
❖ Hawkweed News ❖

Volume 1 Issue 1

 University of Idaho

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Welcome to Hawkweed News

Welcome to the first issue of Hawkweed News!!

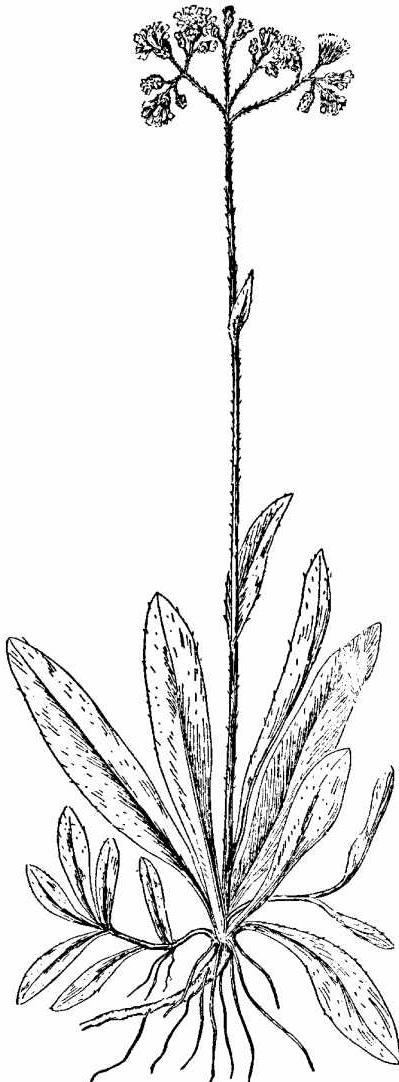
Hawkweed News is a publication dedicated to promoting the awareness of and interest in control and management of introduced hawkweeds in North America.

The rapid spread of hawkweeds in northern Idaho during the past several years and a growing public concern about problems with chemical and cultural control culminated in the establishment of a biological control program for hawkweed. Concurrently, a grass roots organization called the Hawkweed Action Committee, Inc. (see pg. 4), was formed to support the development of an effective biological control program.

Articles for Hawkweed News will cover all topics related to hawkweed control. These include up to date information on hawkweed control, including biological control, and particularly strategies that are aimed at integrated management, and hawkweed biology. We hope to have a regular articles from local, state, or regional hawkweed control programs, including news from the Hawkweed Action Committee, Inc.

Hawkweed News is published by the University of Idaho in Moscow. The editors are Joe McCaffrey and Linda Wilson from the Dept. of Plant, Soil and Entomological Sciences. The newsletter will be published twice annually, although more frequent publications are possible and will depend on the need and interest.

It is our hope that Hawkweed News will foster a movement toward a regionally based, cooperative approach to hawkweed management in the Inland Northwest.



Yellow hawkweed, *Hieracium pratense*, also

Hawkweeds: What are they?

Hawkweeds are herbaceous plants belonging to the large sunflower family (Compositae). They are closely related to the group of plants that includes dandelion, chicory, and prickly lettuce; they have only ray flowers and contain a milky sap.

There is a huge number of hawkweed species worldwide, some reports estimate as many as 10,000 species, and varieties, making the hawkweeds the largest single genus of plants.

In North America, there are about 25 native hawkweeds. There is also about 11 alien species, that were introduced into North America during the late 1800s.

Alien Hawkweed Species of Concern in the U.S.

About eleven hawkweed species were accidentally or intentionally introduced into the U.S. and Canada from Europe over 100 years ago. Until quite recently, they were found mostly in the northeast and north central states and in southeastern Canada.

However, since about the late 1940s, three species have gained a foothold west of the Continental Divide. The three weeds are:

- Yellow hawkweed (*Hieracium pratense*).
- Orange hawkweed (*H. aurantiacum*), and
- Mouse-ear hawkweed (*H. pilosella*).

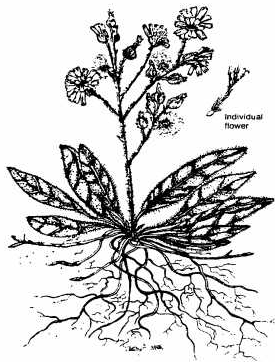
Yellow hawkweed is also known as field or meadow hawkweed. Care needs to be given to the use of the name 'yellow' hawkweed because most of the native hawkweeds are also yellow-flowered.

Once it gains a foothold in a favorable area, hawkweeds quickly spread not only by seed, but also by a huge system of creeping roots and stems that enable it to choke out competing vegetation and to form dense stands in just a few years. In many areas of northern Idaho, single yellow hawkweed infestations of 50-60 acres are known. It infests cultivated pastures and hayfields,

pristine, undisturbed mountain meadows, and lawns and gardens. Orange hawkweed is also often found planted in home rock gardens and cemeteries.

Since yellow hawkweed was first found in Pend Oreille County in 1969, it has spread rapidly and is now estimated to cover thousands of acres from eastern Washington (Okanogan Highlands) to northwestern Montana.

Among the three alien hawkweeds in the west, mouse-ear hawkweed has the smallest and most localized distribution, being recorded only from a few locations west of the Cascade Range. In Washington, it is a Class A



Orange hawkweed
*Hieracium
aurantiacum*

Noxious Weed, targeted for eradication. For more information on mouse-ear hawkweed, refer to PNW Bulletin No. 409.

The hawkweeds seem to be weeds of relatively cool, moist environments like those of forests and mountain habitats. They have not been reported in hot, dry areas that characterize much of the intermountain west. Thus, it is not generally thought that the hawkweeds pose a serious threat to western rangelands.

Rather, the ability of hawkweeds to invade and take over pristine mountain meadows is remarkable. They infest pastures, hay fields, lawns.

Distribution of Weedy Hawkweeds in the West

Yellow and orange hawkweeds are more widely distributed in the West than mouse-ear hawkweed. They are reported from six eastern Washington counties, six northern Idaho counties, and seven western Montana counties. In addition, they extend north into Canada about 700 miles, and are found as far north as Quesnel, B.C. In the western U.S., the region of the heaviest infestation is commonly referred to as the Inland Northwest. This area extends roughly from the Okanogan Highlands in north-central Washington state to the eastern slopes of the Rocky Mountains. However, yellow hawkweed has recently been reported from north-central Oregon, and from as far south as Council, Idaho.

Specific information on the distribution of hawkweeds in our region is lacking.

S. Biological Control Efforts Underway

Biological control of weeds involves using the plant's natural enemies, such as insects and/or pathogens, that attack the plant and cause a reduction in its competitive ability. When less competitive and aggressive, the weed becomes less dominant in infested rangeland and pasture communities and often is reduced to an acceptable density. The strategy for biological control of hawkweeds is:

1. To identify potentially safe and effective biological control agents in Europe.
2. Test the selected agents for specificity and safety.
3. Acquire permits to import and release agents into target country.
4. Monitor establishment, spread and impact of agents.

It takes several years to locate, screen, and introduce a selected natural enemy into the target country.

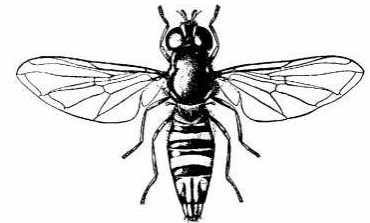
The biological control program for introduced hawkweeds in the U.S. was begun in 1994 on two fronts. Firstly, researchers at the USDA-ARS laboratory in Montpellier, France, began the search for insects associated with the target hawkweeds.

Secondly, Linda Wilson and Joe McCaffrey at the University of Idaho began a survey of insects attacking both the weedy hawkweeds and the natives species in northern Idaho. So far, two species of seed-head flies, two seed-head moths, and one stem infesting gall wasp have been collected. Studies will continue for the next two or more years to quantify the impact of these natural enemies, and learn about their biology, so that we can better predict their likely interaction with introduced European insects.

New Zealand's Experiences

Hawkweeds have invaded New Zealand rangelands, causing widespread devastation to the high country sheep grazing ranges. Although there are about six hawkweed species introduced into New Zealand, the most widespread and damaging species is mouse-ear hawkweed; it invades thousands of acres of sheep rangeland.

Realizing the need for a biological control program, ranchers, researchers, land managers, and agencies, established the Hieracium Control Trust. The Trust is a fund used to support hawkweed research and control programs. By soliciting financial contributions to the Trust, they have been able to fund biological control research in Europe for insects and pathogens attacking mouse-ear hawkweed.



This work is being conducted by the International Institute of Biological Control (IIBC) located in Delémont, Switzerland. Although their program is only a year old, researchers at IIBC have identified several potential biological control agents and will

Mouse-ear hawkweed
Hieracium pilosella



continue screening studies for the following several years. Other researchers have identified two hawkweed-attacking fungi; screening of these pathogens is ongoing.

Hawkweed Action Committee, Inc (HACI)

The Hawkweed Action Committee is a non-profit organization in northern Idaho comprised of county weed control personnel, representatives of state and federal land and wildlife management agencies, Coeur D'Alene Tribe, representatives of private industry including Polatch Corporation, and concerned landowners. The goal of HACI is to provide for the management and administration of the promotion and funding of hawkweed biological control activities. HACI is located in St. Maries, Benewah County, Idaho. Membership is open to anyone with an interest in hawkweed management. The current chairman is Ben Marsh, Benewah County Noxious Weed Control Coordinator. For more information about HACI, write to HACI, 1860 Main St., St. Maries, Idaho, or call Ben at (208) 245-4334.

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To receive future editions of Hawkweed News, please return this mailing form to:
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