

Glossary

abdomen	last body segment of an insect containing most of the internal organs
abiotic	not living
aeciospore	a type of spore produced by rust fungi
anaerobic	not requiring oxygen for respiration
annual	occurring for one year only
antenna	a type of sensory organ on the head of an insect (pl. antennae)
asymptomatic	not having symptoms
bacteria	microscopic, single celled prokaryotic organisms (sn. bacterium)
basidiospore	a type of spore produced by basidiomycetous fungi such as rust fungi
biocontrol	the use of one organism to manage or control another (alt. biological control)
biotic	living
blight	a general term used for a disease that causes blighting
blighting	a rapid and complete chlorosis, browning, then death of plant tissues such as leaves or shoots
bud break	initiation of growth from a bud, usually in reference to the beginning of leaf expansion or shoot growth in the spring
canker	localized region of tissue death in the inner and/or outer bark on stems, branches or twigs
chlorotic	yellowing or whitening of normally green plant tissue
coalesce	to grow or expand into each other to eventually become one
compartmentalize	the sectioning off of damaged or diseased plant tissues using physical and/or chemical barriers
compound eye	insect eye composed of up to several thousand individual light sensing units
conk	a type of fruiting body produced by some wood-decaying fungi
contact pesticide	a hard, shelf-like, spore-bearing structure of certain wood-decaying fungi found on stumps, logs, or trees
cultivar	a cultivated variety of a plant species that has been deliberately selected for specific desirable characteristics
defoliation	loss of plant foliage
disease center	a localized area of disease in the landscape characterized by infected, dying, and dead individuals
drip line	the edge of the area located directly under the tree canopy

elytra	a hardened pair of wings modified to act as protective covers for underwings
emergence	the act of insects coming out of dormancy or metamorphosis
entomology	the study of insects
epicormic sprout	a type of shoot that emerges from a dormant bud along the trunk or branch of a tree
exoskeleton	an external skeleton that covers and protects an insect's body
exotic	not native
forest protection	the scientific branch of forestry concerned with the study and control of stress agents
frass	insect excrement
fruiting body	any complex or multi-celled structure that contains or bears spores
hypha	a tubular filament making up the structure of most fungi (pl. hyphae)
flagging	term for a pattern of symptom development; a single branch that dies and is easily visible in an otherwise healthy crown
fungi	eukaryotic, spore-producing, non-chlorophyll-containing organisms with absorptive nutrition
fungicide	a pesticide that is used to kill fungi
gall	tumor-like tissue on a plant resulting from rapid, uncontrolled cell division and enlargement caused by fungi, insects, or bacteria
gallery	a tunnel created under the bark of a tree made by insects for the purpose of feeding or reproduction (pl. galleries)
girdle	to sever the nutrient and water conducting tissues around the circumference of a tree stem or branch
heartwood	formed in some tree species, a physiologically inactive portion of the xylem rich in antimicrobial chemicals and tyloses
host	in a parasitic relationship, the organism that has stored energy utilized by the parasite
hypopharynx	tongue-like organ of an insect
infection	the entry of a pathogenic organism into a susceptible host
infection court	the site at which infection occurs
infestation	assault or occupation of a host by (usually numerous) parasites
inner bark	general term referring to the cambium and phloem tissues that lie below the outer bark surface
inoculum	pathogen propagules such as spores that are used for the process of infection
insect vector	an insect that can transmit a pathogenic organism from one plant to another
insecticide	a pesticide that kills insects
instar	a developmental stage of an insect larva between each molt

labium	lower lip of an insect
labrum	upper lip of an insect
larva	the juvenile life stage of insects which undergo complete metamorphosis (pl. larvae)
lateral shoot	a side shoot or branch, usually suppressed by the apical dominance exerted by the terminal shoot
lenticel	a pore most commonly found on the surface of plant stems and roots used for gas exchange (not found on all plant species)
lesion	localized region of tissue death
mandible	appendage near an insect's mouth similar to a jaw; the most anterior of the three pairs of oral appendages
meristem	plant tissue capable of cell division that is responsible for growth
mesothorax	second segment of the thorax
metamorphosis	the process of an immature insect developing into the adult form
metathorax	third segment of the thorax
molt	the process of shedding the exoskeleton or skin to make way for new growth
monocyclic disease	a disease caused by pathogens that reproduce only once per year
motile spore	a spore capable of self-propulsion
mycelium	mass of tubular filaments (hyphae) of fungi (pl. mycelia)
nematode	worm-like microorganism that is free living in the soil or water and feeds on plant cells with a spear-like mouthpart called a stylet
niche	a small cut or hollow area in plant tissue where eggs are laid
nymph	the juvenile life stage of insects which undergo incomplete metamorphosis
ocellus	a simple type of insect eye composed of only one light sensing unit (pl. ocelli)
outbreak	a surge in the population of a forest pest (usually insects)
outer bark	a protective layer of dead cells that covers the stem and branches of a tree
ovipositor	an egg laying appendage on some female adult insects that may be stout, blade-like, saw-like, or needle-like; may be modified for stinging
parasite	a biotic stress agent living in or on a host organism as a recipient of energy transfer and causing injury or disease in the process
parthenogenesis	a form of asexual reproduction through the development of unfertilized eggs
pathogen	a biotic stress agent that causes disease
pathology	the study of diseases

perennial	occurring for two or more years
petiole	the stem-like portion of a leaf that attaches the leaf blade to the branch
pheromone	a chemical that is released by an organism that triggers a social response in the same species
phloem	a layer of living cells in the inner bark that conducts photosynthetic products from leaves to the rest of the plant
photosynthesis	the process through which plants convert carbon dioxide and water into sugar (glucose) using the energy from sunlight
pitch tubes	a hardened mass of dried resin on the bark surface at the site of insect entry
polycyclic disease	a disease caused by a pathogen that reproduces more than once per year
predator	free-living organisms that kill their host, usually consuming more than one individual to reach maturity
predisposing factor	a stress agent that stresses a plant causing it to become susceptible to secondary or opportunistic stress agents
primary stress agent	any agent capable of stressing, injuring, or killing an otherwise healthy tree
proboscis	elongated mouthparts used for piercing-sucking activities
prolegs	fleshy legs located on the abdomen of some insect larvae
prothorax	first segment of the thorax
pupa	the life stage of an insect during which complete metamorphosis occurs (pl. pupae)
pupation	the act of undergoing complete metamorphosis
pycniospore	a type of spore produced by rust fungi
refoliate	to produce leaves again after defoliation occurs
resistant	subject to, but tolerant of attack by a parasite
rhizomorph	a thick string-like strand of clustered hyphae in which the hyphae have lost their individuality
root graft	the fusing of two roots resulting in the connection of vascular tissue between the individual roots involved
sapwood	outermost layer of xylem tissue responsible for transporting water and mineral nutrients from the roots to the crown
secondary stress agent	a stress agent that can only attack a tree that has been sufficiently weakened by a predisposing factor
sign	direct visual observation of a stress agent itself or its activity
silviculture	the science of forest establishment, growth, and composition
spermogonium	a small fruiting body that produces the cells used for sexual reproduction in some fungi (pl. spermogonia)

spore	a small propagative unit of some microorganisms (e.g. fungi) that acts as a seed
stag heading	crown dieback resulting in dead branches extending outward from a section of crown containing foliage
stomate	microscopic opening or pore in plant foliage or young shoots used for gas exchange and the primary source of water loss driving transpiration (pl. stomata)
stramenopile	a group of microorganisms once classified as fungi, but differing significantly, leading to their classification as a unique phylum (e.g. oomycetes including phytophthora known as water molds)
stress agent	any agent that causes a sustained disruption of the normal physiological processes or structural functioning of a tree
stroma	a compact fungal structure on which fruiting bodies generally form (pl. stromata)
substrate	surface upon which an organism grows and derives nutrients from
susceptible	capable of being parasitized
symbiotic	a relationship between two organisms (usually different species) that benefits both individuals
symptom	a visible plant reaction a stress agent
symptomatic	showing symptoms
systemic pesticide	a pesticide that is absorbed by the plant and can be translocated in portions of the vascular system
teliospore	a type of spore produced by rust fungi
terminal shoot	shoot originating from the tip of a branch, usually exerts apical dominance on lateral shoots
thorax	middle body segment containing appendages used for locomotion
transpiration	the process during which water is lost from the plant surface to the atmosphere causing the movement of water through the xylem
urediospore	a type of spore produced by rust fungi
vascular system	general term referring to those tissues (xylem and phloem) that conduct water, nutrients, photosynthetic products, and a variety of plant compounds throughout the plant
virus	a microscopic infectious stress agent that can only replicate inside of living cells
wind throw	the act of a tree being blown over by the wind
xylem	central core of wood in stems and branches below the inner bark that contains the sapwood, growth rings, and heartwood

