

Humboldt Watershed Cooperative Weed Management Area

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*Providing land managers, owners and local weed control groups assistance
through funding, agency and weed group coordination, communication and cooperation*



Medusahead and Ventenata

Invasive annual grasses, such as medusahead (*Taeniatherum caput-medusae*) and ventenata (*Ventenata dubia*) are negatively impacting millions of hectares of US rangelands every year. These native annual grasses have become a serious problem for perennial forage producers in the western United States. Both Ventenata and medusahead are winter annual grasses that germinate in the fall, a few weeks after downy brome (cheatgrass). Pastures and hayfields that become infested with these grasses will have significant yield reductions of 50% or more within a few growing seasons. Ventenata is not palatable to livestock, in part, because it has nearly the same amount of silica as medusahead wildrye. With loss of productivity, land condition and land value declines. Recently, the export market for Timothy hay was valued at around \$350 per ton. However, Timothy hay that contains ventenata and/or medusahead is unsuitable for export leaving farmers only a local market at about \$150 per ton. Ventenata and medusahead are difficult to control using common weed management strategies and have seriously impacted forage producers by reducing forage yield and quality throughout the west.

Medusahead (*Taeniatherum caput-medusae*)

Medusahead, one of Nevada's state listed noxious weeds, was first described in the United States in Oregon in 1903 and as of 2005, medusahead has infested approximately 972,700 acres in 17 western states (from North Dakota south to Texas and west to the Pacific coast), and spreads at an average rate of 12% per year. Since its roots develop early and reach deep in the soil, it outcompetes native plants for moisture. It flowers in early spring, and by June or July its seeds, which are covered with tiny barbs, are mature. The barbs help the seeds attach to livestock, humans or vehicles that pass by. As the grass grows it accumulates silica, making it unpalatable to livestock except for early in its life cycle. It creates a dense layer of litter, and because of the silica content, the litter decomposes more slowly than that of other plants. This litter suppresses native plant growth while encouraging the germination of its own seed, and after a few years it creates an enormous load of dry fuel that can lead to wildfires.

Stands of medusahead vary in density from several hundred to 2,000 plants per square foot. This variance is directly related to annual precipitation, soil type, and other vegetation in the area. Since it matures later than most other annuals, it is easy to identify as it is often bright green when other annuals are brown. As it matures, it turns shades of purple and eventually tan. Medusahead can also be easily confused with squirrel-tail or foxtail barley.

Medusahead ranges in height from 20 to 60 centimeters. It has slender, weak stems that often branch at the base. It has spike inflorescences similar to those of wheat or rye. The grass spikelet or lemma, has long awns and the glumes have shorter ones, giving the seed head a layered look. As the awns dry, they twist and spread in all directions, similar to the snake-covered head of the mythological Medusa. The barbs on

the awns help the seed drive into the soil. The grain-like seed may remain viable in the soil for a number of years.



Ventenata (Ventenata dubia)

Ventenata is a plant that is not currently listed as one of Nevada's state listed noxious weeds, but has shown itself to be highly invasive in surrounding states. Ventenata commonly referred to as wiregrass, has become a serious problem for perennial forage producers in the Pacific Northwest. Ventenata is an introduced annual grass, native to central and southern Europe, Asia, and Africa. The first recorded sighting of Ventenata in North America is dated 1957; more specifically, in Kootenai County, Idaho. Since then, confirmed sightings have been made in the states of Washington, Oregon, California, Idaho, Montana, Wyoming, Utah, Wisconsin, New York, Maine and now Nevada has been added to that list.

Identification of Ventenata in the fall after seedlings emerge and in the early spring can be difficult. Ventenata seedlings can often be found beneath litter created from the previous growing season in the fall and spring. Ventenata is a basally branched, tufted winter annual grass that has rolled or folded leaves and membranous ligules. Openly branched panicles are pyramidal in overall shape and have spikelets comprised of typically 3 florets. The awns of some of the florets are bent and twisted. The inflorescence is an open panicle, pyramidal in shape, and 2.8 to 8 inches and leaves mostly occur on the lower half of the stem and have open leaf sheaths. Key identification traits for Ventenata include: reddish-black nodes in late spring; the long, membranous leaf ligule; the inflorescence is an open panicle in June-July; upper floret awns that are twisted and bent.

Ventenata grows in a variety of dry, open and often disturbed habitats, tending to prefer sites that are inundated in early spring but dried out by late spring. It is commonly found on south-facing hillsides with

shallow, rocky clay or clay-loam soils, though it can be found on other aspects and substrates. In a survey of land managers throughout eastern Oregon, central and eastern Washington and northern Idaho, *Ventenata* was found growing in areas receiving 13.8 to 44.1 inches (35 to 112 cm) of annual precipitation and elevations of 33 to 5906. It grows in rangeland, dry meadows, pastures, roadsides, rocky swales, open forests, and sagebrush communities, including areas previously dominated by or having cheatgrass present.



As always, please notify the HWCWMA if you see *Ventenata* or *Medusahead* growing within the Humboldt River Watershed. We have an opportunity to stop invasive species from spreading if we act quickly and our staff can provide the property owner or appropriate public agency with site-specific treatment options for these plants. The HWCWMA also maps and monitors heavily infested sites in the watershed which allows the HWCWMA the ability to provide educational and financial assistance to land owners and groups in their management efforts, ultimately improving all of the qualities of the land and water in our watershed.

The HWCWMA has also developed a website to serve as a clearinghouse for information on invasive weeds in the Humboldt Watershed. Our website (<http://www.humboldtweedfree.org>) contains fact sheets for state listed noxious weeds in Nevada, Board of Director's information, funding partner's links, and many more features including a detailed project proposal packet that you can print, fill out and mail back to us at your convenience. We are looking to expand our project area outside of the Humboldt River and always welcome new funding opportunities. If you have any questions, please feel free to contact Andi Porreca, HWCWMA Coordinator at (775) 762-2636 or email her at aporreca@humboldtweedfree.org.