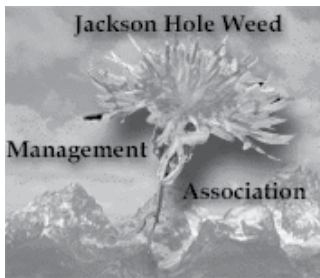


# The Annual Weed

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## The Jackson Hole Weed Management Association

The JHWMA (formed in 1998) has played a critical role in restoration and protection of native plant ecosystems. These ecosystems support wildlife and recreational opportunities in the JHWMA area every day. This group is a collaboration of various federal, state, local and private organizations that are dedicated to prevention, control, and eventually stabilization of the ecosystem from further spread of noxious weed invasion. The following are the accomplishments from the 2002 year from a few members of this organization. Thanks to the Rocky Mountain Elk Foundation for their continued support of weed control on critical game range, and thank you to all who continue to be supporters of this excit-



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## The Jackson Hole Land Trust

This summer the Land Trust was very active in our weed eradication efforts. The summer of 2002 was the first year that we conducted 100% chemical control. In an effort to begin minimizing the large weed problems on our fee owned properties, we began spraying the properties with the densest population of weeds. These properties included Hardeman North, the de Beixedon property on Ely Springs, and the Mary Scott/ C-V property. With the help of Teton County Weed and Pest, we also did weed control on the Poison Creek property. Over the next five years, the Land Trust hopes to substantially minimize the number of weeds that are found on our properties and contain those that do exist.

The Land Trust also completed a spreadsheet of all of the weed concerns on our conservation properties and identified priority properties and strategies. This will be used as a guide for our weed efforts in the future and measure of our success over time.

- 85 total properties under protection
- 17 (21%) are classified as weed-free and will be monitored for new invasions
- 30 (36%) have minor weed occurrences that can be eliminated
- 17 (21%) have significant occurrence that can be contained and eventually eliminated
- 18 (20%) have major infestation that will attempt to be contained
- 3 (<1%) undetermined status



## Teton Conservation District

The Teton Conservation District's participation in the activities of the Jackson Hole Weed Management Association is a priority for TCD's board of supervisors. The District provided partial funding and office space for the JHWMA summer intern, Karen Ganey and a fall intern, Melissa Mader. This summer, TCD again assisted in funding the "Weed of the Week" informational newspaper ads. The District staff participated in and helped to provide incentives (pizza and soda) for the JHWMA summer weed pulls. TCD provided funding for informational booths at the Murie Center's Spring Festival and at the Teton County Fair. Additional funding for office supplies, educational materials and reprinting the JHWMA's weed brochure was provided. The Teton Conservation District is very supportive of the Teton County Weed and Pest's "Snake River Corridor Project." A grant of \$5,000 was provided to this project in the 2002 fiscal year. TCD hopes to continue its role in assisting the JHWMA with projects and programs and its relationship with the vast group of cooperating agencies that make up this organization.

## Teton County Weed & Pest

Teton County Weed and Pest had a very successful year. Spray work was completed on Bridger Teton National Forest, Grand Teton National Park, The National Elk Refuge, state highways, the levee system on the Snake River and Teton County Roads. Ten seasonal summer employees worked for us this season controlling weeds manually and with herbicides. A full-time office manager/education coordinator position was created and for the first time our office was open five days a week for regular business hours. Hay was again certified by our staff in both Teton County, Wyoming and Teton County, Idaho. Our smaller infestations of salt cedar, Russian knapweed, leafy spurge, and perennial pepperweed were again aggressively controlled and the only new invader we found this year was one plant of squarrose knapweed.

Erika Wells, our new education coordinator began many new projects, including a weed poster contest and weed education programs in the various schools around the county. TCWP, in cooperation with the Teton Conservation District sponsored three weed pulls and gave many public and private weed consultations. TCWP also created the Snake River Project in an effort to address the problems with weeds along the Snake River and to address the need for the public to become more informed about the noxious weed issues within the JH-WMA.

In terms of grants, TCWP and the JHWMA received a \$10,000 grant from the National Association of Counties and the Five Star Initiative program, a \$5,000 grant from the Center for Invasive Plant Management, and a \$4,000 grant from the Community Foundation of Jackson Hole. All three grants were for the Snake River Project. In addition, the JHWMA and TCWP received another grant of \$10,000 from the Rocky Mountain Elk Foundation. Some of this money was used to support a backcountry monitoring program, in which remote campsites and recreation areas were searched for noxious weeds.

The main focus in the bio-control program was Canada thistle again this year, making a lot of the new releases in areas that had burned last year. Pack strings were utilized this year for part of the bio-control releases. Releases were also made on musk thistle, Dalmatian toadflax, spotted knapweed,



Brett Richardson, Co-Supervisor at TCWP discusses the use of biological control agents with students at Jackson Hole Middle School, December 4, 2002.

## Caribou-Targhee National Forest

Teton Basin Ranger District treated 851 acres with chemical and biological control in Idaho and Wyoming on the Caribou-Targhee National Forest.

We have a two person crew with a 1 ton truck with a 200 gallon spray unit on it. They also used back pack sprayers, ATV mounted sprayers, and a horse and mule pack sprayer. The mule pack sprayer works well in the remote areas, with one person spraying and one person with a couple of pack animals freighting chemical to the sprayer.

We also took part in a couple of large spray projects which the Upper Snake CWMA sponsored, the Highway 33 Project and the Dry Creek Project. The Highway 33 Project treated highway right-of-way from the INEEL to the Wyoming line and most of the main roads that connect to highway 33. The Dry Creek Project is on the Palisades District along the south fork of the Snake River.



**Upper left:** *Larinus minutus*, a biological control insect used on spotted knapweed. **Upper right:** The damage to a spotted knapweed seed head caused by *L. minutus*.

## Bridger-Teton National Forest

Teton County Weed and Pest District performed all noxious weed treatments on the Teton Division in 2002. They spent a total of 496 person hours on mechanical, chemical and biological treatments. 179.5 acres were treated mechanically, 29.69 acres were treated with herbicides, and 225.45 were treated with biological control insects. Acres treated chemically were calculated based on active ingredients. Acres treated chemically do not reflect the actual acres covered. All treated acreage were spot treated and no acres were applied by boom sprayer methods.

Of the 225.45 acres treated with biological control agents, 155 acres were treated within the Green Knoll and Enos fire areas. Fifteen sites received *Ceutorhynchus litura* for Canada thistle. Eight sites received *Thichosirocalus horridus* for musk thistle. Three sites received *Gymnetron tetrum* for common mullein. Two areas received *Larinus minutus* for spotted knapweed and two received *Agapeta zoegana* which is also for spotted knapweed. Each site, with the exception of the "saturated sites" were figured to treat five acres of noxious weeds per site. "Saturated" sites were calculated at 20 acres per site. In total, 17,530 individual insects were released on 32 sites in 2002.

## Pinto Ranch

The Pinto Ranch continues to battle weed infestations throughout the ranch and along the highway corridor bordering the ranch property. Many of the weeds that were treated in 2002 were not of the noxious variety (prairie onions, native cinquefoil, dandelions), just problem weeds, although some noxious weeds are still being addressed. Approximately 75 acres of prairie onions were treated, as were 80 acres of cinquefoil. Escort was used on the cinquefoil to evaluate for effective control measures without damaging hay production, and may be used in the future if the results are favorable.

Approximately 30 acres of Canada thistle were treated with Redeem in the fall. 80% of the 30 acres were along ditch banks that had been reworked in the past few years and seed banks germinated as a result of the ditch work. We also had a large bio-control insect release by Brett Richardson from TCWP on about 10-20 acres for control on Canada thistle where spraying was not feasible. Some musk thistle patches were controlled using backpack sprayers.

We continue to address very small patches of oxeye daisy, yellow toadflax, field bindweed (along highway right-of-way), common mullein, and spotted knapweed (also along highway) with backpacks. Due to the road construction in GTNP bordering the ranch, we are anticipating some serious monitoring and control measures when needed in the next few years. Less than one half of a backpack was used on the spotted knapweed patch along the park highway right-of-way this year, as compared to the 4-5 backpacks used when initial control was started several years ago. This only shows that control efforts are effective when they are addressed yearly and the no mercy attitude is given to these noxious invaders! We will continue to keep fighting the noxious weeds we find along the highway corridors because we feel that is where the real problems start and continue to grow into major ones.



Brian Remlinger from Teton Conservation District navigates the Snake River in a hail storm in August of 2002. TCD teamed up with members from Teton County Weed and Pest this summer to evaluate spotted knapweed problems and search for new infestations of saltcedar/tamarisk on the river. Luckily, none were found.

## National Elk Refuge

This was the second year the refuge provided funding to Teton County Weed and Pest to hire two full-time summer employees to work almost exclusively on the refuge. The refuge supplied housing, a vehicle and two ATV's with spray tanks. The two employees started in early June, one was done in early August and the second worked through September.

This was also the fourth consecutive year that about 700 acres on both sides of the refuge road from East Broadway to Twin Creek Corner (about 1/3 mile on each side of the road) was searched for musk thistle. Virtually thousands of plants were chopped during the flowering stage. Even though this is the fourth year of this work, we still have not seen a reduction in musk thistle densities. Much of this program was accomplished with youth volunteers. About 100 acres of musk thistle was also chopped along the butte north of the hatchery and along Flat Creek, for the second year in a row.

An emphasis was placed on controlling the diffuse knapweed in the Chambers fields area of the refuge. This is the only existing infestation of diffuse knapweed in Jackson Hole. This infestation was apparently brought in with spray equipment from Teton Valley, Idaho in 1999 when the fields were sprayed with roundup in preparation for reseeding grasses.

An intensive effort to control spotted knapweed along the Gros Ventre River bottom was initiated this year. In cooperation with GTNP, a person was hired to chemically spray with two pack mules along the river for about 3-4 weeks. The infestation along the river and on the gravel islands seems to have become significantly worse this year. Because of labeling restrictions on effective chemicals in this riparian area, we may have to resort to controlling this plant on the adjacent uplands and give up on the immediate area.

Two small patches of perennial pepperweed were located and treated this year. One near town on the refuge road and the second at the old feed shed site in the Nowlin. We chemically treated 40 acres of musk thistle, 40 acres of spotted knapweed, 1 acre of dalmatian toadflax, 100 acres of Canada thistle, 5 acres of diffuse knapweed, 1 acre of tansy, and 5 acres of white top.

## Education Subcommittee

The JHWMA Education Subcommittee was very busy this year. We started off by putting on a poster contest for children under 12, participated in the county fair, and organized three weed pulls. Erika Wells was hired as a full time education coordinator and has taken on many of Niki Tippitts' duties since she moved on to a new job in Riverton, WY. Development of a Kindergarten through 12th grade noxious weed curriculum began with the new school year in September. Five classrooms were visited in 2002, with more scheduled after the first of the year. All teachers in the district were contacted via email with many personally or by mail. A children's activity book is in progress that will target all children in the State of Wyoming in grades K-5, with hopes of being published in 2003.

# Grand Teton National Park

In 2002 Grand Teton National Park's treatment priorities remained similar to past years with heavy emphasis placed on the control of spotted knapweed in the Gros Ventre River Corridor and on invasive weeds that have limited distribution and can be eradicated or contained.

Chemical, mechanical, and biological control treatments, which totaled 1,884.1 person-hours, were used. A total of 422.2 acres and about 354 miles of road right-of-ways were treated. Bio-controls were applied to spotted knapweed, yellow toadflax, and St. Johnswort. The Gros Ventre riparian corridor again received a concentrated effort to reduce and control spotted knapweed populations. A total of 403.95 person-hours were worked to treat 35.2 acres in and around the river with the majority focused on high use areas at the Gros Ventre Campground and Kelly. At the Jackson Lake Dam complex, GRTE's weed crews along with the Montana Conservation Corps, worked a total of 123.75 person-hours to reduce weed populations. Sulfur cinquefoil, dyers woad, yellow hawkweed, Russian knapweed, and leafy spurge were all identified as new or recent invaders and given a concentrated eradication effort. In addition orange hawkweed was identified and mapped along Bradley Lake and will be given high priority in 2003. A total of 57 person-hours were dedicated to treating 5.61 acres of these new invaders. Boom spraying of musk thistle was also conducted in the Kelly Hayfields, Elk Ranch, Barker/Ewing Meadow, and Aspen/Hunter Ranch. 199 acres of old farm pasture were treated using a tractor pulled boom sprayer.

Formal inventories were conducted for weeds along frontcountry and backcountry trails. A total of 23 weed species were mapped and over 400 miles of survey lines were completed. Distribution maps were produced for all weed species. In addition, specialized weed maps of various areas throughout the Park were produced.

Established test plots were sampled for the final time on Dalmatian

toadflax at the Moran cemetery. The plots were designed to determine the efficacy of four different herbicides, applied at different concentrations, with minimal collateral damage to native plants. The data is still being analyzed to determine the best chemical and rate to be used as a broadcast application in this area. Early analysis of the data along with correspondence with different county weed supervisors in the Greater Yellowstone Area points to Plateau as an effective chemical for treatment. Three populations of dalmatian toadflax were treated to test the effectiveness of Plateau.

## JHWMA Members

Bridger-Teton National Forest, Bureau of Land Management, Bureau of Reclamation, Grand Teton National Park, Hatchet Ranch, Jackson Hole Conservation Alliance, Jackson Hole Land Trust, Jackson Hole Wildlife Foundation, Lost Creek Ranch, National Elk Refuge, Natural Resources Conservation Service, Pinto Ranch, Targhee National Forest, Teton Conservation District, Teton County Parks and Recreation Department, Teton County Weed & Pest District, Teton Science School, Wyoming Game & Fish Department, Wyoming Native Plant Society-Teton Chapter, and Yellowstone National Park.

*For more information on the JHWMA or for a copy of the brochure, please call Erika Wells @ (307) 733-8419*

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PLACE ADDRESS LABEL

# Wyoming Game & Fish Department

Teton County Weed & Pest performed all of the weed control work on our properties this following summer. Almost 46 hours of work was spent treating spotted knapweed, houndstongue, musk thistle and Canada thistle on the South Park Feedgrounds. The entire feedground was checked and treated during this time. Also, 1600 *Larinus minutus* and 900 *Cyphocleonus achates* were released on spotted knapweed infestations located in the Snake River next to South Park Feedgrounds. Finally, access was finally obtained so that weed control crews could begin treating the Horse Creek Feedground. One small patch of leafy spurge was discovered and treated at the feedground, along with musk thistle and Canada thistle. In addition, 430 *Ceutorhynchus litura* were released on two Canada thistle patches on this feedground.