

BOGS

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INTRODUCTION

Bogs are a part of wetlands. Where they are a dominant part of the landscape, bogs tend to be intimately entwined with the lives of people. For millennia the Danes, Irish, and others have hand-cut blocks for peat from bogs to heat their homes and cook their meals. For centuries the Finns have harvested bogs for cloudberries to make liqueur. The Soviet Union is now (March 1987) the world's leading peat producer, harvesting 200 million tons annually, some of which fuels 76 power plants around the country. Peat is following the course of crudeoil, which is fractionated and refined into a host of valuable by-products. Russians are producing mineral wax from peat to be used in leather polishes, crayons, and plastics, cream for the treatment of eczema, ulcers, and burns and an eye medication that reduces nearsightedness. Ireland currently (1987) meets one-fifth of its energy needs and generate 21 percent of its electric power with peat. It took some 10,000 years for nature to create these midland bogs, and in less than 40 years most have been destroyed. Only 5 percent of Irelands's three million acres of peatlands survive in their natural state. For world distribution of Bogs (Peatlands), see Table 2A and 2B. In the New World, bogs provided Native Americans with many plants and plant parts for food, medicines, magic charms, tools, trinkets, and even toys for children, see Table 1.

There have been another dimensions to the human relationship with bogs, the sentiment dimension, almost spiritual.

DEFINITION

Bogs or Peatlands are three-dimensional portions of the earth's landscape which are wetland and have organic soils; they include the full depth of organic materials, regardless of origin; they include all waters within or on top of the organic materials; and they include all organisms living within or atop the organic materials and water.

The above basic definition of peatland can be applies throughout the world, despite differences in the climates and vegetation that have formed the peat.

TABLE 1
Indian Uses of Some Bog Plants

Plants	Use
Sphagnum mosses (Sphagnum Compactum)	Stuffing for pillows, mattresses, "diapers"
Tamarack (Larix laricina)	Treatment for scurvy, bronchitis, infections; rope, twine; and caulking (for canoes, etc.); beer
Pitch pine (Pinus Strobus)	Treatment for tuberculosis
Cotton grasses (Eriophorum Viridi-Carinatum)	Food
Bog Willow (Salica ceae)	Treatment for stomachache, pain; astringent; tobacco
Sweet gale (Myrica gale)	Preservative in blueberry pails; burned as smudge to repel mosquitoes; reddish-brown dye; charm against snakes
Gray birch (Betula ceae [coryla ceae])	Treatment for bruises, wounds, cuts, scalds; pain during childbirth and menstruation; pipe stems
Pitcher plant (Sarracenia purpurea)	Drinking cup; toy ("frog leggings"); cup for berries; treatment for smallpox, kidney and lung ailments; sorcery
Bog rosemary (Andromeda glaucophylla)	Tea
Leatherleaf (Chamaedaphne calyculata)	Treatment for fever, inflammations; tea
Labrador tea (Ledum groenlandicum)	Treatment for ulcers, burns, fever; blood cleansers; expectorant; tonic; tea; brown dye
Blueberry (Vaccinium angustifolium)	Food; treatment for insanity, pleurisy, pain during childbirth; blood cleanser.
Cranberry (Vaccinium oxycoccos)	Food, treatment for nausea.
Bog goldenrod (Solidago canadensis)	Treatment for boils
White bog orchis	Love charm

Reindeer moss lichen (Cladonia cristatella)	Wash for babies
Sheep laurel (Kalmia angustifolia)	Treatment for headache, backache, colds
Creeping snowberry (Symphoricarpos albus)	Tea

Source: Densmore(1974); Kovacs(1979); Weiner(1980), and Biological Inventory and Evaluation of the Wainfleet Bog Area of Natural and Scientific Interest, Ministry of Natural Resources, 1992, pp 154.

TABLE 2A
Estimate of Total Peatlands in the world by Country

Country	Peatland Area	
	Millions of Hectares	Percentage of World Total
Canada	170	40.36
USSR	150	35.62
USA	30	7.12
Indonesia	26	6.17
Sweden	7.0	1.66
Rest of the World	38.25	9.07

Source: Kivinen and Pakarinen (1981)

TABLE 2B
Virgin and Protected Peatlands

Country	Percent of total peatland area of country that is virgin	Percent of peatlands in country that are protected
Canada	99	?
China	92	0

USSR	91	0.9
USA (Minnesota)*	90	6.7
Norway	83	0.1
Sweden	83	2.1
Czechoslovakia	56	15.9
Ireland	53	1.1
Finland	42	2.0
New Zealand	37	33.0
Great Britain	30	?
Switzerland	21	9.1
West Germany	9	3.1
Poland	6	0.4
Denmark	3	0.004
East Germany	2	1.8

SOURCE: Adapted from Kivinen and Pakarinen(1981), based on the data from International Peat Society Survey in 1979 and from Goodwillie (1979).

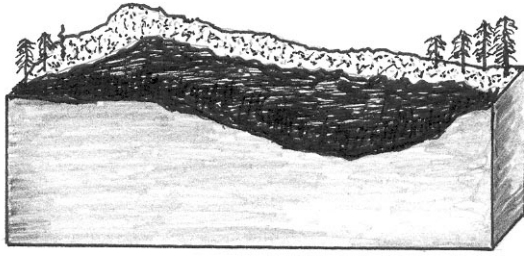
* The only available data from the USA were for the state of Minnesota.

ECOSYSTEM OF A BOG (PEATLAND)

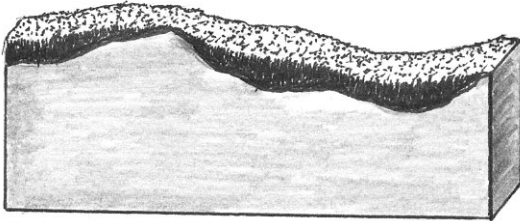
Peatlands are the only ecosystems in which the plants play a large role in controlling their physical environment. Mosses and sedges can change the water chemistry of a bog, which in turn, can alter its plant and animal life. The dynamics of this interaction is not yet clearly known.

Found on all continents except Antarctica, bogs are most common in northern latitudes where retreating glaciers left moist, depressed land with poor drainage. Precipitation is their only water source. If fed by other waters, usually springs, bogs are called fens.

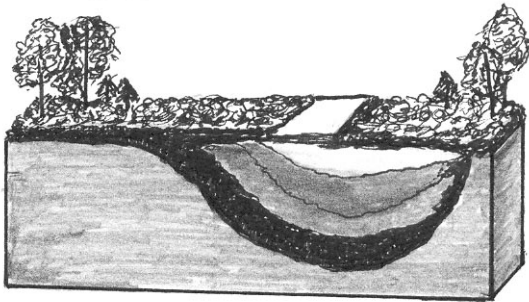
Climate and terrain determine bog type. Waterlogging first lowers oxygen levels and slows plant decay. Dead vegetation settles and becomes peat, a precursor of coal. Swamps and some marshes also produce peat. But accumulation is most dramatic in bogs, where sphagnum mosses excrete antibiotics and raise water acidity.



Raised Bog



Blanket Bog



Kettle Hole

In some parts of new England, glacier-melt Kettle Holes may simply fill in with peat and vegetation. In areas such as central Ireland, they may climax as Raised Bogs. Blanket Bogs spread across poorly drained landscapes, most often in northern coastal regions.

The cry has already gone out to save the raised bogs and to preserve representative peatlands around the world. It will be a race against time. Hunger of fossil fuels continues, and ecologists are just beginning to understand the mysteries of these unique wetland ecosystems and to judge their importance as natural habitats for wildlife.

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