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Please join YewCon in fostering protection and sustainable
use of yews and other plant species threatened by human
impact !

Native Yew Conservation Council (YewCon)
PO Box 2928 / Berkeley, CA 94702 / USA

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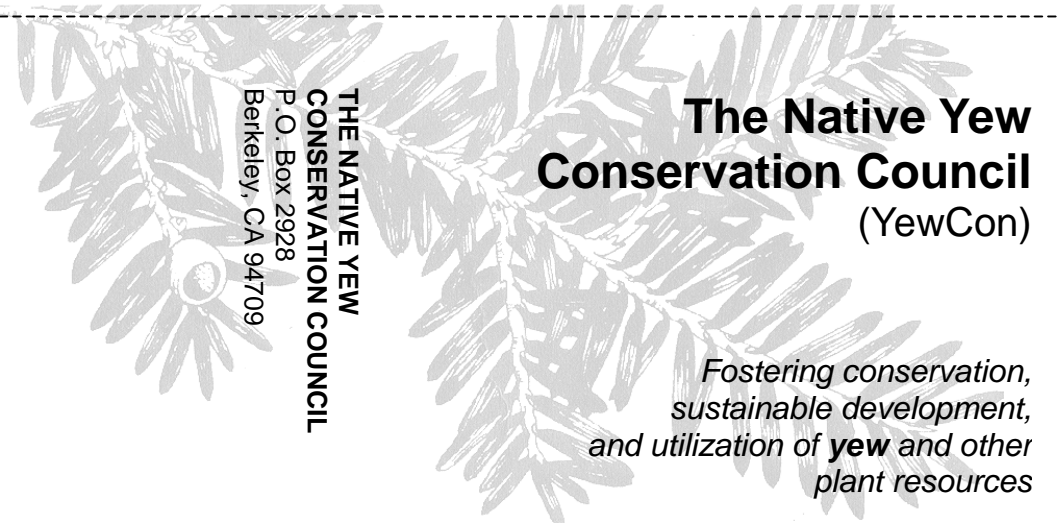
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**THE NATIVE YEW
CONSERVATION COUNCIL**
P.O. Box 2928
Berkeley, CA 94709

The Native Yew Conservation Council (YewCon)

*Fostering conservation,
sustainable development,
and utilization of **yew** and other
plant resources*



A Short History of the YEW

Yews originated during the age of the dinosaurs. Before humans discovered this plant, animals browsed its foliage and birds consumed its berries (arils). Thousands of years ago, humans recognized the property of yew wood for constructing tools and weapons; extracts of yew bark and foliage were valued as a source of medicine. The yews' slow growth, sprouting, longevity and dark green evergreen needles evolved symbolism imbued with death, rebirth and immortality.

When the National Cancer Institute and the U.S. Department of Agriculture began a cooperative program to screen plants for anti-cancer properties, they rediscovered the yew. Bark from the Pacific yew was identified as the most concentrated source of *taxol*. Intensive harvests of yew bark during the last decade decimated Pacific Northwest forests of their native yew populations. Related compounds extracted from cultivated yew trees now serve as the primary source of semisynthetic taxol and close analogs.

TAXOL®

In 1960, the National Cancer Institute (NCI) and US Department of Agriculture began a cooperative venture to screen plants for novel anti-cancer compounds. Yews in the Pacific Northwest were sampled, and analyses in 1967 identified taxol as a promising compound, especially for refractory ovarian cancer.

During the next two decades, through a variety of bureaucratic fits and starts, enough needles, branches, and bark of the Pacific yew (*Taxus brevifolia*) was collected from National Forests in the Pacific Northwest to establish the chemistry, extraction, and refinement of taxol and related taxane compounds, and

to complete very promising clinical trials. Unfortunately, yew bark was identified as the most concentrated source of taxol, and many mature yews were destroyed for these trials by stripping their bark to extract taxol.

Because the compound then named taxol was identified by a publicly funded agency, it could not be patented (although the name later was). In order to interest pharmaceutical companies in its development, the NCI, via a competitive process, awarded Bristol Myers Squibb (BMS) exclusive rights to harvest yew bark on federal forest lands in the Pacific Northwest.

BMS now produces TAXOL® by semi-synthesis with compounds extracted from cultivated yews. However, paclitaxel (a generic name for TAXOL®), and its close analogues have been such useful drugs that other companies around the world are now producing these and related pharmaceuticals. Wild yews in the forests of the Pacific Northwest, Asia Minor, the southern Himalayas, and southeastern China continue to be a source material.

YewCon as an Advocate...

The Native Yew Conservation Council (YewCon) was formed in the late 1980's to address growing concern about non-sustainable yew harvests.

Yew populations on public lands had already been depleted by decades of industrial clear-cutting that left "useless" trees (like yews) to rot.

Yew harvests for paclitaxel specifically targeted the largest remaining yews because they were the cheapest source of bark. Cutting ancient yews for their bark was often compared to slaughtering buffalo for their hides.

While the world welcomed the development of an effective new cancer drug, YewCon focused

protecting both cancer patients and wild yews through sustainable yew harvesting.

We advocate harvesting the renewable needles instead of the bark, and switching from wild yew to plantation production. YewCon urged involved federal, state and industry officials to move quickly toward sustainable yew harvesting, and launched a series of 10 public meetings from Seattle to San Francisco to educate the public and provide a forum for all parties to meet and communicate. These actions helped advance YewCon's objectives.

YewCon also organized the First International Yew Resources Conference, March 12 & 13, 1993 in Berkeley, CA.

The combined efforts of YewCon and other concerned organizations, institutions and individuals led to the passage in Congress of the Pacific Yew Act, and to more yew protection on public lands. With the event of semi-synthesis processes that permit economic and sustainable extraction of taxol precursors from yew leaves, and plantations that produce from yew plant biomass, the pressure on the native yew forest population diminished.

Public concern and pressure led Bristol-Myer Squibb, the major user of wild yews on public land to finally discontinue harvesting wild yews on U.S. Forest Service and BLM lands.

To spotlight the global condition of yew resources, YewCon sponsored in Beijing PRC "The Yew Chronicles Continued--Microtubule-Sterilizin Therapeutic Agents (MiSTAs)" Conference in China in May 2005.