



Oregon Sea Grant Extension
Sustainable Tourism &
Outdoor Recreation Program

Interpretative Fact Sheet

Bracken Fern (*Pteridium aquilinum*)



The following short article is from the [Oregon Coast 101 Species](#) collection used by the Guide and Outfitter Recognized Professional (GORP) training program. These articles are intended to provide interesting facts you can share with your clientele and add value to your services.

An Interpretive Fact Sheet has been written about each species. We are currently uploading these blogs and creating the links.

Come visit us!

Tourism and Business Development College of Business,
Oregon State University Extension - Oregon Sea Grant at

<http://tourism.oregonstate.edu/>

Guide and Outfitter Recognized Professional Program

<https://www.GORPguide.org>

For more information about the GORP training program see:

<https://www.gorpguide.org/become-a-gorp-certified-guide>

Bracken Fern (*Pteridium aquilinum*)

 tourism.oregonstate.edu/bracken-fern-pteridium-aquilinum/

By colliiek2

September 9, 2020

Just like in classic murder mysteries... a pretty face pressed behind glass and poisoning as art is really a deceptive killer.



Bracken fern (royalty free from Unsplash)

Perhaps being a deceptive killer is really just a clever survival strategy. Fossil records over 55 million years old show Bracken ferns is one of the oldest plants around.

Bracken ferns grow throughout all temperate and tropical regions. In Oregon we see the subspecies *P. aquilinum pubescens* or Western Bracken which grows from Alaska to Mexico and east to Wyoming, Colorado, and Texas.

The plant prefers well-drained soils and will often grow on hillsides. It will also grow in burned-over areas near woodlands or other shady places and in open pastures and ranges with sandy, gravelly soils.

Colonization

It colonizes areas two different ways. Triangular fronds may reach 16 feet or taller in a season. Fronds provide some shade and protection but discourage native species through large volumes of plant litter and chemical emissions.

Tiny, lightweight spores are on the underside of the frond. Spores easily spread in the wind or fall from fronds to the ground.

Spores sprout into plants and lead to the development of deep-set, black roots called rhizomes. Bracken rhizomes creep underground up to 1,300 feet sending up fronds as they grow. The lowly Bracken is surprisingly one of the largest plants in the world.



Dried Bracken fern (royalty free Unsplash)

Silent Killer

Every part of the Bracken contains poisonous, carcinogenic compounds—even the spores are toxic. The plant emits poison into the surrounding soil through spores and leaf litter. These toxic chemicals remain in the soil even after the fern is removed.

Bracken fern is toxic to dogs, cattle, sheep, horses, and pigs. This fern is linked to cancer in humans. Even milk from cows grazing Bracken fern may be hazardous to humans.

Grazing animals may consume Bracken when normal foods are unavailable (such as during adverse weather). Ptaquiloside has a cumulative effect. Cattle consuming large amounts of Bracken in short periods of time can become poisoned. The disease has a delayed onset and poisoned animals rarely recover. The disease is often chronic in horses.

Some cultures consume young fronds called fiddleheads and rhizomes. Ptaquiloside will damage DNA and potentially lead to digestive tract cancers. There are ways to reduce the level of this chemical through cooking and other detoxifying techniques.

Hydrogen cyanide is released when mammals or insects eat this fern. This chemical causes repeated insect molting leading to death. Bracken is under investigation as a possible new insecticide.

Eradication

Bracken invasions threaten biodiversity and habitat loss. Once established, this deciduous plant and its chemical foot print are very difficult to eradicate.

Removal and long-term management can encourage the re-establishment of native habitats. Bracken ferns are listed as an invasive species in several areas and considered to be among the world's worst weeds.

REFERENCES:

- Encyclopedia Britannica (<https://www.britannica.com/plant/bracken>)
- USDA Agricultural Research Service (<https://www.ars.usda.gov/pacific-west-area/logan-ut/poisonous-plant-research/docs/western-bracken-fern-pteridium-aquilinum/>)
- Wikipedia, Bracken (<https://en.wikipedia.org/wiki/Bracken>)