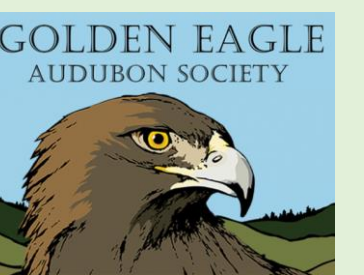
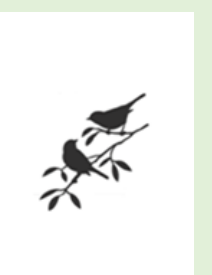
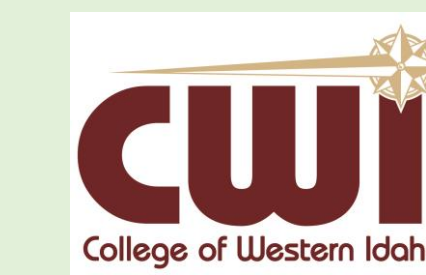


THE ADOPT-A-PLOT PROGRAM:

HARNESSING THE POWER OF COMMUNITY VOLUNTEERS TO CONTROL INVASIVE WEEDS.

<https://www.boisestate.edu/ibo/get-involved/volunteer/>

A. Connolly¹, H. Ware Carlisle¹, G. Kaltenecker¹, D. Perkins² & S. Finn³
Boise State University¹ College of Western Idaho² Golden Eagle Audubon Society³



Introduction/Background

22-acre Diane Moore Nature Center adjacent to the Boise River is managed by Intermountain Bird Observatory for avian science, education and conservation

- Landowners
 - Idaho Department of Transportation
 - Boise State University
- Restoration Partners
 - Intermountain Bird Observatory
 - College of Western Idaho
 - Golden Eagle Audubon Society
 - Idaho Department of Fish and Game
 - US Fish and Wildlife Service

Intermountain Bird Observatory leading restoration; have brought in partners

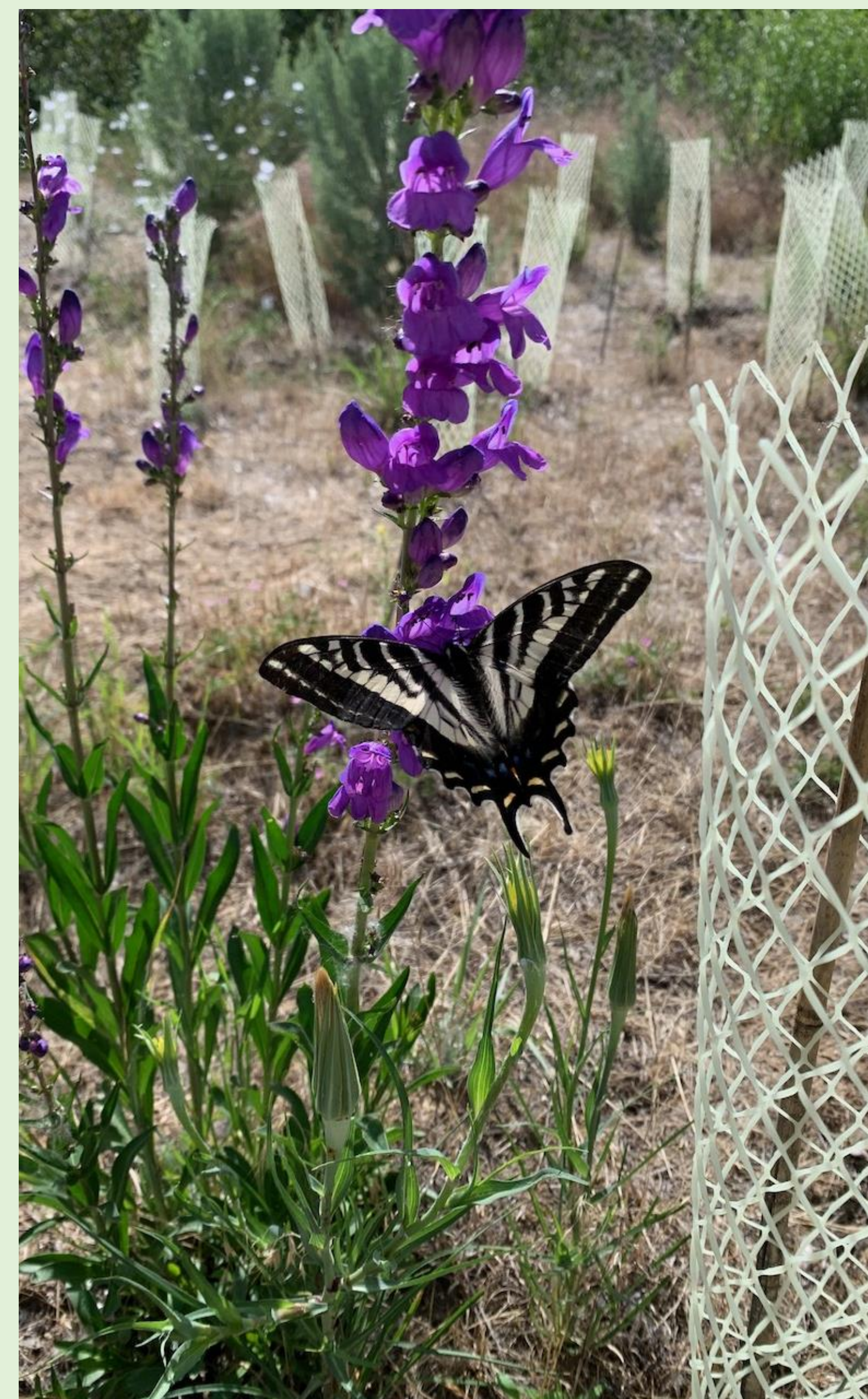
Decades of unregulated use has led to abundance of invasive weeds

In 2018 and 2019, 75 experimental plots established to explore restoration success and survival rates of reintroduced native plants

Adopt-a-plot program piloted in 2020 to recruit volunteers to help with weeding and maintenance of plots

Program concept was developed prior to the pandemic; efficiently adapted for COVID-safe protocols

Information from this project will inform complementary restoration efforts at adjacent sites down river



A pale swallowtail butterfly perched on penstemon – photo credit: Aaron Connolly

Results

Training sessions

- Avg. group size ~ 4, max. 8, several singles
- Approx. 1 hour long depending on group size
- Held 9 formal training sessions
 - Many one-on-one to accommodate COVID concerns

37 volunteer groups “adopted” at least one plot

- Groups often had a “leader” with multiple members in their group
 - Families
 - Friends
 - Girl scout troop
 - Many single person groups

21 volunteer groups adopted more than one plot

Approx. 1-3 person-hours average time to weed a single plot

- Translates to 75-225 hours of weeding alone across the site
 - Perhaps more for plots with very thick weeds
 - Some plots weeded more than once
- Other maintenance
 - Straightening seedling protection cages
 - Mulching around plants
 - Many volunteers took upon themselves to collect trash in and around plots

More than 50% of plots already “adopted” for 2021

- 57% of volunteers confirmed they are returning

Discussion

The first season of adopt-a-plot was a success!!!

- Each year more restoration plants are added making intern workload increasingly difficult
 - weekly watering
 - data collection and entry
- Adopt-a-plot takes the focus off weeding and plot maintenance for student interns
- Volunteers are easily trained to identify desirable and undesirable species
 - Very few known instances of native removal from plots

2021 Season will start 1-2 months earlier

- Earlier weeding will prevent seed production and will help reduce the weed seed bank size

Volunteer retention take-aways:

- Use existing connections- identified highly involved volunteers to help with 2020 socially-distanced Fall planting event
- Word of mouth is important- Friends and family of existing volunteers reached out wanting to adopt their own plot(s)
- Adjust and Adapt- We made strategic adjustments to changes caused by pandemic and applied creative problem solving to provide volunteer opportunities during the COVID-19 pandemic

Sense of pride and ownership passed to volunteers for their contributions to the restoration

- Aligns with IBO’s mission
 - Discovery of the natural world
 - Community engagement

Future Volunteer Opportunities

- 2021 Adopt-a-plot season
- Future side channel restoration
- Revegetation when project is complete

Acknowledgements

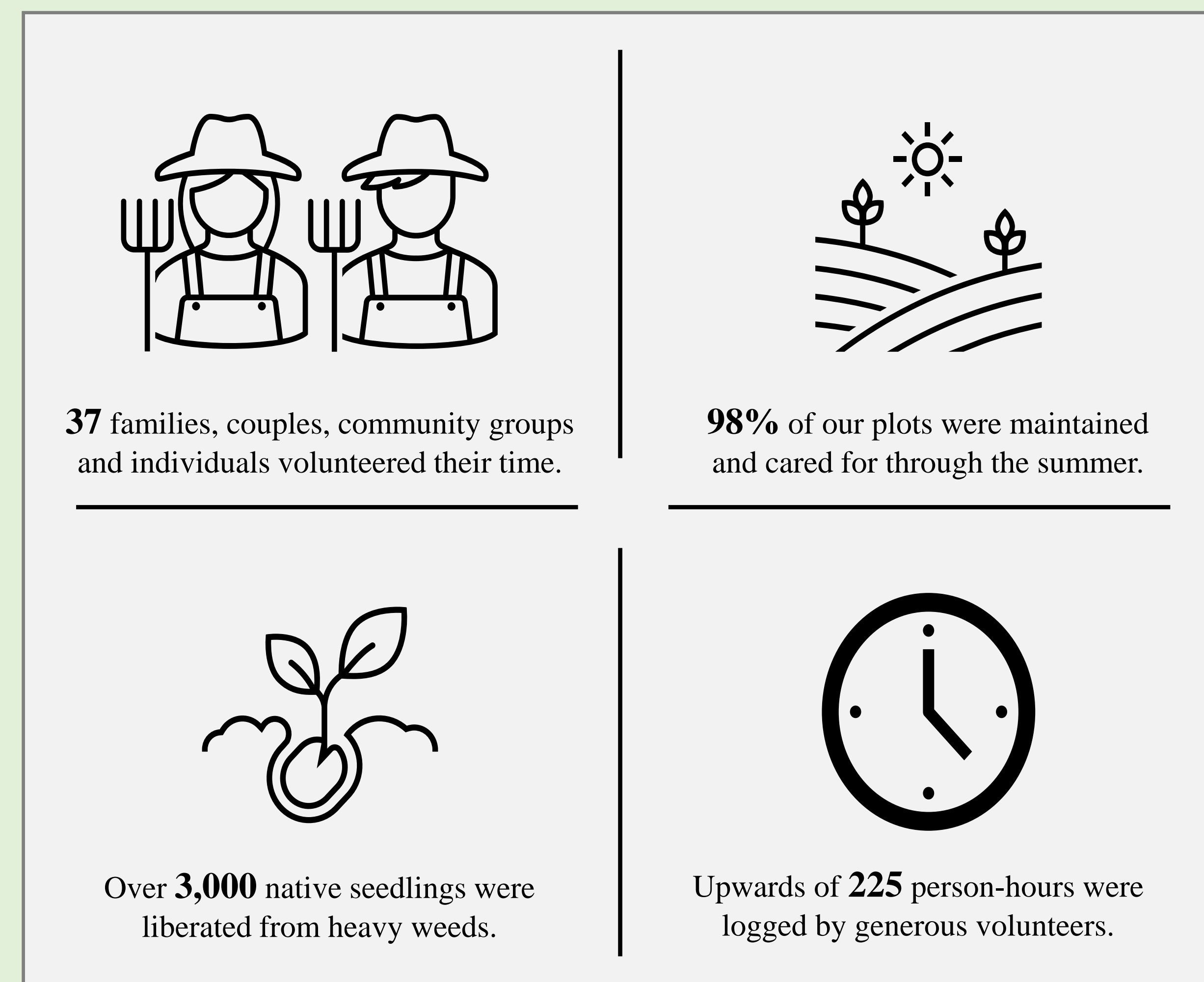
We’d like to thank Idaho Department of Fish and Game and US Fish and Wildlife Service for funding of restoration supplies, CWI Horticulture Program and Native Plant Network for growing and supplying seedlings, Mia Cinello-Smith and Kelly Smith for developing our Adopt-a-plot plant identification guide. Also, thanks to our community volunteers for all their hard work and dedication to this project and the future of the Boise River corridor.



Sundancer daisy – photo credit: Aaron Connolly



An Adopt-a-plot program training session; photo taken prior to Boise mask mandate – photo credit: Aaron Connolly



Highlights from the 2020 Adopt-a-plot pilot season

Methods

Recruitment

- Social media – IBO Facebook and Instagram
- Existing volunteer email list
- Google form to collect group information
 - email
 - phone number
 - group size
 - group name
 - group availability

Training sessions led by student interns

- Scheduled a series of training sessions to familiarize volunteers with the site, the plots, plant species and the overall goals of the project.
 - site tour
 - plant identification
 - the goal was to keep this simple
 - intern-developed illustrated plant identification guide was provided to volunteers (Figure 1)
- Plot assignment

Pandemic posed some challenges

- Social distancing
- Small groups
 - Masks were strongly encouraged
 - Took volunteer concerns into account when scheduling
 - Greatest concern = smaller group or one-on-one

Plants to remove	Plants to keep
cheatgrass (<i>Bromus tectorum</i>)	generally - "When in doubt; Don't pull it!"
rush skeletonweed (<i>Chondrilla juncea</i>)	focused on "look alikes"; grasses and forbs
tumble mustard (<i>Sisymbrium altissimum</i>)	pictures and descriptions provided in guide
prickly lettuce (<i>Lactuca serriola</i>)	Native plants found in our plots
goathead (<i>Tribulus terrestris</i>)	other important natives across the site
others; pictures and descriptions provided in guide	

Figure 1: Guidelines for basic plant identification and removal; guide provided photos and descriptions.



A plot before weeding – photo credit: Kim Bahruth



A plot after weeding – photo credit: Aaron Connolly



Aspen fleabane – photo credit: Aaron Connolly



Globemallow – photo credit: Aaron Connolly



Hoary tansyaster – photo credit: Aaron Connolly