included how to minimize campfire impacts, how to choose a campsite, respecting wildlife, and how to dispose of waste properly. Students received Leave No Trace certifications.





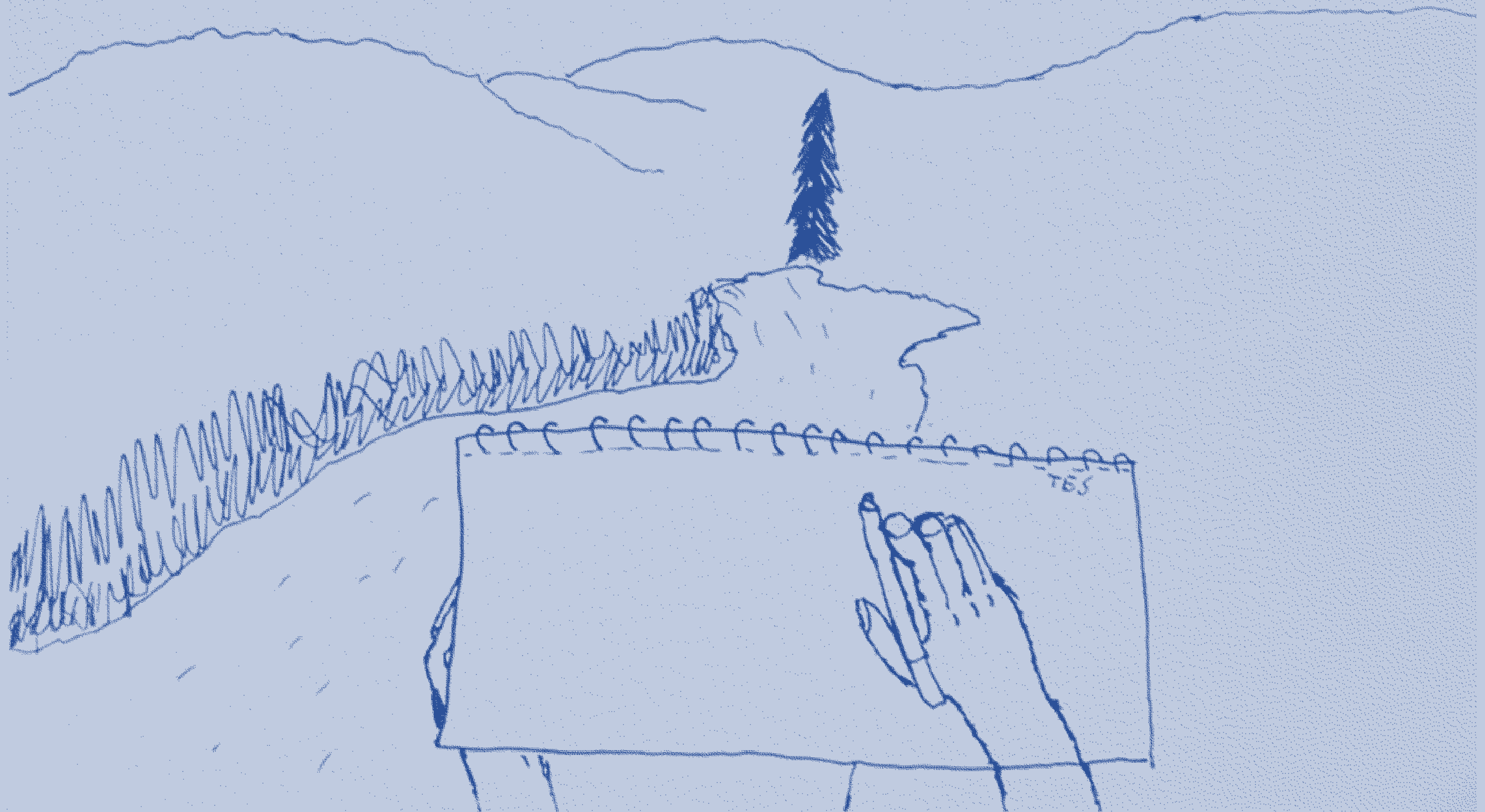
On the hike, students also met a graduate student doing research on tree swallows and had the opportunity to learn about her work.



Photo Trenton C

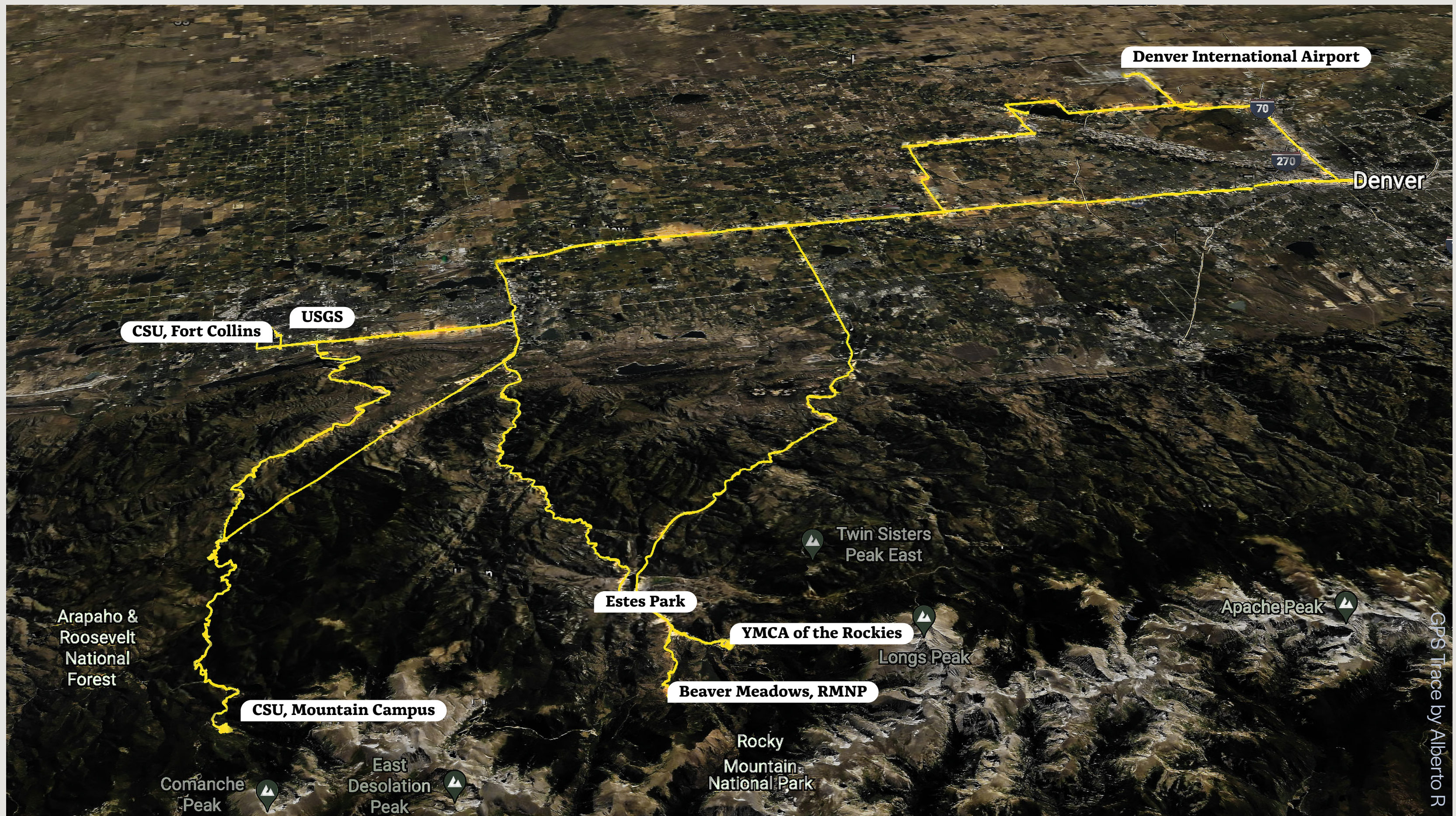


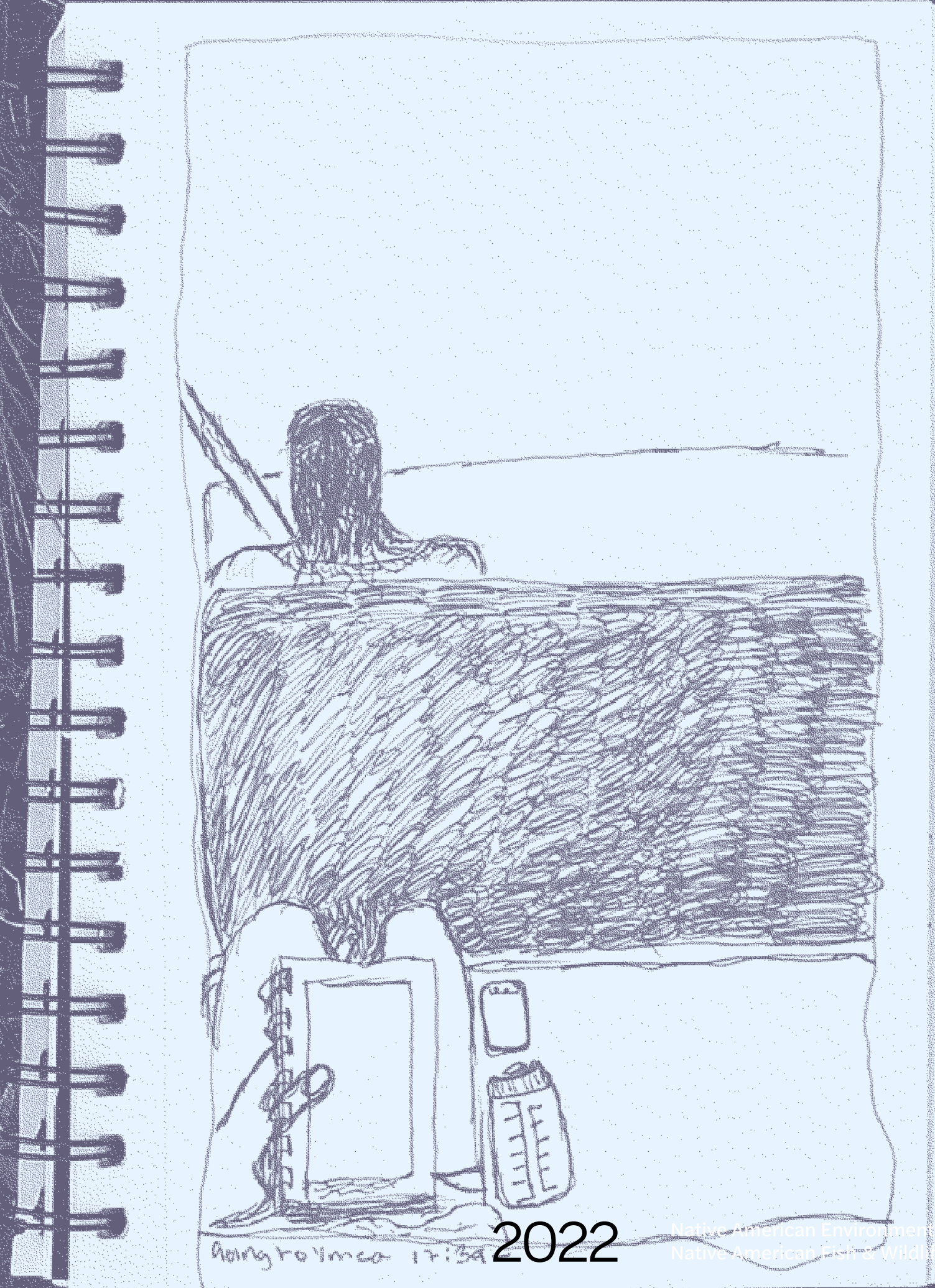
Tristan E.S











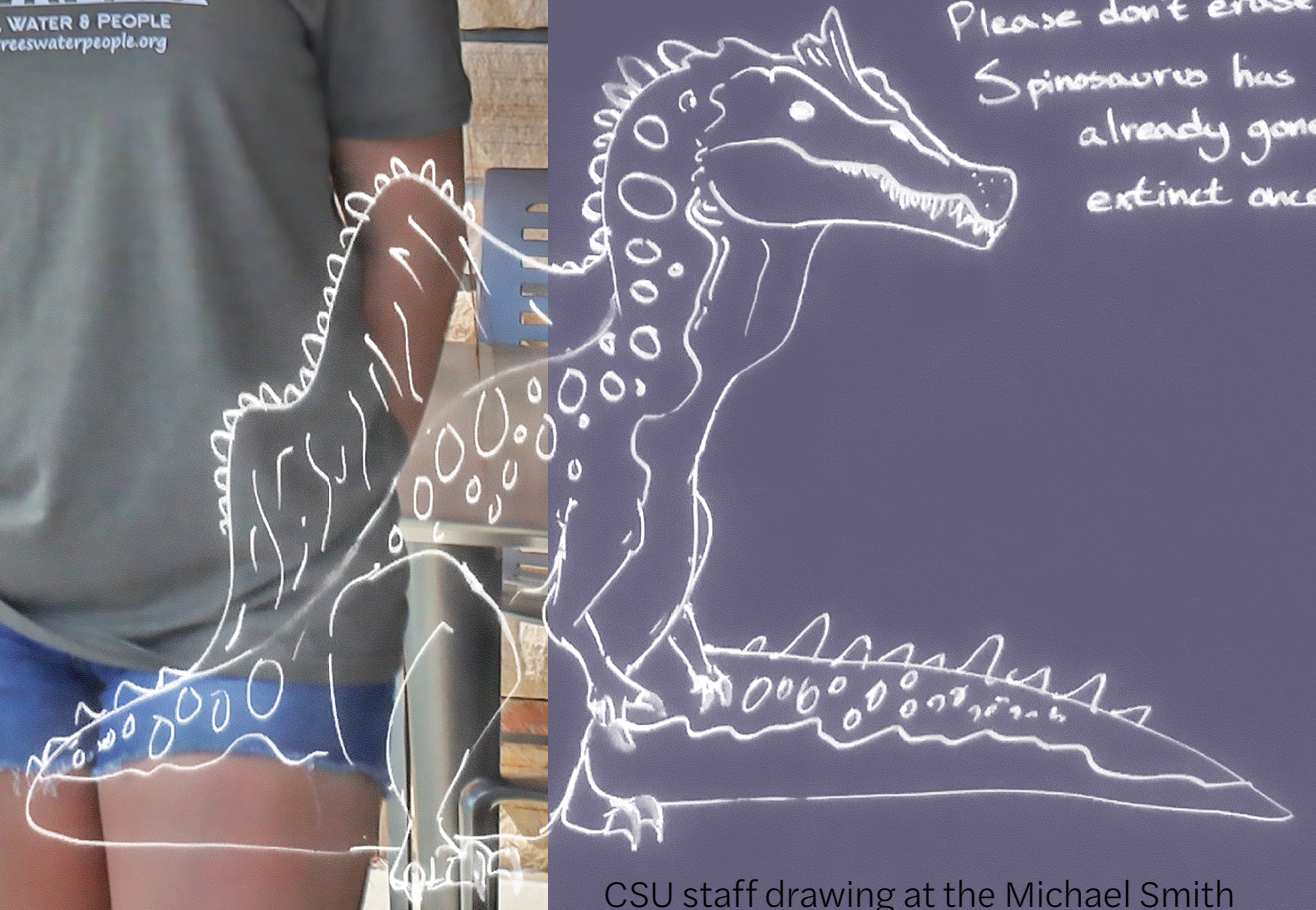
Going to Ymca 17:30

2022

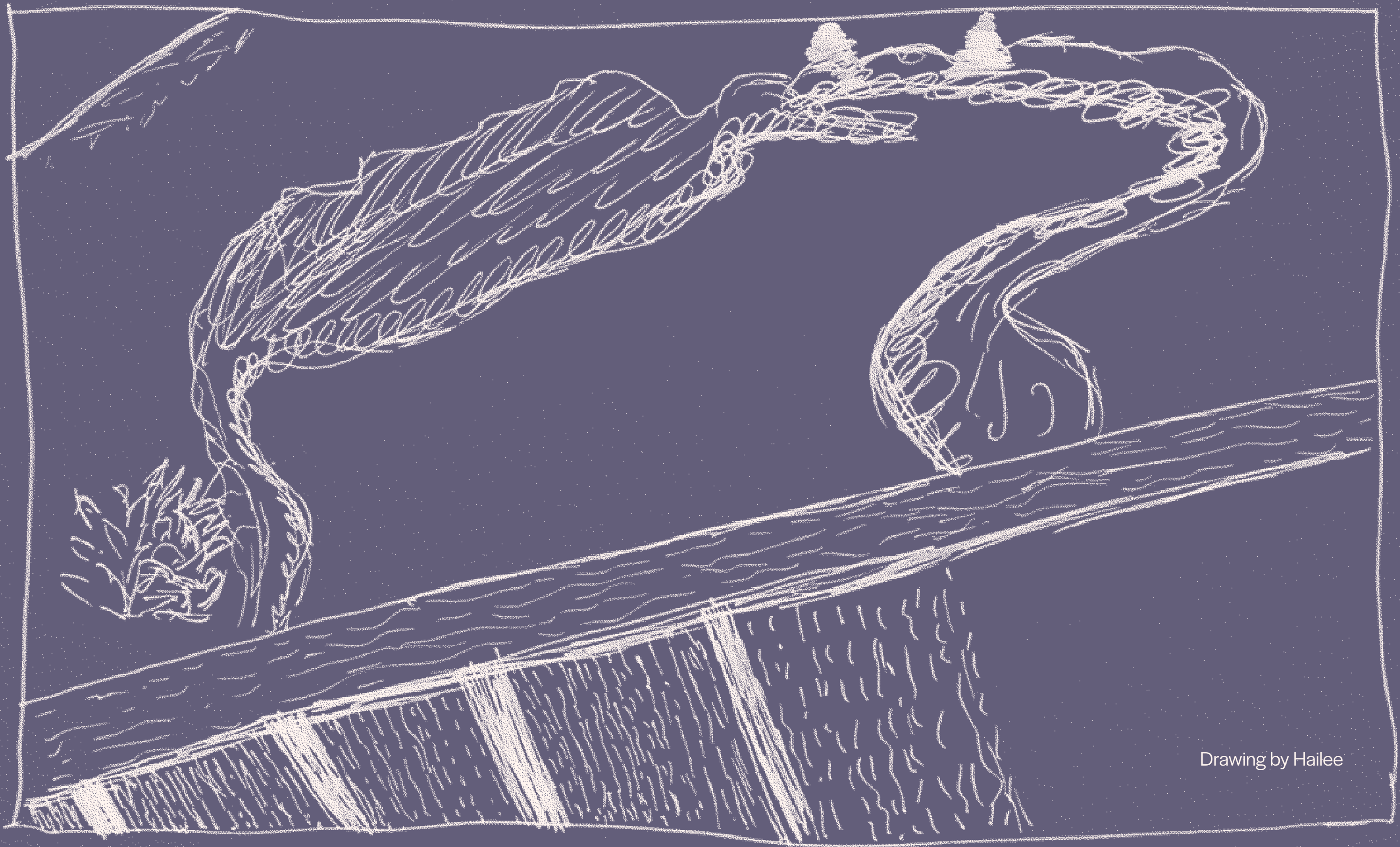


NEW LAB
MASCOT

Please don't erase,
Spinosaurus has
already gone
extinct once.



CSU staff drawing at the Michael Smith
Natural Resources Building.



Drawing by Hailee

SYP students toured the CSU campus and visited the U.S. Geological Survey (USGS) Science Center. They met and had lunch with the Trees, Water & People staff and learned about how they work with Tribes and resources available on campus for Native students. The tour also stopped at the Warner College of Natural Resources.



Photo April R

Photo Trenton C

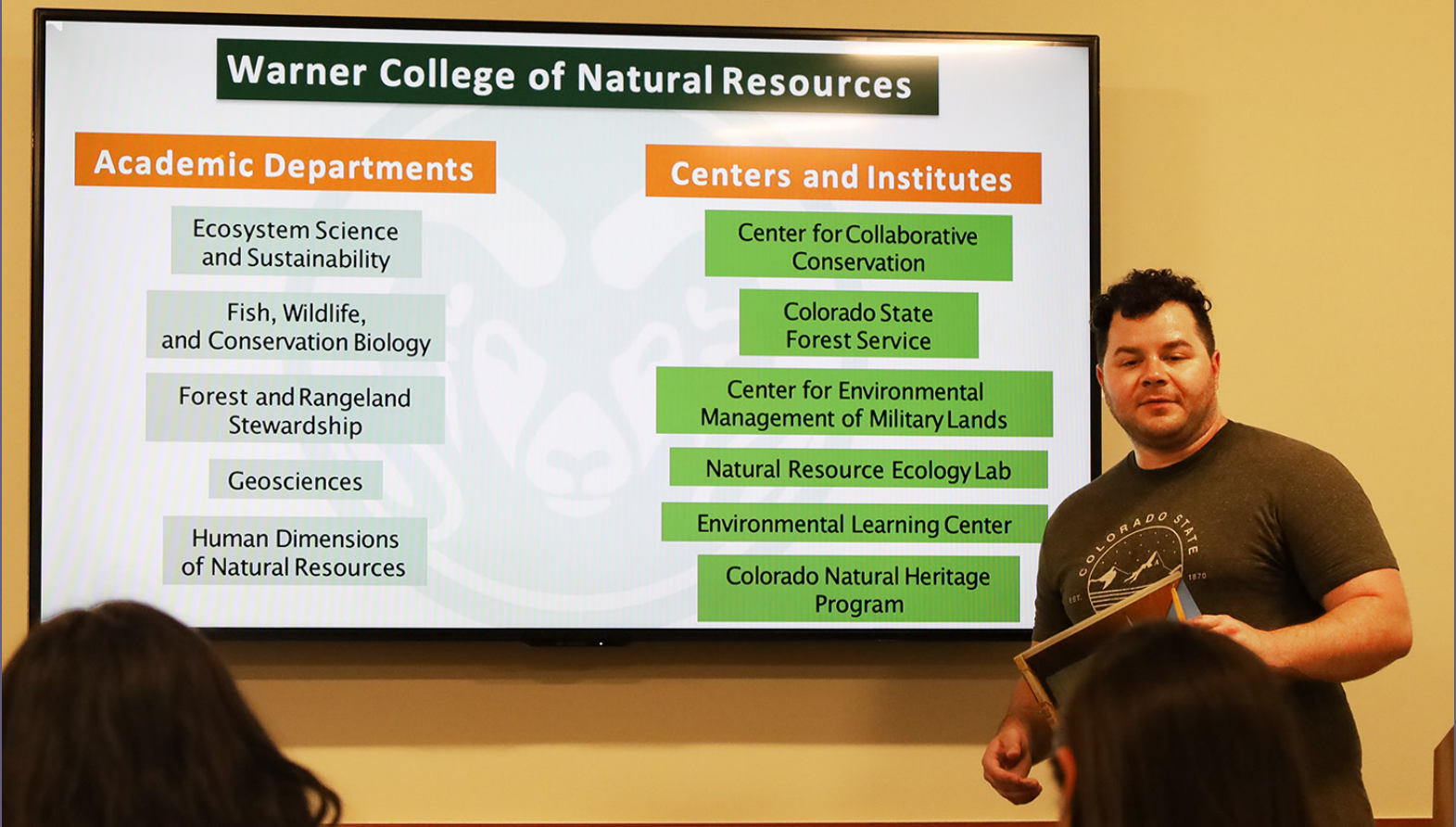
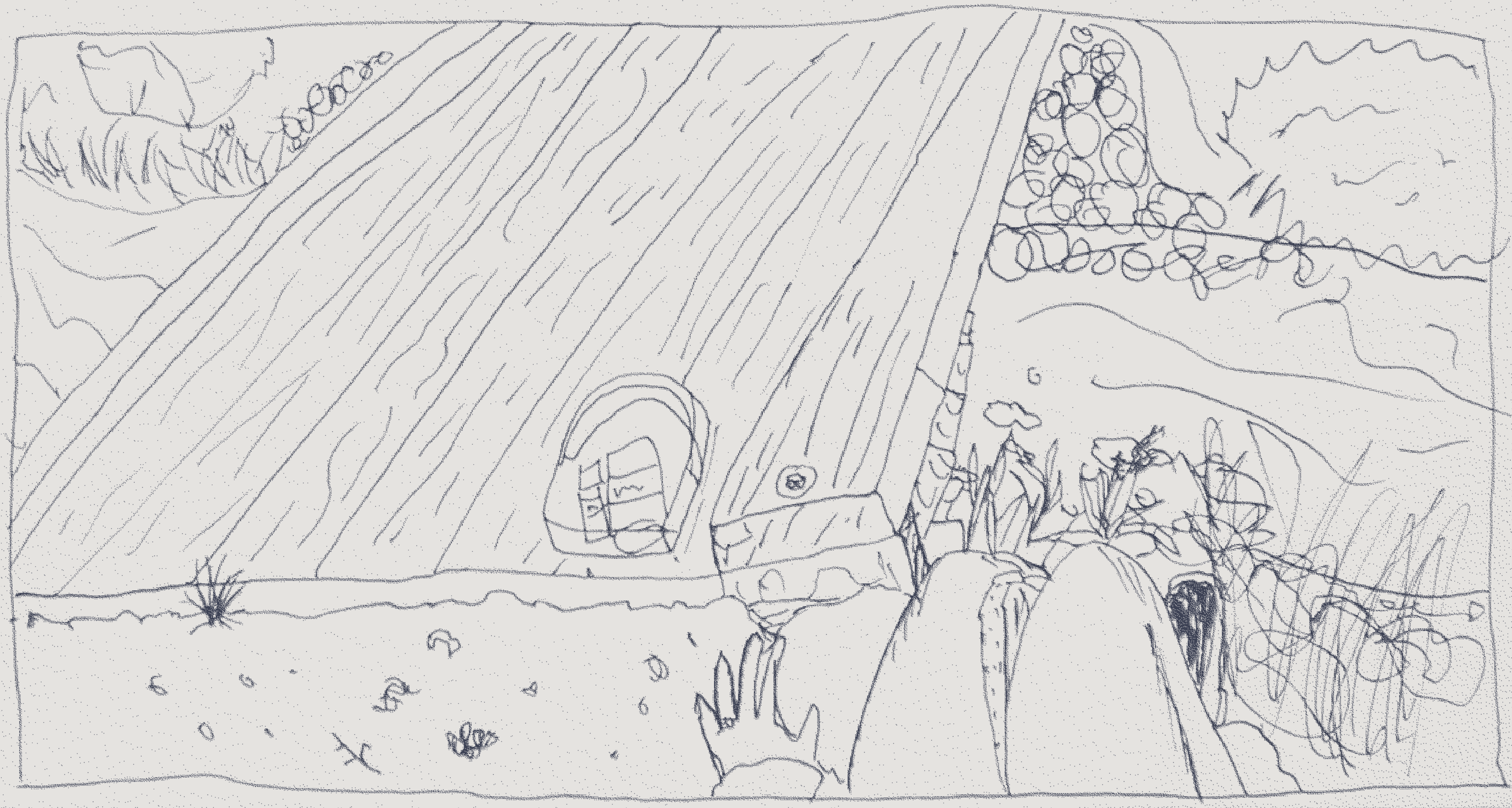


Photo Trenton Chalmers













Yesterday evening we arrived at the YMCA of the Rockies where we will spend the rest of the 2022 National SYP. Today we visited Beaver Meadows in the Rocky Mountain National Park. Park Rangers Emily, Nicole, and Jan led students through a variety of activities focused on elk management. First, the rangers walked through a history of elk management in the park from the near extinction of regional herds and reintroduction to over population and reduction. SYP students practiced research methods used by park scientists including creating plots to measure plant communities and estimating elk density using scat. They also examined the possible management options the park considered and role played a town hall meeting.

Elk Density Survey

Research Team: _____

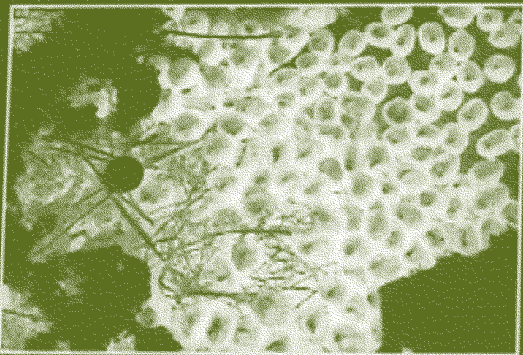
Date: _____ Season: _____ Location: Upper Beaver Meadows Plot #: _____

Transect Line Start Longitude: _____ Latitude: _____ Bearing of Transect: _____

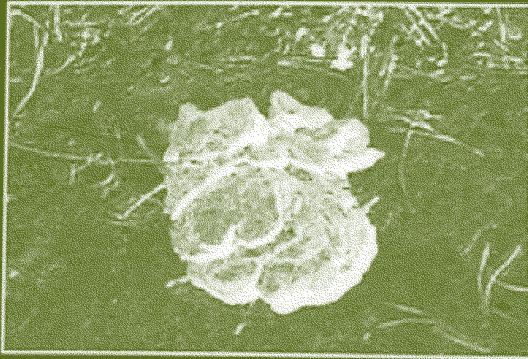
Research Question: How many elk per square mile live in Upper Beaver Meadows?

Data

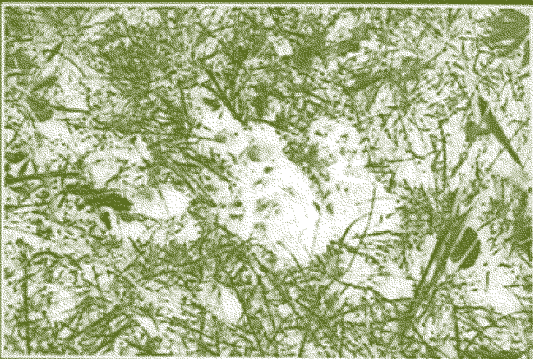
Total pellet groups in your plot A	Total pellet groups in your plot B	Total pellet groups in both plots



winter/spring scat group



summer scat group



summer/fall scat group

Total pellet groups in plots 1 A+B	Total pellet groups in plots 2 A+B	Total pellet groups in plots 3 A+B	Total pellet groups in plots 4 A+B	Total pellet groups in plots 5 A+B	Total pellet groups along the transect line. (Area = 4500 ft ²)
	+	+	+	+	= (A)
Average pellets per plot along the transect line = Total pellet groups (A) ÷ 10				(A) ÷ 10 =	(B)

Calculate the number of elk/mile²

Begin by determining how many elk there are per acre. Multiply the average number of pellets per plot along the transect line by 97 plots (450 ft²/plot) to determine how many elk there are per 43,650 ft² (1 acre). Each elk drops an average of 12 pellet groups per day. Divide the total number of pellet groups by 12 to determine the number of 'elk days' per acre. Observable pellets have been dropped within about a 6 month period (180 days). To determine the number of elk per acre, divide the number of elk days by 180 days. Finally, multiply the number of elk per acre by 640 (640 acres/mile²) to estimate the number of elk per mile².

Calculations

A. Average pellet groups per plot (B) X 97 plots per acre = # Pellet groups per acre (C)

B. Number of pellet groups per acre (C) ÷ 12 = # elk days per acre (D)

A. _____ (B) X 97 = _____ (C)



7/14/22 Spectrum

Humans don't interact with issues in nature

Like here

Humans should interact whenever they want

12,000 yrs ago - Native people use game drive

1800's - First white settlers to hunt elk

1878 - Elk disappearing from Es

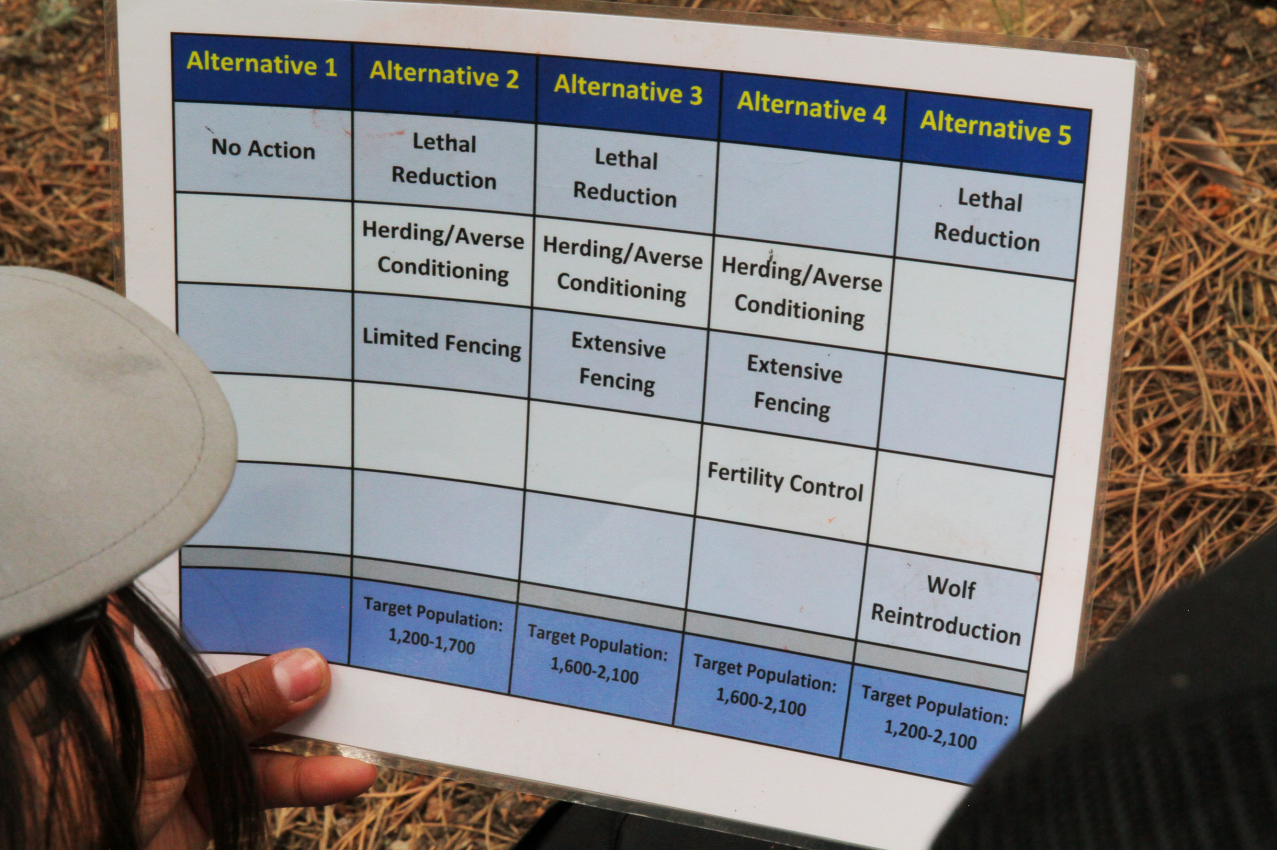
exterminated

+ grizzly bears

1900 - Grey Wolf disappeared from Es

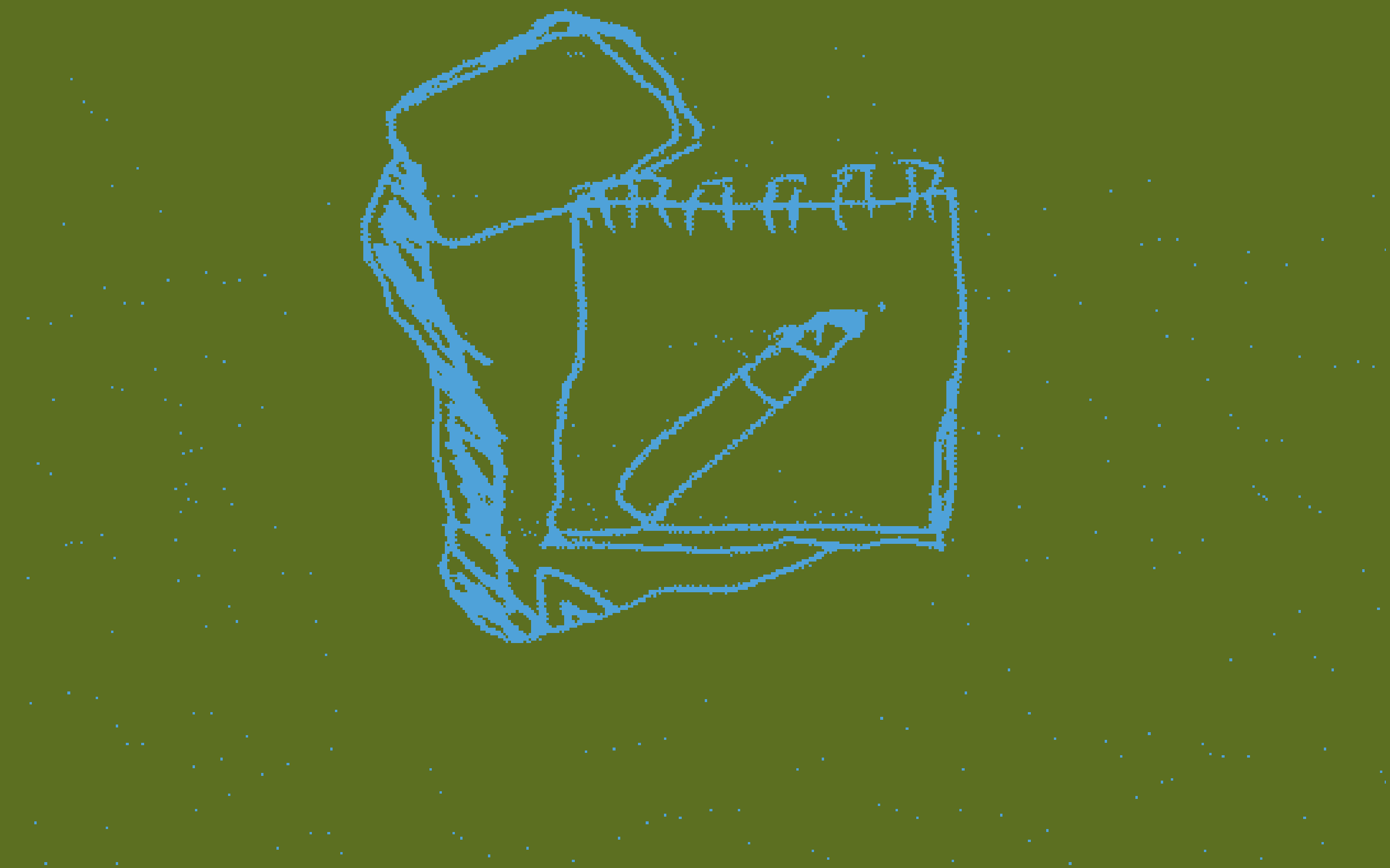
1913-1914 - National park here?





Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
No Action	Lethal Reduction	Lethal Reduction		Lethal Reduction
	Herding/Averse Conditioning	Herding/Averse Conditioning	Herding/Averse Conditioning	
	Limited Fencing	Extensive Fencing	Extensive Fencing	
			Fertility Control	
				Wolf Reintroduction
	Target Population: 1,200-1,700	Target Population: 1,600-2,100	Target Population: 1,600-2,100	Target Population: 1,200-2,100





Drawing by Cathaline

2022

Native American Environmental Awareness **Summer Youth Practicum**
Native American Fish & Wildlife Society

90



Photos April R



Greenwood Wildlife Rehabilitation Center, Sarah Zimmerman and Lori Neff, introduce students to wildlife rehabilitation and showed model animal skulls.

WARM

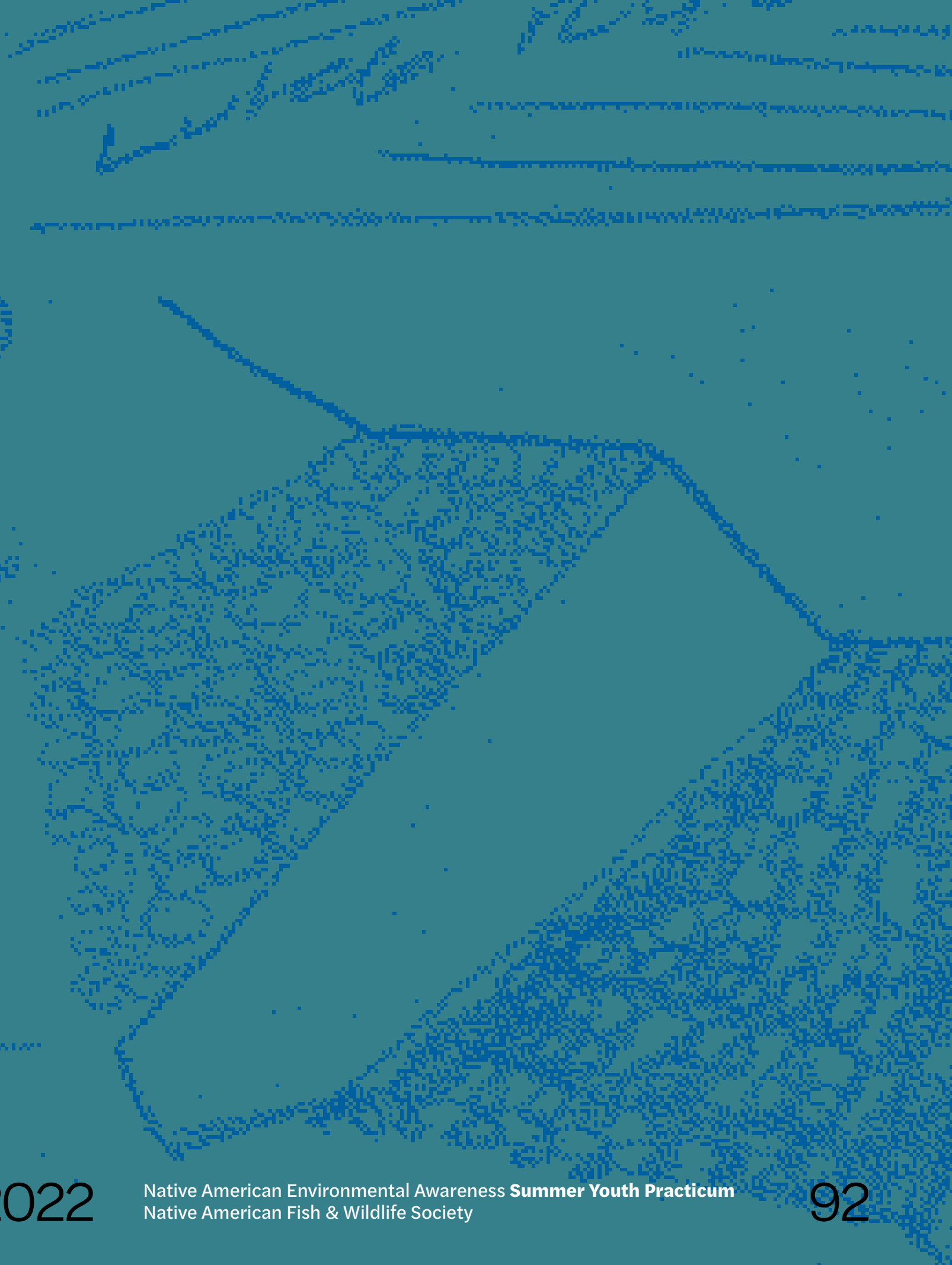
WARM

WARM

WARM

WARM

WARM



The Education Director of the Bird Conservancy of the Rockies, Sherry Nickolaus taught students how to use binoculars and to look and listen for birds.



Photo April R

Oasis

7/10/22 mtn Campus CSU, Colorado 12:02





On the final day of the SYP students presented their Elk Management Plans for the SYPer Tribe of Colorado. Teams were required to develop their own management plans that included partnerships, funding sources, management objectives, and project timelines. The students worked incredibly hard on their projects and delivered insightful presentations that incorporated what they learned throughout the week.

Parents, NAFWS staff, and board members joined a zoom call to watch the presentations, ask questions, and cheer the students on.















Native American ... @native_... • Just now

Thank you to those who supported the 2022 NAFWS National SYP including Alberto Rey and Jason Dilworth from @FredoniaU, NAFWS CLEO Intern Trenton Chalmers, and all of our speakers. Thank you to our sponsors @BureauIndAffrs, @Cabelas, @BassProShops, #outdoorfund, and @TheOrvisCompany



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