

Slate River Working Group Fall Meeting

9 October 2024

Great Blue Heron 2024 Season Summary

Patrick Magee!

Western Colorado University



March 17 2024



March 30 2024

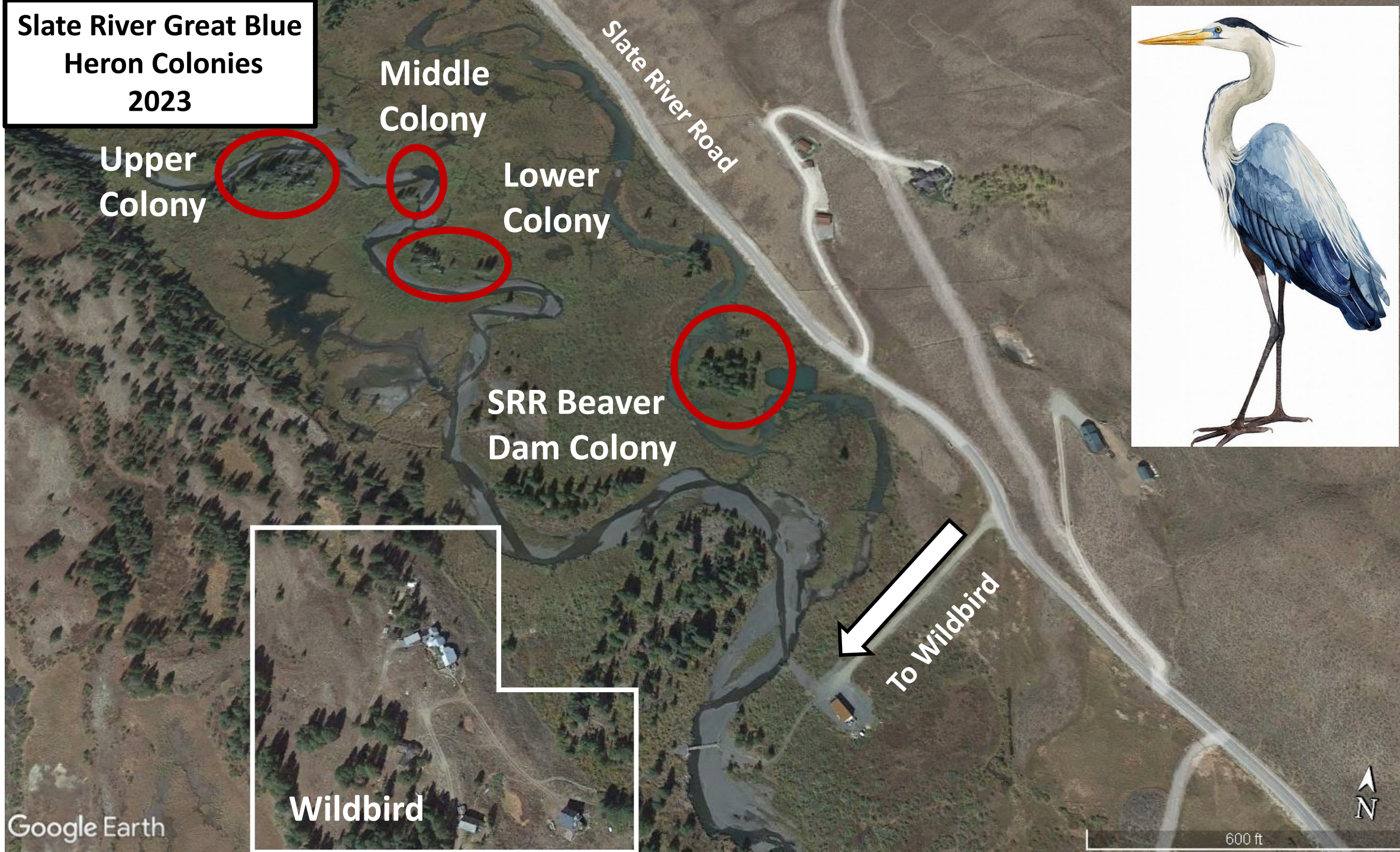


Nest 13
First Nest
March 30, 2024



Photo by Lucca Sterrer

**Slate River Great Blue
Heron Colonies
2023**



Beaver Dam Colony
June 17, 2024

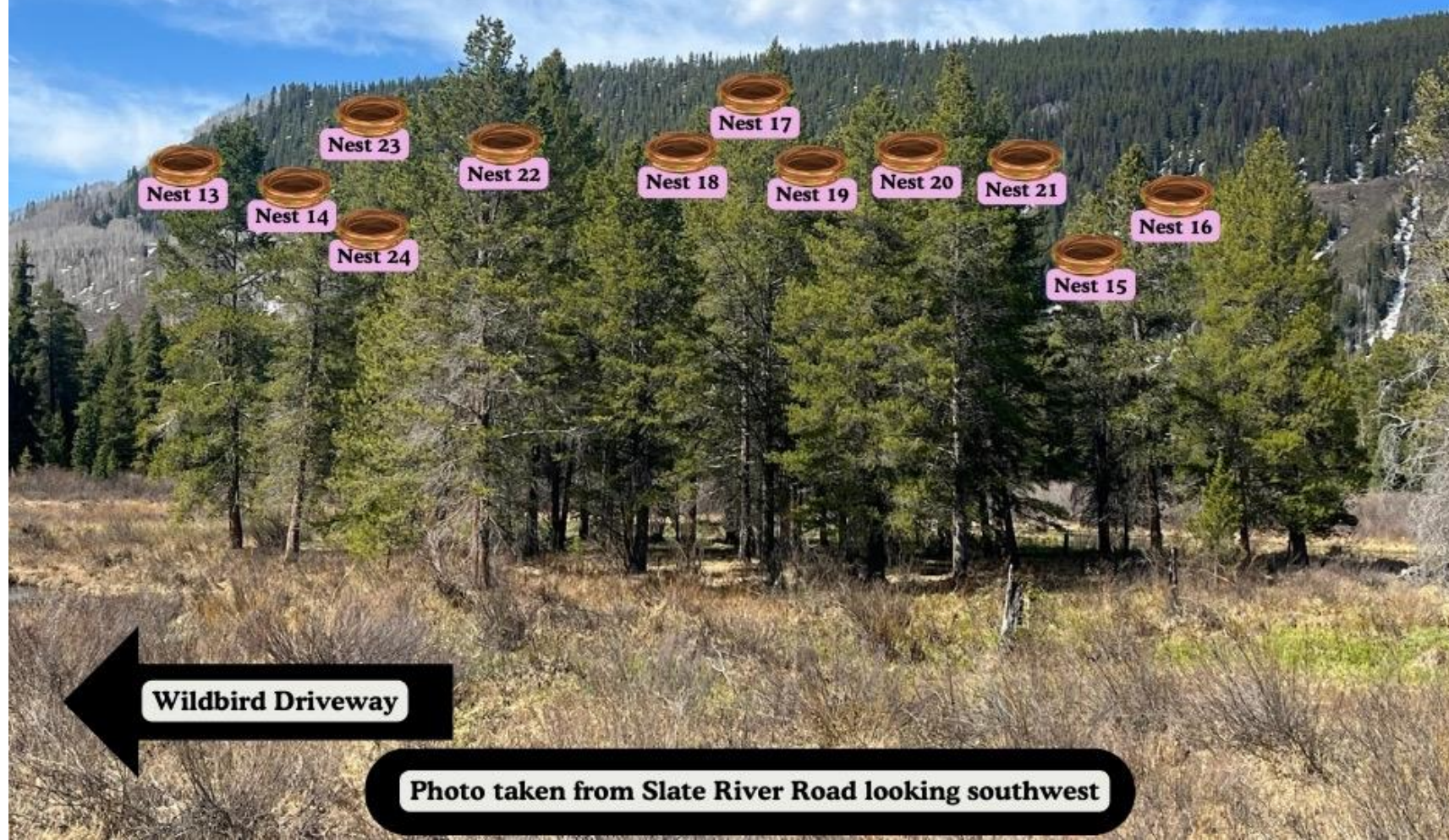


Photo by Lucca Sterrer



Slate River

GREAT BLUE HERONS



By Lucca Sterrer
June 21, 2024

Beaver Dam Colony, Slate River, Crested Butte, July 14, 2024

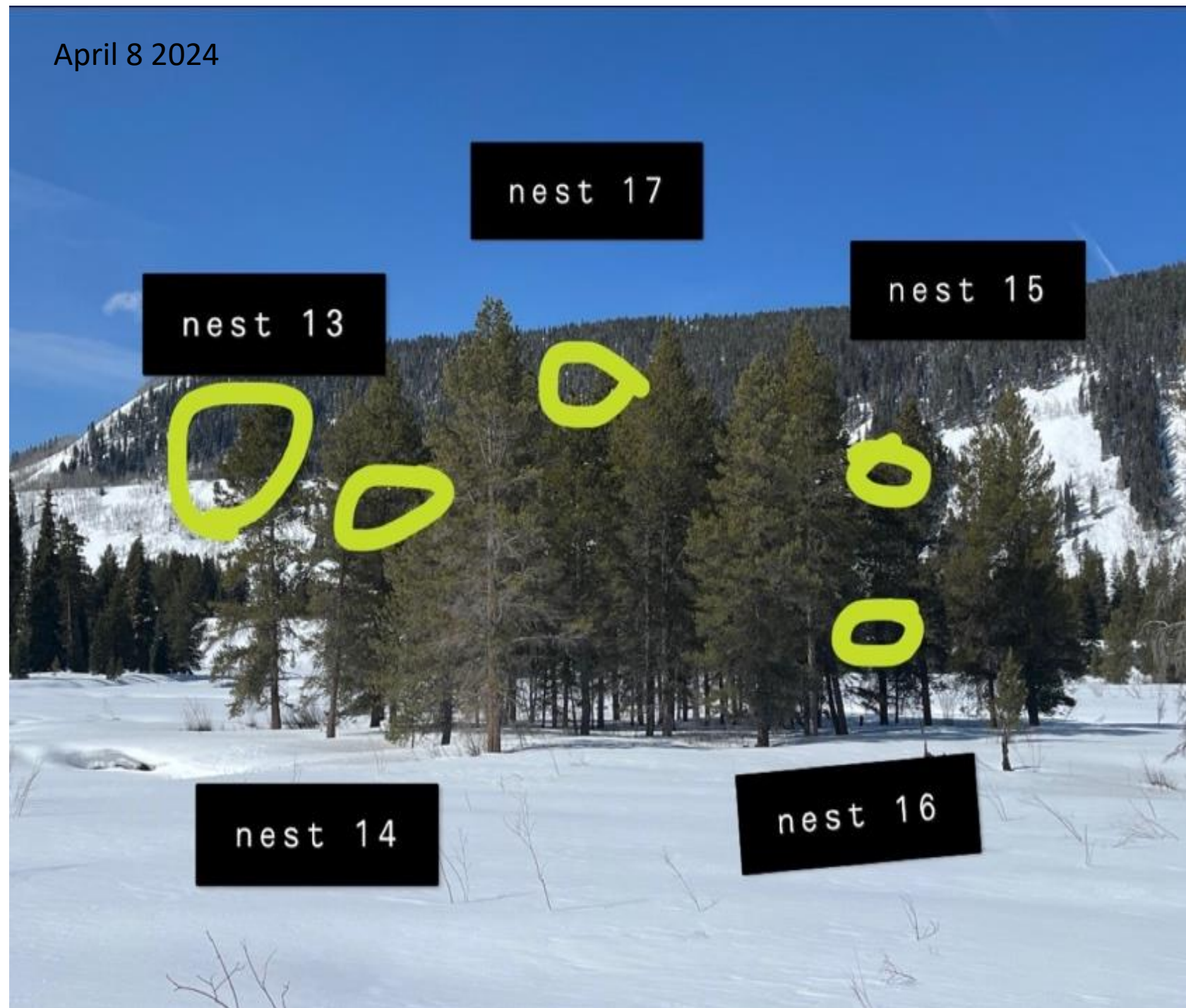


Photo by
Lucca Sterrer

Summary of Heron Nests

2024 Nest #	2023 Nest #	Colony	Occupied	# of Adults	# of Chicks	Fledged Chicks
1	1	Lower	No	0	0	0
3	3	Lower	No	0	0	0
4	4	Lower	No	0	0	0
5	5	Lower	No	0	0	0
6	6	Lower	No	0	0	0
7	7	Lower	No	0	0	0
11	11	Lower	No	0	0	0
12	12	Lower	No	0	0	0
UC 16	16	Upper	No	0	0	0
UC 17	17	Upper	No	0	0	0
UC 18	18	Upper	No	0	0	0
UC 19	19	Upper	No	0	0	0

April 8 2024



nest 17

nest 13

nest 15

nest 14

nest 16

2024 Nest #	2023 Nest #	Colony	Occupied	# of Adults	# of Chicks	Fledged Chicks
16	16	Beaver Dam	Yes	2	3	3
					5/30, 6/1, 6/3	7/12, 7/10, 7/14
17	17	Beaver Dam	Yes	2	3	3
					5/23, 5/25, 5/27	7/14, 7/12, 7/10
18	N/A	Beaver Dam	Yes	2	4	4
					5/30, 6/1, 6/3, 6/5	7/12, 7/14, 7/16, 7/18
19	N/A	Beaver Dam	Yes	2	2	2
					5/19, 5/21	8/1, 8/3
13	13	Beaver Dam	Yes	2	3	3
					5/12, 5/14, 5/16	6/30, 6/28, 6/26
14	14	Beaver Dam	Yes	2	5	5
					5/13 ,5/15 ,5/17, 5/19, 5/21	6/28, 7/1, 7/3, 7/5, 7/7
15	15	Beaver Dam	Yes	2	3	3
					5/21, 5/23, 5/25	7/22, 7/20, 7/18
20	N/A	Beaver Dam	Yes	2	4	4
					5/26, 5/28, 5/30, 6/1	6/28, 6/30, 7/1, 7/3
21	N/A	Beaver Dam	Yes	2	5	5
					5/26, 5/28, 5/30, 6/1, 6/3	7/1, 7/3, 7/5, 7/7, 7/9
22	N/A	Beaver Dam	Yes	2	4	4
					5/28, 5/30, 6/1, 6/3	7/1, 7/3, 7/5, 7/7
23	N/A	Beaver Dam	Yes	2	3	3
					6/1,6/3, 6/5	7/20, 7/22, 7/24, 7/26
24	N/A	Beaver Dam	Yes	2	2	2
					6/3, 6/5	7/12, 7/14



Slate River View
April 29, 2024
7:56 am



Slate River View
April 29, 2024
9:52 am

Partners in the Tree Canopy

Nest 13 is home to Cosmo & Wanda

Nest 14 houses Samson & Jill

Nest 15 houses Emerson & Allison

Nest 16 houses Joe & Polly

Nest 17 houses Romeo & Juliet

Nest 18 houses Jack & Beverly

Nest 19 is home to Helga & Hans



**Nest 15
April 8, 2024
(Emerson
and
Allison)**

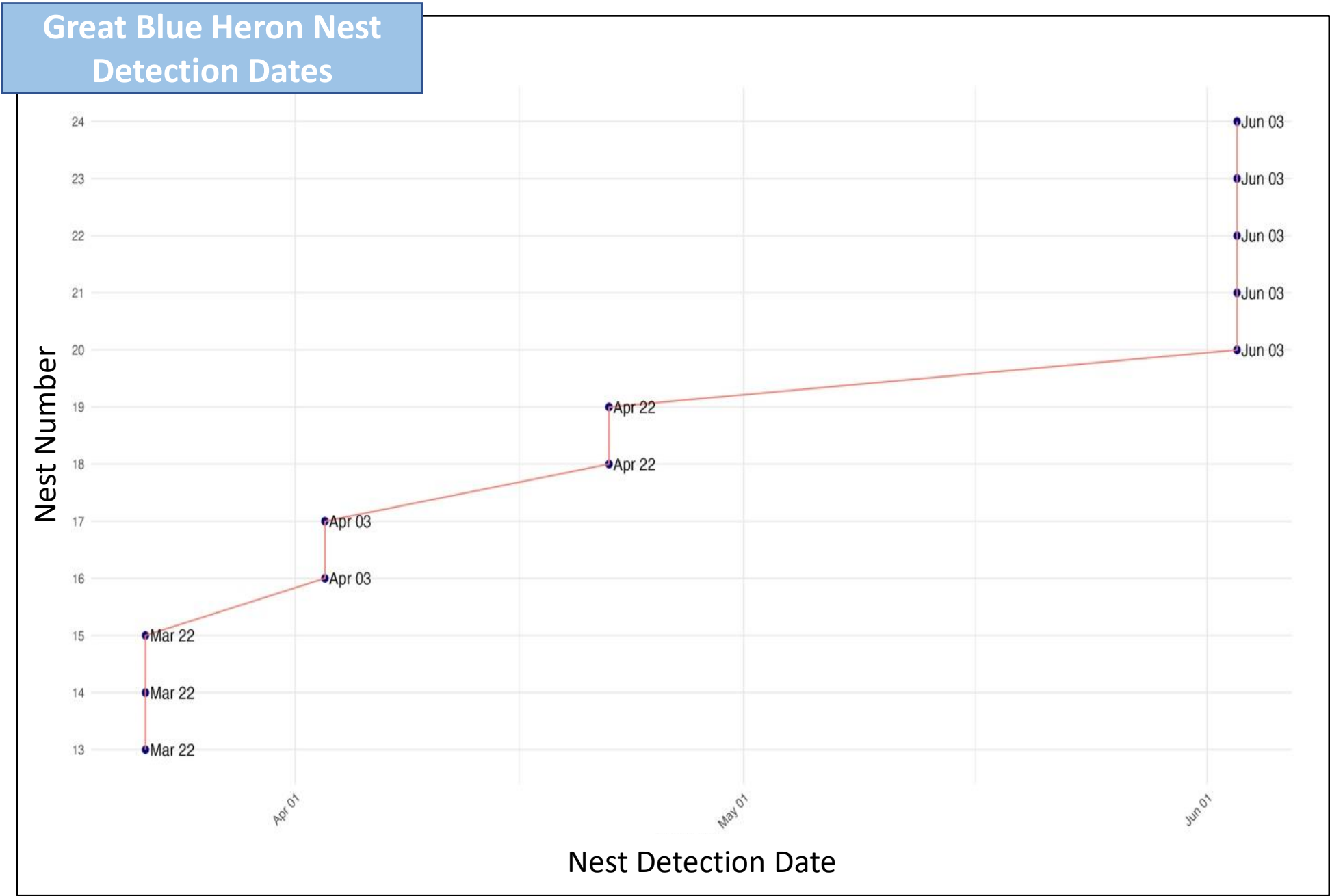


Photos by Lucca Sterrer



Nest 17
April 22, 2024

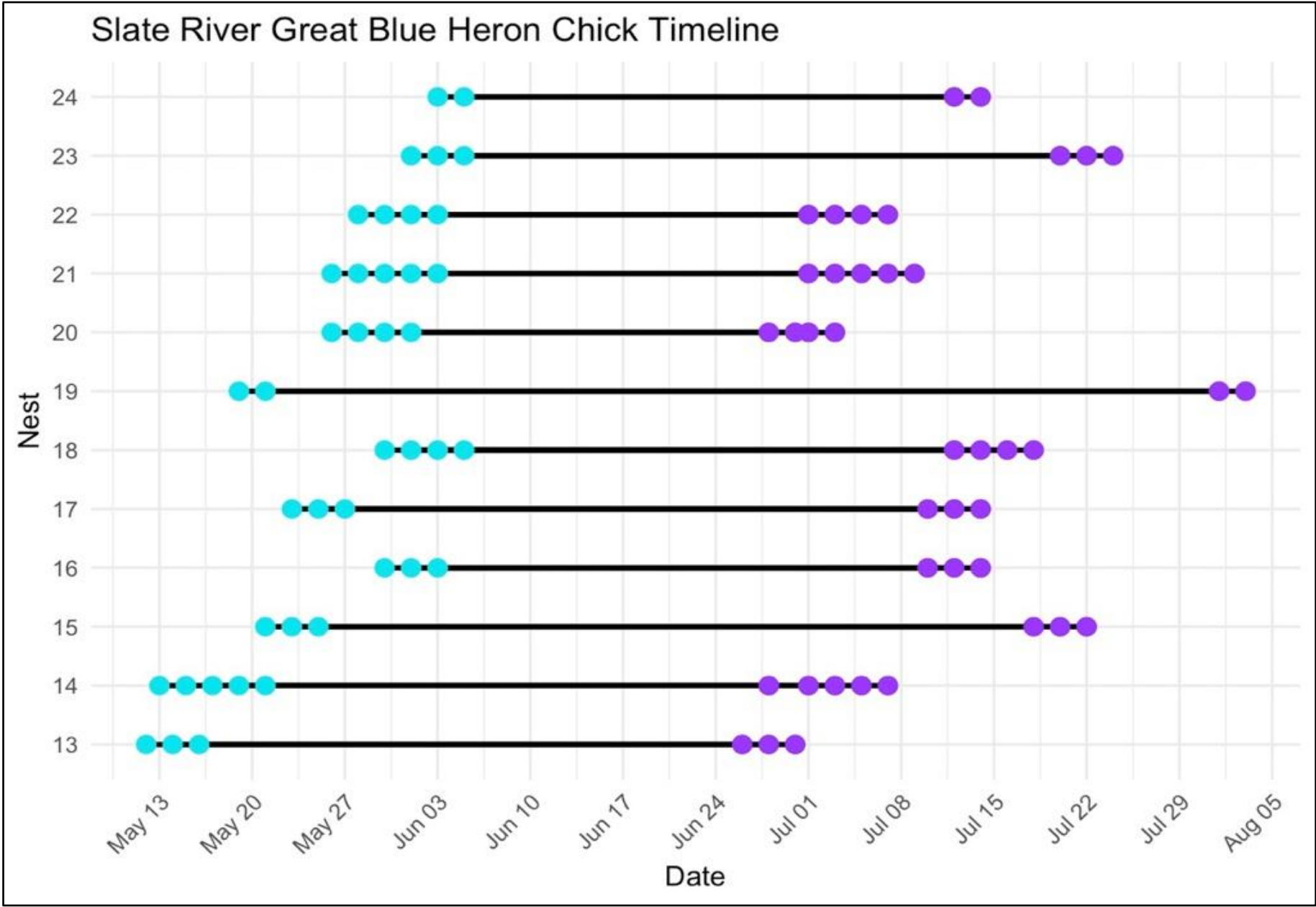
Photo by Lucca Sterrer



Nest 21
June 23, 2024
One Adult
Feeding
4 Chicks
(1 week before
first chick fledged)

Photo by Lucca Sterrer





**Great Blue Heron Chick
Ready to Fledge
July 14, 2024
Photo by Lucca Sterrer**

Nest 18
May 20, 2024
Incubation

Photo by Lucca Sterrer

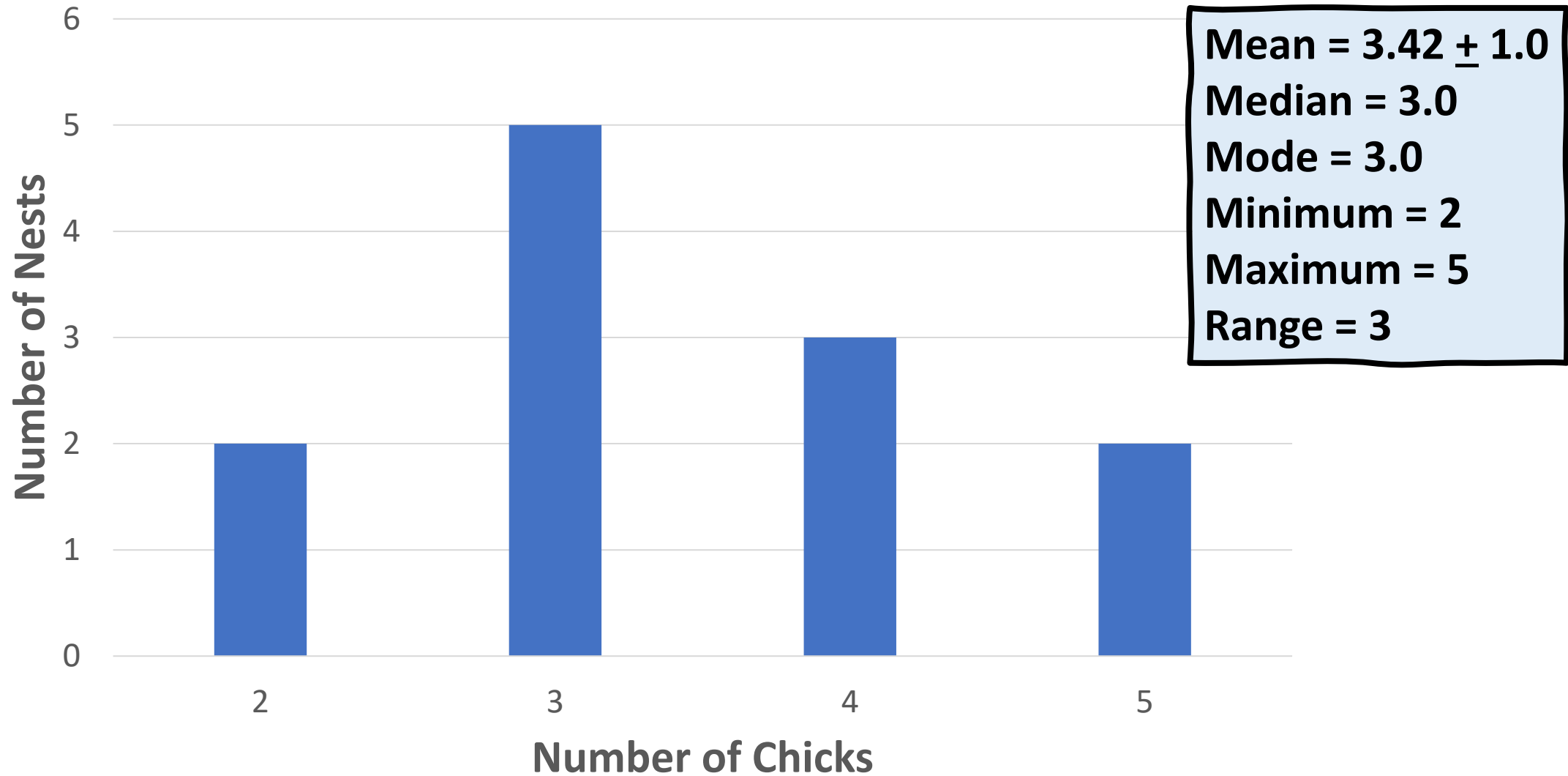


Slate River Great Blue Heron Colony

Demographic and Phenological Comparison Among Years

Parameter	2018	2019	2020	2021	2022	2023	2024
Arrival	March 13	March 17	March 13	March 7	March 13	March 23 (+10)	March 22 (-1)
Egg Laying + Incubation	April 9	April 12	April 3	?	April 2+	?	?
Hatching + Broods	May 7	May 10	May 1	?	May 19	June 7 (+19)	May 12 (-26)
First Fledge	July 3	July 7	July 2	July 1-5	July 8	July 27 (+19)	June 26 (-31)
Last Fledge	August 15	September 2	August 12	July 14-18	August 29	August 12 (-17)	August 8 (-4)
Nest Occupancy (days)	155	170	151	130	169	142 (-27)	139 (-3)
Active nests	25	20	18	16	18	15 (-3)	12 (-3)
Nests Fledging Young	25	19	17	15	14	10 (-4)	12 (+2)
Total Adults	50	38	34	32	36	30? (-6)	24 (-6)
Total Chicks	67	47	45	46	42	29 (-13)	41 (+12)
Fledged Chicks	67	41	43	42	39-40	29 (-10)	41 (+12)
Mean Brood Size	2.7 $\pm$ 1.2	2.5 $\pm$ 1.0	2.7 $\pm$ 0.9	2.9 $\pm$ 0.23	2.8 $\pm$ 0.8	2.9 $\pm$ 1.2	3.4 $\pm$ 1.0
Brood Size Range	1-5	1-4	1-4	1-5	1-4	1-5	2-5

Great Blue Heron Brood Sizes 2024



Photos by Lucca Sterrer



Nest 13, Adult and Chick, May 27, 2024



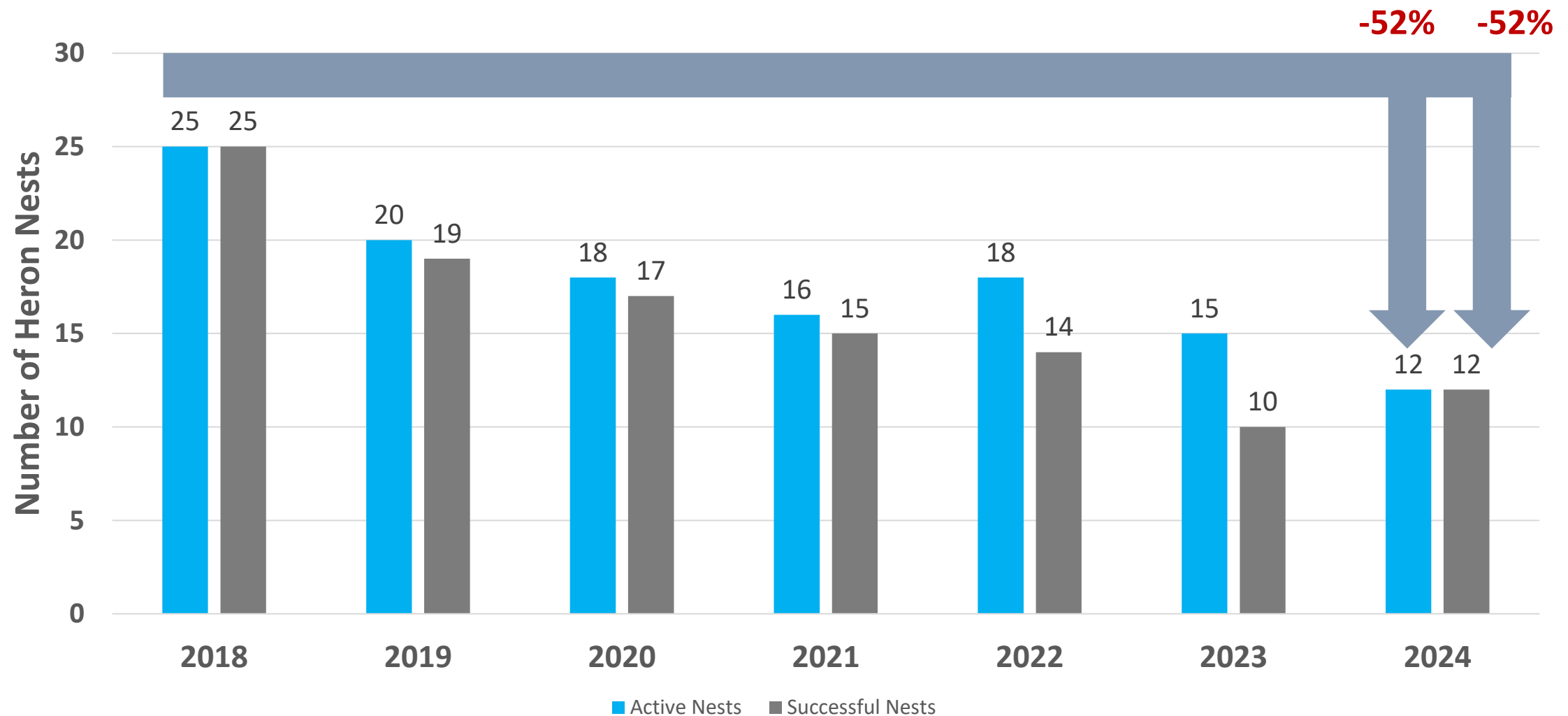
Nest 19, 2 Adults and Chick, May 27, 2024



Nest 13, Three Chicks, June 3, 2024

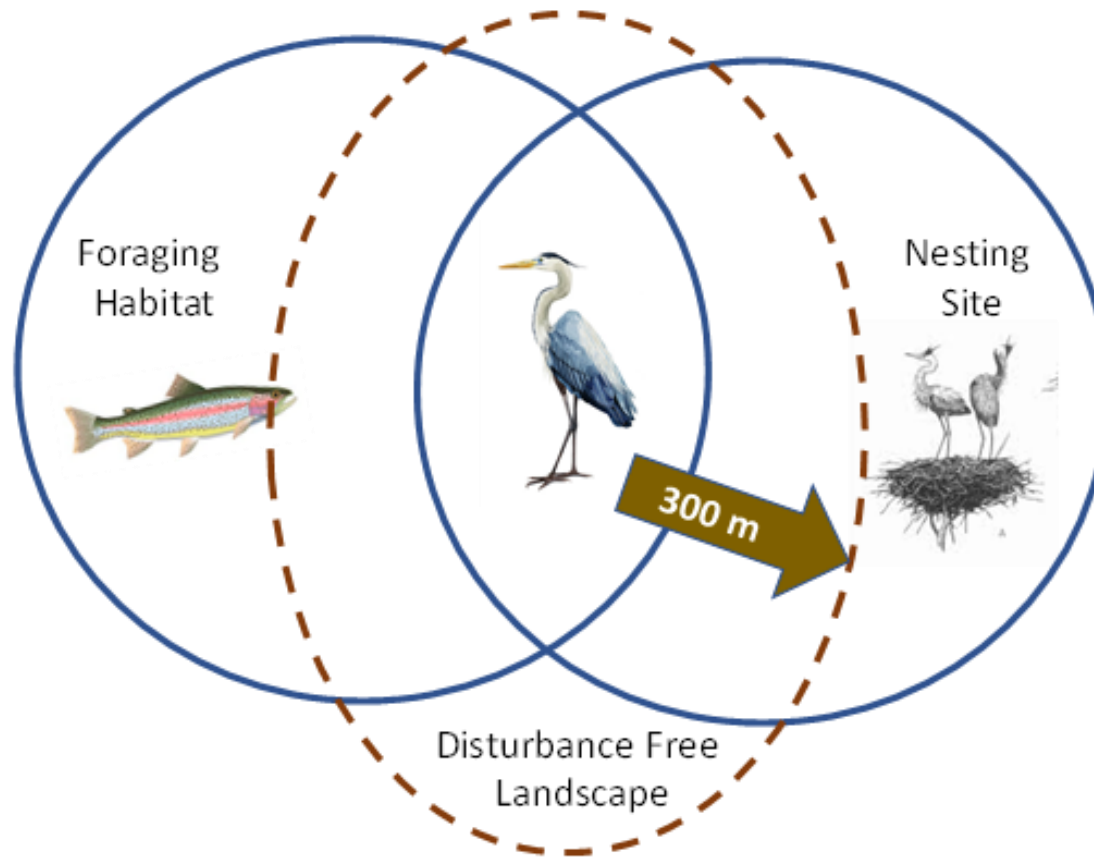
Photo by Lucca Sterrer

Slate Rive Great Blue Heron Nests from 2018-2023



Management Action	Explanation	Timeline	Responsible Party
Conservation Planning Slate River Working Group Mgt Plan	Maintain and update, collaborative, adaptive management approach	Ongoing	Slate River Working Group
Identify Threats	Human recreation, construction and road maintenance, climate, health and vigor of nesting trees, water quality, predation.	Ongoing	Slate River Working Group
Monitoring and Research Identify and monitor threats to colony	Predation by bald eagles, osprey and ravens; colony tree stand health and vigor; water pollution; drought and climate change; human disturbances	Ongoing	Slate River Working Group partner with researchers
Threat Mitigation <u>Spatial Buffers</u> Maintain 300 m disturbance “free” spatial buffer	Great blue herons require a spatial buffer during the nesting season to successfully occupy nests, lay eggs, brood young, and provision young to fledging	Annually	Slate River Working Group and Crested Butte Community
Threat Mitigation <u>Spatial Buffers</u> Maintain 300 m disturbance “free” spatial buffer	Stay vigilant regarding other uses such as nordic skiing, fishing, Lower Loop Trail use from March through August	Annually	Slate River Working Group, CB Nordic Center
Threat Mitigation <u>Spatial Buffers</u> Prioritize protecting any adjacent lands within ½ mile (or more) of colony	Hérons require nesting trees, foraging habitats and disturbance free landscape that connects the nesting site to the foraging areas	Ongoing	Land conservation organizations (CBLT) and private landowners
Threat Mitigation <u>Spatial Buffers</u> Forest screening between colony and Wild Bird development and Lower Loop Trail system	Maintain forest cover, prohibit tree removal (except for tree health applications, i.e., removing diseased trees that might infect adjacent trees) and monitor tree health on west side of colony.	Ongoing	CBLT, CB Nordic, Town of CB, Slate River Working Group, Wildbird
Threat Mitigation <u>Temporal Buffers</u> Maintain temporal buffer, voluntary no-float	Continue the voluntary no-float recommendation from Mid-March through July 15 from Gunsight Bridge to Recreation Path Bridge	March 15-July 15 annually, Re-evaluate annually	Slate River Working Group, Crested Butte community
Threat Mitigation <u>Temporal Buffers</u> Slate River Road maintenance and house building	Loud noises within 300 m of the heron colony can elicit flushing events and can increase heron stress levels. Avoid road and housing construction from March through August	Ongoing	Slate River Working Group, Crested Butte community, Gunnison County Public Works, Colorado Department of Transportation
Education and Outreach River user education	River steward program promotes awareness about voluntary no-float and educates users on heron colony	Annually	CBLT and partners
Education and Outreach Low impact floating	Further develop recommendations for low impact floating This might require additional research	Ongoing	Slate River Working Group, Crested Butte and Gunnison schools
Education and Outreach Great Blue Heron Days	Develop an annual educational outreach celebration that includes viewing of the herons open to community	Mid-May to early July	Slate River Working Group
Monitoring and Research Heron monitoring	Develop an on-going, low intensity monitoring plan for the heronry	Annually	Western Colorado University, partners
Monitoring and Research Citizen Science	Engage public in heron monitoring and conservation	Annually	Slate River Working Group and Crested Butte community

Great Blue Heron Annual Cycle and Habitat Requirements



Big winter: habitat in March/April

Colony abandonment (April 24)

Ohio Creek Heronry (April 24/May 20)

16 nests, 20 adults at RJ

Trees

**Limitations on voluntary no-float
Late and wet scenario**

Disturbance management

Outreach and celebration

Future monitoring

"The heron uses the shallows as I cannot. I give them up to the heron"

Henry David Thoreau

Heron and Biodiversity

2024 Season

Challenging to observe herons in live trees

Lowest number of nests (-52%)

Phenology was “normal” after slow start

High reproductive success (100%)

Highest number of chicks per nest (3.4)

Less disturbance in new site

More vulnerable to road impacts (fall projects)

River recreation – morning observations

Dead branches on trees

2025 Season

Continue monitoring



ACKNOWLEDGEMENTS

Anonymous donor → 2023, 2024

Crested Butte Land Trust

Town of CB

Upper Gunnison River Water Conservancy District

Community Foundation of the Gunnison Valley

Colorado Parks and Wildlife

Partners in the Outdoors

Denver Field Ornithologists

Protect the CB Herons (Larry and Tim)

Colorado Chapter of the Wildlife Society

Louise Pentland and Dirk Williamson

Western Colorado University

Dan Piquette, Mindful Birder Photography

Slate River Working Group

Students:

Megan Zareba, Ellie Orr, Jake Bartholomew, Amy

Haeseler, Grant Campbell, Cam Uetz, Hadley

Nelson, Arrow Myers, Cait Harvey, Ryan Outler

Lucca Sterrer → 2024



Questions?



Photo by Lucca Sterrer