



MONTANA BIOCONTROL COORDINATION PROJECT

2024 ANNUAL REPORT



MONTANA BIOCONTROL COORDINATION PROJECT

EXECUTIVE COMMITTEE

Jeff Littlefield, Chair
Hannah Lewis, Vice Chair
Natalie West, Science Advisor

STAFF

Melissa Maggio, Project Coordinator
Jill Leblow, Biocontrol Technician
Jake Kleimann, Biocontrol Technician
Cade Ulrich, Biocontrol Technician
Harper Tipps, Biocontrol Technician
Malcolm Bernosky, University of Montana Work Study Position

OUR MISSION

To provide the leadership, coordination, and education necessary to enable land managers across Montana to successfully incorporate biological weed control into their noxious weed management programs.

As we conclude the 11th year of the Montana Biocontrol Project (MTBCP), we are excited to share the results from our 5-year program assessment (see pages 6 and 7) that will guide our work in the coming years. While our core focus areas—**education, collection & distribution, and monitoring**—remain unchanged, we are introducing some new strategies moving forward. Based on your feedback, we will shift the emphasis from collecting and shipping biocontrol agents to land managers, to **evaluating the establishment** of the releases made over the past decade. The goal is to identify new, collectible populations that can be used by local land managers. We will continue to host collection days for land managers to attend, just as we have in previous years. In 2024, we took initial steps in this direction and successfully identified **previously unknown, potential collection sites** (see page 5). In 2025, we will refine and expand these site evaluations. Additionally, we will begin integrating **new biocontrol agents** into our work (see page



4). We are excited about the evolution of MTBCP and the opportunities these new activities and strategies will bring in 2025.

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New Address
1075 South Ave West, Suite 1
Missoula, MT 59801

Cover photo: a black-capped chickadee (*Poecile atricapillus*) picking a gall fly larva (*Urophora* spp.) out of spotted knapweed seedhead

PARTICIPATION

19 In-person Workshops/
Presentations | 4 Virtual Workshops/
Presentations

Outreach
Helped coordinate NAISMA Conference Biocontrol Strand, Special Session & Virtual Biocontrol Summit

44 Days Spent Collecting

372 Collection Day Participants

13,339 Miles Traveled for Workshops and Collections

INSECTS

6 Species Released | 6 Species Collected

11,556 Acres Treated

97 Sites Monitored | 35 Counties Received Insects

15 States & 2 Tribal Nations Received Insects

1.6 million Insects Distributed

\$416,600 Market Value of Insects

2024 BREAKDOWN

9% Out-of-State Coordination

9% Fundraising

21% Collection & Distribution

14% Education | 32% Monitoring

15% In-state Coordination

NEW(ER) BIOCONTROL SYSTEMS

FLOWERING RUSH

We continued our pre-release monitoring work on the flowering rush weevil (*Bagous nodulosus*) and installed rearing ponds in anticipation of approval for field release with the intention of increasing the number of weevils released at initial release sites. The weevil was approved for release in late 2024, meaning we will begin rearing weevils in our ponds in 2025!



WHITETOP

We were able to join Jeff Littlefield (MSU) at one of the whitetop mite (*Aceria drabae*) release sites and assisted in his monitoring efforts. This biocontrol agent has increased its population at some of the initial release sites to the point of being moved to a distribution phase! We will assist with this effort in 2025 by working with land managers throughout MT who are interested in using biocontrol to aid in the management of whitetop infestations. Our role will include identifying appropriate release sites, collecting and redistributing, and monitoring.

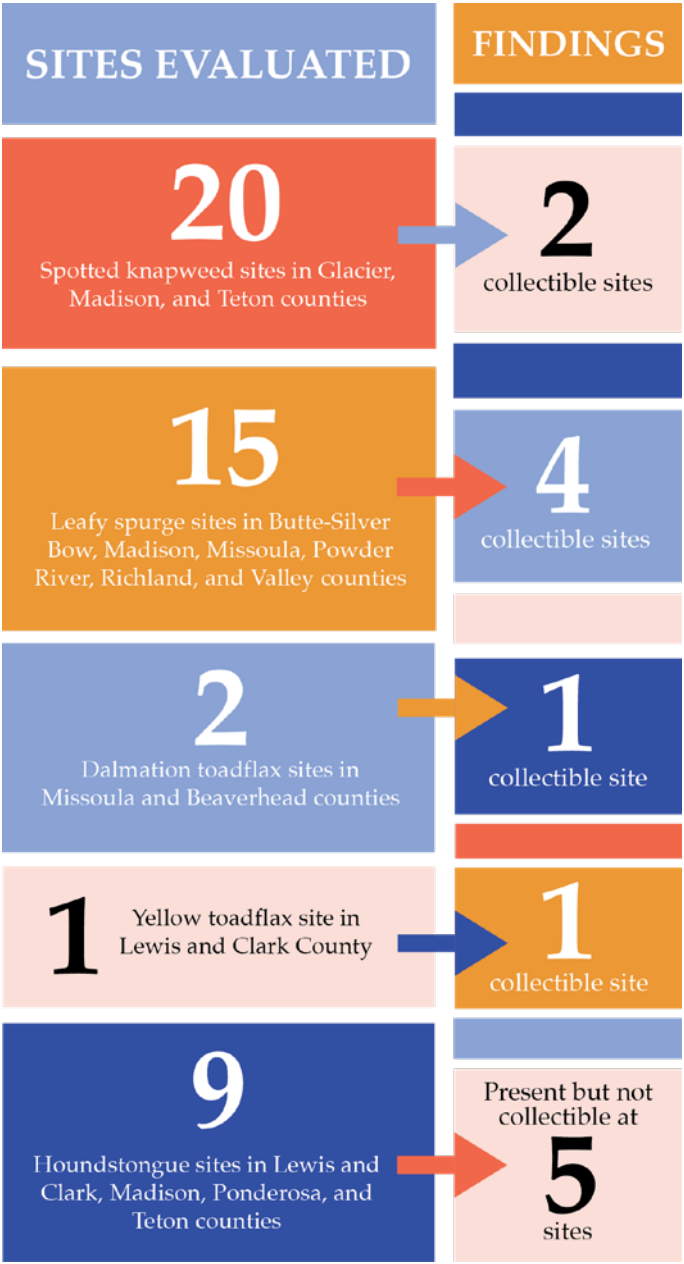
OXEYE DAISY

In 2024, we also began to think about how we could help Jeff Littlefield (MSU) with the oxeye daisy moth (*Dichrorampha aeratana*) in anticipation of its approval for field release. We visited a potential release site with Jeff and his assistant to learn more about desired site characteristics. We are anticipating approval for field release in 2025 and will continue to help Jeff as appropriate. We will likely begin to evaluate potential future release sites and possibly begin pre-release monitoring if appropriate sites are identified.

Be sure to fill out the 2025 Annual Biocontrol Needs Survey if you are interested in whitetop or oxeye daisy biocontrol.

OLDER BIOCONTROL SYSTEMS

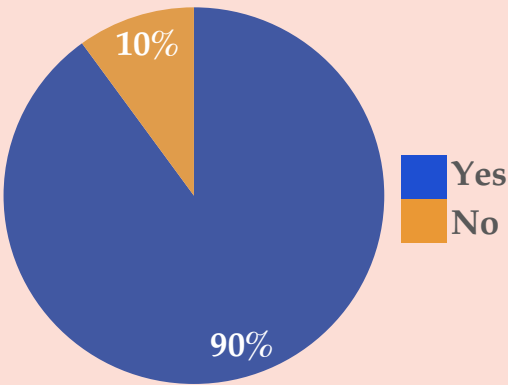
We partnered with local land managers to conduct site evaluations where biocontrol agent presence had not previously been assessed. The purpose of these evaluations was to determine if agents were present and if the populations were large enough to collect. Our travels took us to some of Montana's most remote and scenic landscapes, from Sidney to East Glacier to the Madison Valley. This effort was included in our 2024 work because the overwhelming majority of assessment respondents identified it as a valuable service (see pages 6 and 7). This effort will be refined and expanded in 2025.



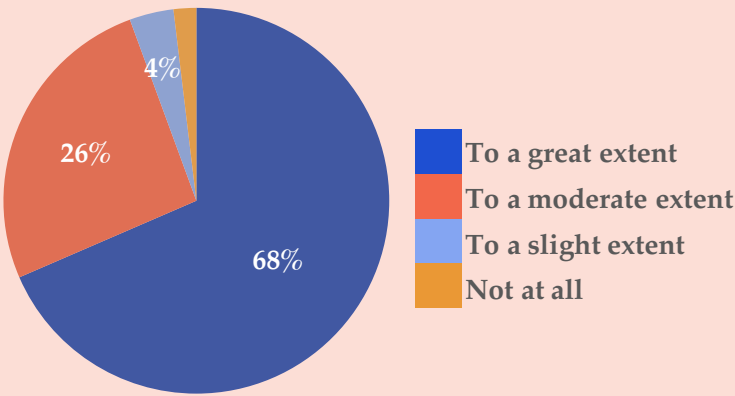
2024 PROGRAM ASSESSMENT

The 3rd MTBCP program assessment was conducted in early 2024. We received feedback from 79 respondents (county, state, and federal government, tribal, non-profit, conservation districts, MSU Extension, private land managers, and others) working in all 56 Montana Counties. The complete results will be available on the website soon, but here are some of the highlights.

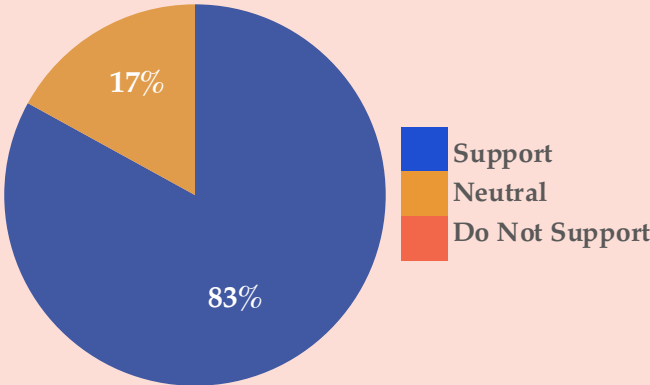
Has your understanding of biocontrol improved due to MTBCP's efforts?



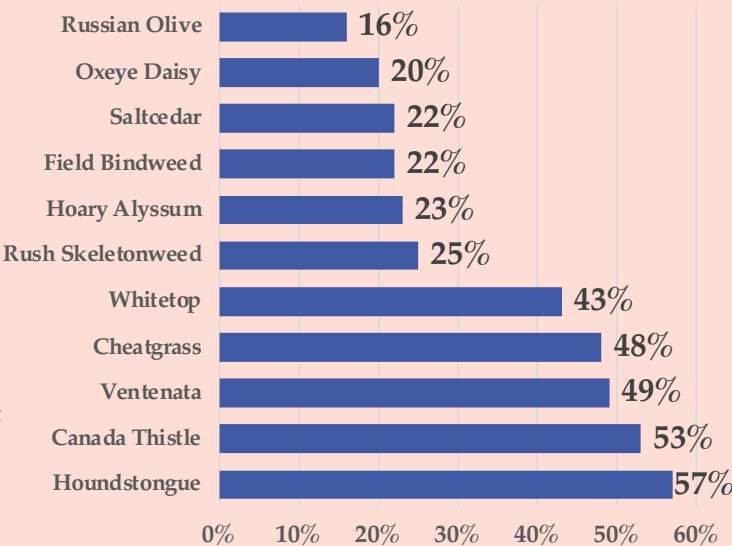
To what extent does MTBCP meet your needs?



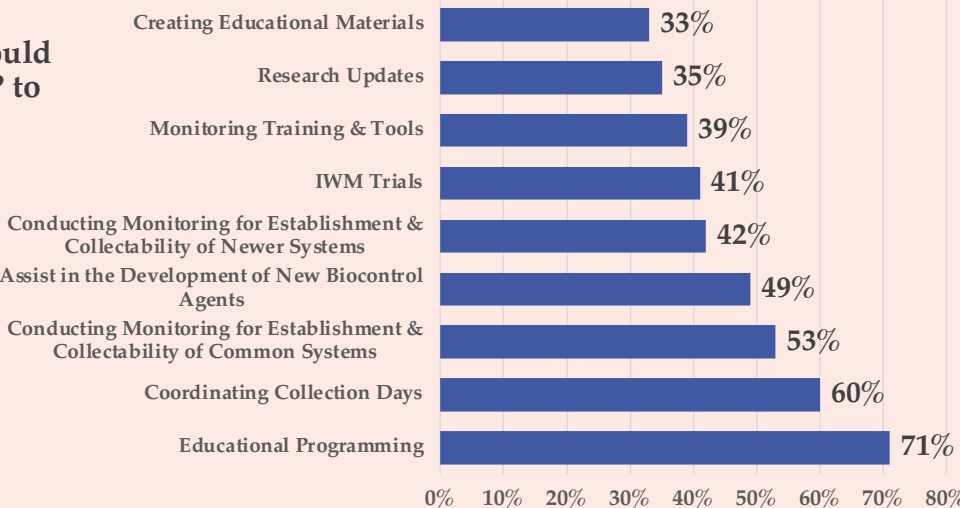
Support for redirecting some time from collection days to evaluation of past release sites



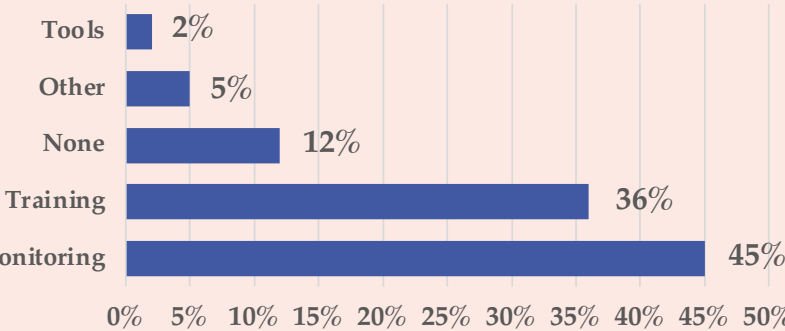
Weeds that should be targeted for development of new biocontrol agents



What services would you like MTBCP to provide?

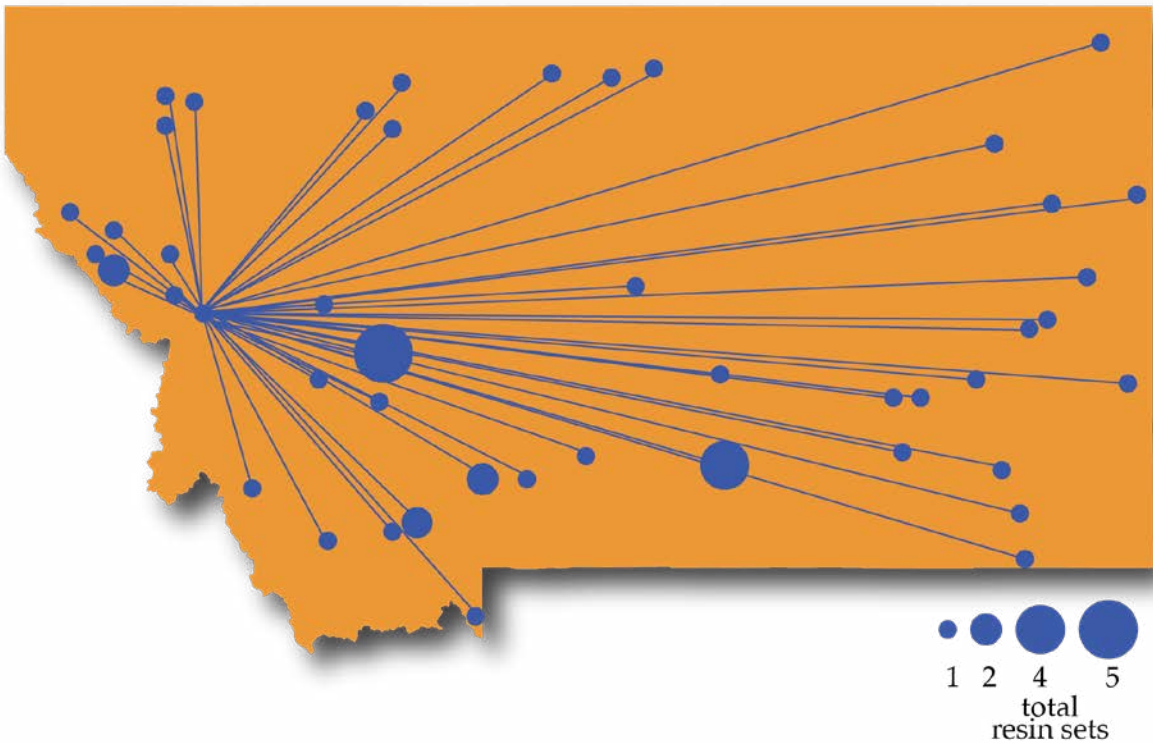


What assistance would you need to conduct periodic monitoring of release sites?



BIOCONTROL RESINS

The biocontrol resins are educational tools that can be used as displays at education events, when tabling at community events, in classrooms, or any other informal educational opportunity. They feature the 5 most common and effective biocontrol systems in Montana (yellow toadflax, Dalmatian toadflax, St. Johnswort, leafy spurge, and spotted knapweed). In 2024, we distributed 56 sets of resins to 28 counties.



"I have started to implement more monitoring sites in release areas. Additionally, our program has stopped chemical treatment of some areas that have healthy biocontrol populations and are allowing these agents to do their work overtime as we monitor."

—Anonymous assessment respondent, in response to: "What changes have you made after attending a MTBCP presentation?"

"Have learned a great deal about the ecology and life cycles of various biocontrol agents, as well as monitoring protocols. I have also become more informed about the process of researching and vetting new biocontrol agents and all the work and time that is put into that..."

— Anonymous assessment respondent, in response to: "What have you learned from attending a MTBCP presentation?"

"Overall, I feel MTBCP does an awesome job. We're so grateful for this resource. It's a great help to support our county and also to promote methods that potentially reduce chemical herbicide and pesticide use. We're extremely grateful for the work you do and for making these biocontrol options available to landowners. Thank you!"

— Anonymous assessment respondent, additional comments



Rocky Mountain Weed Roundtable/Teton County Weed District

Mark Korte, Teton County Weed Coordinator, Co-founder/Board Member Rocky Mountain Front Weed Roundtable (RMFWRT)

Over the years of the MTBCP’s existence we have had the pleasure of working with Melissa Maggio and the MTBCP crew every year. MTBCP has been a key partner in supplying spotted knapweed and leafy spurge biocontrol insects to the Teton County Weed District. Thanks to MTBCP’s spirit of cooperative partnership the spotted knapweed root boring weevil is now well established at numerous sites across Teton County. Although slow in showing positive effects at all sites, numerous release sites are showing reductions of knapweed densities and overall health. Thanks to help from MTBCP the leafy spurge stem borer beetle is also now established in several sites across the county. MTBCP has also been a key player in an attempt to establish the Canada thistle rust agent at two sites in Teton County. While efforts have so far been inconclusive, MTBCP’s support in establishing sites and supplying subsequent releases has been exemplary in every way. This coming season I look forward to a project with MTBCP that will hopefully establish the yellow toadflax agent at a remote site in Teton County.

I have been involved with the RMFWR since its inception in 2004 and a large part of what RMFWR does across our one-million-acre project area involves biocontrol releases and monitoring across the Rocky Mountain Front. MTBCP has supplied agents, given monitoring presentations at RMFWR Community Biocontrol Collection Events, and supported our own landscape scale monitoring efforts. Most recently a MTBCP crew searched for the presence/effects of the houndstongue root weevil. While not cleared for release, this agent has been steadily moving south from Canada and this past season MTBCP found evidence that it is present across the Rocky Mountain Front. The significance of this new information should not be discounted – large private landowners and public agencies are now reconsidering their approach to controlling houndstongue with herbicides. This development will have a positive impact on native woody vegetation that often suffers severe collateral damage through houndstongue control efforts using necessarily strong herbicides. It’s a win-win for land managers and the native plant community.

I can unequivocally say that biocontrol efforts in Teton County and across a million acres of the Rocky Mountain Front would be far behind where they are today without the support and help from MTBCP.



THANK YOU!

A big THANK YOU for the financial and technical support we received in 2024! Without such supportive partners, the Montana Biocontrol Coordination Project would not be possible.

Agricultural Research Service	Liberty County Weed District	Sweet Grass County Weed District
APHIS Plant Protection and Quarantine	MT Department of Natural Resources & Conservation	Teton Conservation District
Beaverhead County Conservation District	MT Noxious Weed Trust Fund	Teton County Weed District
Beaverhead County Weed District	MT Department of Transportation	Toole County Weed District
Big Sandy Conservation District	Madison Valley Ranchlands Group	United States Forest Service – Region 1
Bureau of Land Management	Mineral County Weed District	Wibaux Conservation District
Carbon County Weed District	Missoula County Conservation District	
Cascade County Weed District	Missoula County Department of Ecology & Extension	
Dawson County Weed District	Musselshell County Weed District	
Eastern Sanders Conservation District	Pondera County Conservation District	
Fergus County Weed District	Powell County Weed District	
Gallatin County Weed District	Prairie County Weed District	
Glacier County Weed District	Richland County Weed District	
Granite County Conservation District	Roosevelt County Weed District	
Jefferson County Weed District	Sanders County Weed District	
Jefferson Valley Conservation District	Sheridan County Weed District	
Lake County Weed District	Stillwater Valley Watershed Council	
Lewis & Clark County Conservation District		

Majority of the TECHNICAL SUPPORT we receive comes from the Montana Biological Control Steering Committee. THANKS to all of the members for your support and assistance on a variety of topics!

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