

AN EXTINCTION EVENT?

Fungi

Yeasts, molds, and mushrooms are like animals: they cannot make their own food. They differ from plants and bacteria as their cell walls are made of chitin. This substance, chitin, is also found in insects and crustaceans' exoskeletons. Chitin eating chitin is a suspected cause of Bee Colony Collapse Disorder (CCD), a bee colony disappearing, leaving behind a queen with plenty of food but no workers. Bees feeding on pollen filled with fungicides, insecticides and other agriculture chemicals appear likely to be infected by *Nosema ceranae*, a parasitic microsporangium fungus associated with these widespread deaths. Hives of Western Honey Bees (below) infected with *Nosema* are wiped out within 8 days. Hive losses are currently 40% per year.



Legends & Lessons

Fungi evolved far higher on the evolutionary ladder than did bacteria or viruses. Their DNA is closer to human's than are plant's. This makes human fungal infections more difficult to treat.

That said, fungi are Earth's main decomposer and provide nutrition for humans. They combine with algae or bacteria to create Lichen, a composite organism. Indians were reported to have visited the mountains every summer to collect and dry lichen, the average family collecting many pounds of various types (but never yellow)!

Europeans setting foot here occurred less than 250 years ago. We have proved that the Chinook and Cayuse, residents for 500x as long, can become extinct! Might a fungus create an extinction of the human species? A drug-resistant fungus known as *Candida auris* that is resistant to all three main classes of antifungals has been reported. It may result from natural causes or it may be the result of human action.* As a species, we are so proud, but we have been here a very short time!

*CRISPR gene engineering mail order tool kits are available via the Web to play with bacteria, viruses, fungi ...

Ethnobotanical Gardens

Native plant "starts" from Bonhoeffer Gardens (to your SW, by the I-5) illustrate 99 foods and materials available to the American peoples who lived here 10,000 years without the need to develop agriculture. Planter boxes contain:

Acer circinnatum (81) Achillea millefolium (82) Achlys triphylla (83) Adiantum aleuticum (84) Allium cernuum (85) Allium schoenograsum (86) Alnus rubra (87) Amelanchier alnifolia (88) Anaphalis margaritacea (89) Apuleia formosa (90) Arbutus menziesii (91) Arctostaphylos columbiana (92) Arctostaphylos uva-ursi (93) Athytium filix-femina (94) Balsamorhiza hirtella (95) Berberis aquifolium (96) Berberis nervosa (97) Betula papyrifera (98) Camassia leichlinii (99) Camassia quamash (100) Castilleja linaria (101) Cassiopea cuneata (102) Ceanothus americanus (103) Carex lasiocarpa (104) Ceanothus velutinus (105) Ceanothus velutinus (106) Ceanothus velutinus (107) Ceanothus velutinus (108) Ceanothus velutinus (109) Ceanothus velutinus (110) Ceanothus velutinus (111) Ceanothus velutinus (112) Ceanothus velutinus (113) Ceanothus velutinus (114) Ceanothus velutinus (115) Ceanothus velutinus (116) Ceanothus velutinus (117) Ceanothus velutinus (118) Ceanothus velutinus (119) Ceanothus velutinus (120) Ceanothus velutinus (121) Ceanothus velutinus (122) Ceanothus velutinus (123) Ceanothus velutinus (124) Ceanothus velutinus (125) Ceanothus velutinus (126) Ceanothus velutinus (127) Ceanothus velutinus (128) Ceanothus velutinus (129) Ceanothus velutinus (130) Ceanothus velutinus (131) Ceanothus velutinus (132) Ceanothus velutinus (133) Ceanothus velutinus (134) Ceanothus velutinus (135) Ceanothus velutinus (136) Ceanothus velutinus (137) Ceanothus velutinus (138) Ceanothus velutinus (139) Ceanothus velutinus (140) Ceanothus velutinus (141) Ceanothus velutinus (142) Ceanothus velutinus (143) Ceanothus velutinus (144) Ceanothus velutinus (145) Ceanothus velutinus (146) Ceanothus velutinus (147) Ceanothus velutinus (148) Ceanothus velutinus (149) Ceanothus velutinus (150) Ceanothus velutinus (151) Ceanothus velutinus (152) Ceanothus velutinus (153) Ceanothus velutinus (154) Ceanothus velutinus (155) Ceanothus velutinus (156) Ceanothus velutinus (157) Ceanothus velutinus (158) Ceanothus velutinus (159) Ceanothus velutinus (160) Ceanothus velutinus (161) Ceanothus velutinus (162) Ceanothus velutinus (163) Ceanothus velutinus (164) Ceanothus velutinus (165) Ceanothus velutinus (166) Ceanothus velutinus (167) Ceanothus velutinus (168) Ceanothus velutinus (169) Ceanothus velutinus (170) Ceanothus velutinus (171) Ceanothus velutinus (172) Ceanothus velutinus (173) Ceanothus velutinus (174) Ceanothus velutinus (175) Ceanothus velutinus (176) Ceanothus velutinus (177) Ceanothus velutinus (178) Ceanothus velutinus (179) Ceanothus velutinus (180) Ceanothus velutinus (181) Ceanothus velutinus (182) Ceanothus velutinus (183) Ceanothus velutinus (184) Ceanothus velutinus (185) Ceanothus velutinus (186) Ceanothus velutinus (187) Ceanothus velutinus (188) Ceanothus velutinus (189) Ceanothus velutinus (190) Ceanothus velutinus (191) Ceanothus velutinus (192) Ceanothus velutinus (193) Ceanothus velutinus (194) Ceanothus velutinus (195) Ceanothus velutinus (196) Ceanothus velutinus (197) Ceanothus velutinus (198) Ceanothus velutinus (199) Ceanothus velutinus (200)

The Farm Museum and Garden's goal is to provide Washington State public school students a visual, non-text, introduction to NW History. Local Legends are stories our ancestors told (to us), their grandchildren, who are now 75 years of age. "History" (as compared to "lies perpetuated on the dead") is taken from Wikipedia under the Creative Commons Attribution-ShareAlike Agreements until PLC can develop its unique limited prose. These efforts are now underway with assistance of local school districts and the Stillaguamish Tribe. Plant prose, QR Code Links, and photos are taken from: www.usda.gov (attribution: U.S. Dept. of Agriculture), Wikipedia, and the UoW's www.biology.burke.washington.edu/herbarium website under educational uses. URL Links provided by: USDA, NRCS, the PLANTS Database (<http://plants.usda.gov>) National Plant Data Center, Baton Rouge, LA 70874-4490 USA. Visitors enter under the Revised Codes of the State of Washington - RCW 4.24.200 & 4.24.210 allowing public recreational use, including nature study and viewing or enjoying scenic or scientific sites/waterways on private land. Museum and gardens are proposed uses that still require Snohomish County Planning approvals. At present buildings serve as auxiliary storage units for PLC's native plants, gardening equipment, and Christmas decorations.