

# Glossary

- Acuminate**—gradually tapering to a sharp point.
- Ambrosia**—mycelium cultured in galleries as food by 17 species in the families Scolytidae and Platypodidae.
- Ampulla, ampullae**—a blisterlike structure on abdominal segments of larvae of some members of Cerambycidae.
- Antenna, antennae**—a segmented sensory appendage borne one on each side of the head.
- Arcuate**—arched or bowlike.
- Arista**—a large dorsal bristle on the apical antennal segment of members of Diptera.
- Asperate**—roughened; surface roughenings of tiny dotlike elevations are termed **asperites**.
- Attenuate**—gradually tapering apically.
- Bark scar**—a healed-over injury in the bark.
- Biordinal crochets**—crochets on the proleg of a uniserial circle of two lengths, alternating.
- Bipectinate**—having comblike teeth on the side of the antennal segments.
- Biramous**—having two branches.
- Bispinose**—armed with two spines.
- Bole**—a tree trunk once it has grown to large poletimber or sawtimber size.
- Bristle**—a stiff hair, usually short and blunt.
- Brood**—all individuals that hatch from eggs of one parent or series of parents and normally mature about the same time.
- Cambium**—a thin layer of meristematic cells between the bark and wood that gives rise to new phloem and xylem cells.
- Canker**—a localized necrotic lesion of the bark and cambium and sometimes the wood.
- Carina, carinae**—an elevated ridge or keel.
- Caudal**—pertaining to the rear end of the insect body.
- Cell**—(1) the closed area bounded by veins in an insect wing. (2) a nest, chamber, or compartment.
- Cephalad**—toward or in direction of the head.
- Cercus, cerci**—an appendage (generally paired) of the tenth abdominal segment, usually slender and segmented.
- Cervical shield**—a hardened plate on the prothorax of caterpillars just behind the head.
- Chaetotaxy**—arrangement and nomenclature of the setae on the insect.
- Chlorosis**—an abnormal yellowing of foliage.
- Chorion**—the outer shell or covering of an insect egg.
- Ciliate**—fringed with a row of parallel hairs.
- Clavate**—clubbed, usually toward the tip.
- Coarctate**—a pupa having all appendages and body parts concealed by a thickened, usually cylindrical case.
- Cocoon**—a covering composed of silk, other viscid fiber, and debris constructed by larva for protection of pupa.
- Colleterial**—a viscid secretion during oviposition by an accessory gland connected to the oviduct.
- Concentric**—circles or spheres, one within another.
- Coppice**—reproduction from sprouts arising from stools, rootstocks, or stumps.
- Costa, costae**—the thickened anterior vein or margin of an insect's wing.
- Coxa, coxae**—the basal segment of the insect's leg.
- Cradle**—a small chamber or niche along the gallery where the immature stages of some members of Scolytidae and Platypodidae develop.
- Cremaster**—the apex of the last abdominal segment, often with spined hooks.
- Crenulate**—evenly rounded and rather deeply curved.
- Crochets**—the curved spines or hooks on the prolegs of caterpillars and on the cremaster of pupae.
- Cuprous**—coppery; metallic copper red.
- Diameter at breast height**—diameter of a tree at 1.37 m above ground.
- Deciduous**—having leaves that fall at the end of a growing season.
- Declivity**—the sloping rear end of the elytra of members of Coleoptera, especially in the Scolytidae family.
- Decumbent**—bending downward.

- Defect**—a blemish or imperfection in wood such as a hole, a bark pocket, decay, or stain.
- Deflexed**—abruptly bent downward.
- Degrade**—a reduction in quality and grade caused by defects in the wood.
- Dentate**—toothed.
- Denticulate**—set with little teeth (denticles) or notches.
- Depressed**—flattened down as if pressed.
- Dieback**—progressive dying from the extremity of part of the plant.
- Discal**—a large median cell in the wing extending from the base to the center.
- Distal**—toward the free end of any appendage.
- Dorsum**—the upper surface of the insect body; referring to the dorsal surface.
- Eclosion**—emergence of the adult from the pupa or the act of the larva hatching from the egg.
- Ellipsoidal**—oblong-oval, ends equally rounded.
- Elytron, elytra**—hard or leathery forewings of beetles that usually meet in a straight line down the middle of the dorsum.
- Emarginate**—notched.
- Entomogenous**—growing in or on an insect.
- Excrement**—waste products eliminated by an insect mainly from digestion.
- Exudation**—a discharge of sap, gum, and fine frass from minute openings.
- Exarate**—a type of pupa in which the legs and wings are free from the body.
- Exuvium, exuviae**—the cast skin of larvae at metamorphosis.
- Falcate**—convexly curved.
- Fascia**—a transverse band, usually crossing forewings.
- Femur, femora**—the upper part or thigh of the insect leg.
- Fibrous**—consisting of or including long, narrow pieces or fibers of wood.
- Filiform**—threadlike.
- Flagging**—conspicuous dead twigs and branches with the foliage still present and discolored.
- Forceps**—hook- or pincerlike processes terminating the abdomen.
- Frass**—wood fragments mixed with excrement produced by insect larvae.
- Frons**—the upper anterior portion of the head.
- Funicle**—the slender stalk portion of the antenna.
- Fuscous**—a mixture of black and red.
- Gall**—an abnormal growth or swelling of plant tissue caused by insects or other external stimuli.
- Gallery**—a long narrow passage, chewed in the bark, cambium, and/or wood by a tunneling larva.
- Gena, genae**—part of the head below the eyes.
- Generation**—the time required to complete the life cycle of an insect.
- Genitalia**—sexual organs and associated structures.
- Girdle**—a cut in the living phloem or xylem or both, which encircles a stem, branch, or root.
- Glabrous**—smooth, without hairs.
- Globose**—nearly spherical; globular.
- Granular**—small chips or grains of wood, as in insect frass with a grainy texture.
- Gregarious**—living close together, but not social.
- Grub**—an insect larva; usually the larva of Coleoptera and some members of Hymenoptera.
- Gummosis**—formation of gummy exudates, often in masses.
- Haltere**—small filament on each side of the thorax representing the hindwings in Diptera.
- Heartwood**—the nonliving inner core of wood, usually darker than sapwood.
- Hibernaculum, hibernacula**—silken-trash shelter in which a larva hibernates.
- Hibernation**—a period of inactivity occurring during seasonal low temperatures.
- Hooklet**—minute, black, hook-shaped mouthpart in larvae of the order Diptera.
- Hyaline**—transparent or nearly so.
- Incubation**—the hatching period of an egg.
- Infection**—the establishment of a parasite in a host plant.

- Infestation**—borer attacks usually occurring in numbers.
- Inquiline**—an insect living habitually as a guest in the nest of another insect.
- Instar**—the period or stage between molts in a larva, usually numbered.
- Larva, larvae**—a young insect that hatches from the egg and differs fundamentally in form from the adult.
- Lenticel**—a lens-shaped cortical pore on the stem; serves for the exchange of gases.
- Life cycle**—the time between fertilization of an insect egg and the death of the individual adult that proceeds from that egg.
- Lunule**—a crescent-shaped mark around the eye.
- Maggot**—a legless larva of the order Diptera.
- Mandibles**—the first pair of jaws of insects, usually stout and toothlike.
- Marginate**—having an elevated margin with a flat border.
- Mesothorax**—middle segment of the thorax.
- Midrib**—the central vein of a leaf.
- Mimic**—the resemblance of one animal to another that is not closely related.
- Molt**—to shed the outer skin to accommodate growth of the body.
- Monogamous**—a union where a female is fertilized by one male only.
- Mycelium**—the threadlike vegetative part of fungi.
- Mycetangia**—pouchlike structures on insect bodies for storing fungi as in members of Scolytidae and Platypodidae.
- Nuptial chamber**—a cavelike opening made by bark beetles in the inner bark beneath the entrance hole and from which the egg tunnels originate.
- Ocellus, ocelli**—lateral simple eyes of insects.
- Ochreous**—yellowish with a slight tinge of brown.
- Opaque**—without surface luster; not transparent.
- Ornamental**—a plant grown for its esthetic qualities.
- Ovipositor**—a tubular structure at the rear end of a female insect, used to deposit eggs on or in a suitable material.
- Palpus, palpi**—a jointed sensory appendage of the mouth.
- Parasite**—an organism living in or on, and nourished by, another living organism, which is injured or killed.
- Pathogen**—an organism that causes a disease.
- Pectinate**—comblike; even processes on the antennae like the teeth of a comb.
- Pheromone**—an insect-produced chemical that stimulates a specific reaction by the receiving individuals; i.e., sex attractants.
- Phloem**—inner bark; tissue concerned with translocation of foodstuffs.
- Pinaculum, pinacula**—an enlarged seta-bearing papilla forming a flat plate.
- Pith fleck**—a small discolored spot, mark, or streak of mineral, gummy, or pithlike tissue embedded in the xylem.
- Plumose**—feathery.
- Pole**—a young tree 10.2 cm in diameter at breast height (dbh) and up to 20.3 or 30.5 cm in dbh.
- Polygamy**—the condition of a single male having three or more female mates.
- Predator**—any animal that preys on (kills and eats) other animals.
- Proboscis**—any extended mouth structure in members of Diptera and Lepidoptera.
- Proleg**—an appendage that serves the purpose of a leg, as with the abdominal legs of caterpillars and sawflies.
- Pronotum**—the upper surface of the prothorax.
- Prosternum**—the forebreast between the forelegs.
- Prothoracic shield**—a hardened darkened plate extending transversely across the first thoracic segment.
- Prothorax**—the first thoracic segment; it bears the first pair of legs but no wings.
- Pubescence**—short, fine, soft hairs.
- Punctate**—set with small puncture-like impressions.

- Pupa, pupae**—the resting stage of an insect intermediate between the larva and adult stages.
- Puparium, puparia**—the thickened, hardened, barrel-like larval skin within which the pupa is formed in Diptera.
- Recumbent**—lying down; reclining.
- Resistance**—qualities possessed by a plant that function to minimize damage by insects.
- Rachis, rachises**—extension of the petiole bearing the leaflets in compound leaves.
- Reticulate**—covered with a network of raised lines.
- Rufous**—brilliant reddish yellow.
- Rugose**—wrinkled.
- Sapling**—a young tree less than 10.2 cm in diameter at breast height.
- Sapwood**—living outer layers of wood, usually light in color.
- Saw**—a median pair of flattened plates of the ovipositor.
- Sawlog**—a log of suitable size (generally 30.5 cm in diameter at the small end) and quality for sawing into lumber.
- Sawtimber**—trees of size and quality to yield sawlogs.
- Scale**—flattened and modified hairs, as on wings of members of Lepidoptera.
- Seedling**—a young tree grown from seed, up to the sapling stage.
- Serpentine**—winding or turning one way then the other.
- Serrate**—notched like the teeth of a saw.
- Serrulate**—finely serrated; with minute teeth or notches.
- Seta, setae**—bristlelike hair.
- Sheath**—a structure enclosing the saw in sawflies.
- Shelterbelt**—a strip of trees or shrubs maintained to provide shelter from wind.
- Shoot**—any young, tender, succulent, current-year, aerial outgrowth from a plant.
- Silviculture**—the art and science of growing and tending forest tree crops.
- Sinuate**—wavy.
- Spine**—a large seta or thornlike process.
- Spinule**—a minute pointed spine.
- Spiracles**—breathing pores located along sides of the insect body.
- Stemma, stemmata**—simple eyes of larvae.
- Sternite**—the ventral part of a body segment.
- Stool**—a living stump (usually willow or poplar) maintained in nurserybeds to produce cuttings.
- Striae**—parallel, fine, longitudinal, impressed lines as on the elytra of members of Coleoptera.
- Sulcate**—deeply grooved.
- Symbiosis**—the coexistence of different species without disadvantage to either and often with mutual benefit.
- Tarsus, tarsi**—the insect foot; the outermost jointed division of the leg.
- Teneral**—newly transformed adult not entirely hardened or fully colored.
- Tergite**—the dorsal part of a segment.
- Termen**—the outer margin of a wing.
- Tibia, tibiae**—a single-segmented division of the insect leg between the femur and the tarsus.
- Tridente**—three-toothed.
- Truncate**—cut off squarely at the tip.
- Tubercle**—a small rounded projection from the surface sometimes bearing setae.
- Uniordinal crochets**—crochets on the proleg that are uniform in length and in a single series circle.
- Vector**—a carrier of a disease-producing organism.
- Venter**—the undersurface of the abdomen.
- Vertex**—the top of the head.
- Vestiture**—the surface covering of insects such as hairs or scales.
- Windthrow**—uprooting of trees by the wind.
- Xylem**—the principal strengthening and water-conducting tissue of branches, stems, and roots.

## Diagnostic Host Index

This index should enable foresters and others not trained in entomology to identify many of the borers that cause injury to broadleaf trees and shrubs. The index serves in lieu of keys to borers and their damage and provides a means of narrowing the search for the identity of a borer observed on a particular host. **Using this index involves the following steps:**

1. Identifying the host tree or shrub,
2. Determining the part or parts that are injured,
3. Consulting the habit groups to see which one most closely describes the insect,
4. Referring to the text pages on which insects in the selected habit group are discussed and illustrated to decide which description best fits the insect and/or its injury.

Plant parts on shrubs are designated like those of trees, with trunk indicating the main stem, and the difference between twigs and small branches versus large branches based on relative size. The habit group refers to the characteristics of the larvae or adults, the type of injury caused, or the particular habits exhibited by various borer groups.

The following 16 habit groups are described and used:

*Beetle, ambrosia*—adult small, compact, cylindrical, with head largely hidden beneath thorax; larva white, legless, usually C-shaped, in frass-free gallery in xylem.

*Beetle, bark*—adult small, compact, cylindrical, with head largely hidden beneath thorax; larva white, legless, C-shaped, in frass-packed gallery in cambium region.

*Beetle, false powderpost*—adult elongate, cylindrical, with head largely hidden beneath thorax, with rasplike pronotum; larva white, C-shaped, with thoracic legs, in gallery filled with powderlike frass in xylem.

*Beetle, timber*—adult elongate, subcylindrical, with deflexed narrow head; larva elongate, cylindrical, with taillike structure, in mostly

frass-free gallery deep in xylem.

*Borer, clearwing*—larva white, pink, or brown, elliptical spiracles, with thoracic legs and abdominal prolegs, in frass-free galley in phloem and/or sapwood.

*Borer, flatbeaded*—larva white, elongate, slender, legless, with or without thoracic segments enlarged and flattened, in long, narrow, winding gallery in phloem and/or xylem.

*Borer, roundbeaded*—larva white, fleshy, cylindrical, with or without thoracic legs and abdominal ampullae, in large frass-free or frass-packed gallery in phloem and xylem.

*Carpenterworm*—larva pink to white, with thoracic legs and abdominal prolegs, strong mandibles, disagreeable goatlike odor, in large, mostly frass-free gallery in phloem and xylem.

*Caterpillar*—larva variable in color and size, cylindrical, 13 body segments, with thoracic legs and fleshy abdominal prolegs, usually in frass-free gallery in shoots or phloem and/or xylem of roots and stems.

*Gallformer*—larva white to brown, size and form variable, gallery with or without frass, in galls.

*Girdler/pruner, flatbeaded*—larva white, thoracic segments enlarged and flattened, narrow frass-packed gallery, xylem of stem severed leaving phloem intact, which usually breaks.

*Girdler/pruner, roundbeaded*—larva white, fleshy, cylindrical, frass-free or frass-packed gallery, xylem of stem severed leaving phloem intact, which usually breaks; in a few species, the adult girdles the stem from the outside.

*Horntail*—larva white, cylindrical, slightly S-shaped, abdomen ending in hornlike projection, in frass-packed gallery in xylem.

*Miner, cambium*—larva white, long, slender, legless, headless, with hooklike mouthparts, in long, narrow, frass-packed mine in cambium region.

*Sawfly*—larva yellowish white to purplish green, curved to S-shaped, cylindrical, with small thoracic legs, in frass-packed gallery, usually in tender shoots and stems.

*Weevil*—larva white, subcylindrical, fleshy, C-shaped, legless, in gallery containing some

dark frass in shoots, stems, or under bark.

(For additional details on habit groups, see the introductory text at the beginning of each order and family).

### **Acacia**

- Twigs, small branches
  - Girdler/pruner, roundheaded
    - Oncideres rhodosticta* 329
- Trunk, large branches
  - Beetle, ambrosia
    - Xyleborus dispar* 564
  - Borer, flatheaded
    - Chrysobothris merkelii* 273

### **Alder**

- Buds, shoots, petioles
  - Caterpillars
    - Achatodes zea* 209
    - Epinotia nisella* 151
- Twigs, small branches
  - Girdler/pruner, roundheaded
    - Xylotrechus quadrimaculatus* 457
- Trunk, large branches
  - Beetles, ambrosia
    - Trypodendron betulae* 556
    - Xyleborus dispar* 564
    - Xyloterinus politus* 551
  - Beetle, bark
    - Alniphagus aspercollis* 527
  - Borers, clearwing
    - Parantbrene asilipennis* 40
    - Synantbedon culiciformis* 97
  - Borers, flatheaded
    - Agrilus burkei* 230
    - Agrilus pensus* 232
    - Chrysobothrus mali* 270
    - Eupristocerus cogitans* 262
  - Borers, roundheaded
    - Neoptychodes trilineatus* 314
    - Saperda obliqua* 359
    - Stenodontes dasytomus masticator* 401
  - Weevils
    - Cryptorhynchus lapathi* 492
    - Magdalis aenescens* 495
  - Roots, root collar
    - Borer, clearwing

- Parantbrene asilipennis* 40
- Borer, roundheaded
  - Prionus californicus* 393
- Caterpillar
  - Sthenopis argenteomaculatus* 6
- Alder, black**
  - Trunk, large branches
    - Borer, roundheaded
      - Saperda obliqua* 359
- Alder, Italian**
  - Trunk, large branches
    - Borer, flatheaded
      - Agrilus burkei* 230
- Alder, mountain**
  - Trunk, large branches
    - Borer, flatheaded
      - Agrilus burkei* 230
- Alder, Oregon**
  - Trunk, large branches
    - Beetle, bark
      - Alniphagus aspercollis* 527
- Alder, speckled**
  - Trunk, large branches
    - Borers, flatheaded
      - Agrilus pensus* 232
      - Eupristocerus cogitans* 262
  - Roots, root collar
    - Caterpillar
      - Sthenopis argenteomaculatus* 6
- Alder, white**
  - Trunk, large branches
    - Borer, flatheaded
      - Agrilus burkei* 230
    - Beetle, bark
      - Alniphagus aspercollis* 527
- Alkali blite**
  - Roots, root collar
    - Carpenterworm
      - Comadia suaedivora* 131
- Almond**
  - Buds, shoots, petioles
    - Caterpillar
      - Anarsia lineatella* 22
  - Twigs, small branches
    - Beetle, false powderpost
      - Melagus confertus* 288

- Caterpillar  
*Anarsia lineatella* 22
- Trunk, large branches  
 Borer, clearwing  
*Synanthedon exitiosa* 59
- Roots, root collar  
 Borer, clearwing  
*Synanthedon exitiosa* 59
- Borer, roundheaded  
*Prionus californicus* 393
- American cranberrybush  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon fatifera* 96
- Antelope brush  
 Twigs, small branches  
 Pruner/girdler, roundheaded  
*Aneflomorpha lineare* 421
- Apple  
 Buds, shoots, petioles  
 Caterpillars  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
*Ostrinia nubilalis* 189  
*Papaipema nebris* 202  
*Spilonota ocellana* 147
- Twigs, small branches  
 Beetles, false powderpost  
*Ampibicerus bicaudatus* 284  
*Melalgus confertus* 288  
*Xylobiops basilaris* 286
- Borers, roundheaded  
*Oberea bimaculata* 376  
*Oberea ocellata* 383
- Carpenterworm  
*Zeuzera pyrina* 127
- Caterpillars  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
*Ostrinia nubilalis* 189
- Girdlers/pruners, roundheaded  
*Anelaphus parallelus* 429  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324
- Trunk, large branches  
 Beetles, ambrosia  
*Monartbrum fasciatum* 548  
*Monartbrum mali* 546  
*Xyleborus dispar* 564  
*Xyleborus xylographus* 563  
*Xylosandrus germanus* 572
- Beetle, bark  
*Scolytus rugulosus* 506
- Beetle, false powderpost  
*Xylobiops basilaris* 286
- Borers, clearwing  
*Synanthedon pyri* 78  
*Synanthedon scitula* 65
- Borers, flatheaded  
*Agrilus vittaticollis* 254  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270
- Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
*Saperda candida* 346  
*Saperda cretata* 349  
*Synaphaeta guexi* 316
- Carpenterworm  
*Zeuzera pyrina* 127
- Caterpillars  
*Euzophera semifuneralis* 169  
*Hepialus californicus* 10
- Horntail  
*Tremex columba* 597
- Weevils  
*Conotrachelus anaglypticus* 490  
*Magdalis aenescens* 495
- Roots, root collar  
 Borer, flatheaded  
*Agrilus vittaticollis* 254
- Borers, roundheaded  
*Archodontes melanopus melanopus* 396  
*Prionus californicus* 393  
*Prionus imbricornis* 388  
*Prionus laticollis* 390
- Caterpillar  
*Hepialus californicus* 10
- Apricot  
 Buds, shoots, petioles  
 Caterpillars  
*Anarsia lineatella* 22

- Grapholita molesta* 160
- Twigs, small branches
- Beetles, false powderpost
- Amphicerus bicaudatus* 284
- Melalgus confertus* 288
- Trunk, large branches
- Beetle, ambrosia
- Xyleborus dispar* 564
- Beetle, bark
- Scolytus rugulosus* 506
- Borer, clearwing
- Synanthedon exitiosa* 59
- Borers, flatheaded
- Chrysobothris femorata* 267
- Chrysobothris mali* 270
- Caterpillar
- Euzophera semifuneralis* 169
- Roots, root collar
- Borer, clearwing
- Synanthedon exitiosa* 59
- Arrowwood*
- Trunk, large branches
- Borer, clearwing
- Synanthedon viburni* 94
- Asb*
- Buds, shoots, petioles
- Borer, clearwing
- Podosesia syringae* 30
- Caterpillars
- Papaipema furcata* 207
- Papaipema nebris* 202
- Twigs, small branches
- Beetle, ambrosia
- Xyleborus sayi* 565
- Beetles, bark
- Hylesinus californicus* 517
- Hylesinus criddlei* 519
- Beetles, false powderpost
- Amphicerus bicaudatus* 284
- Xylobiops basilaris* 286
- Carpenterworm
- Zeuzera pyrina* 127
- Trunk, large branches
- Beetles, ambrosia
- Xyleborus dispar* 564
- Xyleborus ferrugineus* 561
- Xylosandrus germanus* 572
- Xyloterinus politus* 551
- Beetles, bark
- Hylesinus aculeatus* 514
- Hylesinus californicus* 517
- Hylesinus criddlei* 519
- Hylurgopinus rufipes* 512
- Borers, clearwing
- Parantbrene asilipennis* 40
- Podosesia aureocincta* 33
- Podosesia syringae* 30
- Borer, flatheaded
- Chrysobothris mali* 270
- Borers, roundheaded
- Neoclytus acuminatus* 464
- Saperda lateralis* 363
- Tylonotus bimaculatus* 413
- Carpenterworms
- Prionoxystus robiniae* 112
- Zeuzera pyrina* 127
- Miner, cambium
- Phytobia* sp. 631
- Roots, root collar
- Borer, clearwing
- Parantbrene asilipennis* 40
- Miner, cambium
- Phytobia* sp. 631
- Asb, black*
- Buds, shoots, petioles
- Caterpillar
- Papaipema furcata* 207
- Trunk, large branches
- Borer, roundheaded
- Parandra brunnea* 385
- Asb, Carolina*
- Trunk, large branches
- Borer, clearwing
- Podosesia syringae* 30
- Asb, European*
- Trunk, large branches
- Borer, clearwing
- Podosesia syringae* 30
- Asb, green*
- Buds, shoots, petioles
- Borer, clearwing
- Podosesia syringae* 30



- Caterpillar  
*Papaipema furcata* 207
- Twigs, small branches
- Beetles, bark  
*Hylesinus californicus* 517  
*Hylesinus criddlei* 519
- Trunk, large branches
- Beetles, bark  
*Hylesinus aculeatus* 514  
*Hylesinus californicus* 517  
*Hylesinus criddlei* 519
- Borers, clearwing  
*Podosesia aureocincta* 33  
*Podosesia syringae* 30
- Borer, roundheaded  
*Tylonotus bimaculatus* 413
- Carpenterworm  
*Prionoxystus robiniae* 112
- Miner, cambium  
*Phytobia* sp. 631
- Roots, root collar  
 Miner, cambium  
*Phytobia* sp. 631
- Asb, Oregon*
- Twigs, small branches
- Beetle, bark  
*Hylesinus californicus* 517
- Trunk, large branches
- Beetle, bark  
*Hylesinus californicus* 517
- Asb, red*
- Trunk, large branches
- Borer, clearwing  
*Podosesia syringae* 30
- Asb, white*
- Buds, shoots, petioles
- Caterpillar  
*Papaipema furcata* 207
- Twigs, small branches
- Beetle, bark  
*Corthylus punctatissimus* 543
- Beetles, bark  
*Hylesinus californicus* 517  
*Hylesinus criddlei* 519
- Trunk, large branches
- Beetles, bark  
*Hylesinus aculeatus* 514  
*Hylesinus californicus* 517
- Borers, clearwing  
*Podosesia aureocincta* 33  
*Podosesia syringae* 30
- Miner, cambium  
*Phytobia* sp. 631
- Roots, root collar  
 Miner, cambium  
*Phytobia* sp. 631
- Aspen, bigtooth*
- Buds, shoots, petioles
- Gallformer  
*Ectoedema populella* 15
- Sawfly  
*Janus abbreviatus* 608
- Twigs, small branches
- Borer, flatheaded  
*Descarpentriesina cyanipes* 274
- Borers, roundheaded  
*Oberea schaumii* 367  
*Saperda inornata* 339
- Trunk, large branches
- Beetle, ambrosia  
*Trypodendron retusum* 553
- Borers, flatheaded  
*Agrilus granulatus liragus* 224  
*Agrilus horni* 220  
*Descarpentriesina cyanipes* 274  
*Dicerca tenebrica* 280
- Roots, root collar
- Borer, flatheaded  
*Agrilus horni* 220
- Aspen, quaking*
- Buds, shoots, petioles
- Caterpillar  
*Epinotia nisella* 151
- Gallformer  
*Ectoedema populella* 15
- Sawfly  
*Janus abbreviatus* 608
- Twigs, small branches
- Borer, flatheaded  
*Descarpentriesina cyanipes* 274
- Borers, roundheaded  
*Oberea schaumii* 367

- Saperda inornata* 339  
*Saperda populnea moesta* 342  
 Trunk, large branches  
   Beetle, ambrosia  
     *Trypodendron retusum* 553  
   Borer, clearwing  
     *Sesia tibialis* 51  
   Borers, flatheaded  
     *Agrilus granulatus liragus* 224  
     *Agrilus horni* 220  
     *Descarpentriesina californica* 276  
     *Descarpentriesina cyanipes* 274  
     *Dicerca tenebrica* 280  
   Borers, roundheaded  
     *Saperda calcarata* 334  
     *Xylotrechus oblitteratus* 461  
   Carpenterworms  
     *Acosus centerensis* 124  
     *Acosus populi* 127  
   Weevil  
     *Cryptorhynchus lapathi* 492  
 Roots, root collar  
   Borer, clearwing  
     *Sesia tibialis* 51  
   Borer, flatheaded  
     *Agrilus horni* 220  
   Borer, roundheaded  
     *Xylotrechus oblitteratus* 461  
*Avocado*  
   Twigs, small branches  
     Beetle, false powderpost  
       *Melalgus confertus* 288  
     Beetle, ambrosia  
       *Xylosandrus compactus* 569  
   Trunk, large branches  
     Borer, clearwing  
       *Synantbedon resplendens* 72  
     Borer, flatheaded  
       *Chrysobothris mali* 270  
*Azalea*  
   Twigs, small branches  
     Beetle, ambrosia  
       *Corthylus punctatissimus* 543  
     Borer, roundheaded  
       *Oberea tripunctata* 374  
   Trunk, large branches  
     Borer, clearwing  
       *Synantbedon rhododendri* 75  
     Roots, root collar  
       Caterpillar  
         *Hepialus californicus* 10  
**Baccharis**  
   Trunk, large branches  
     Borer, flatheaded  
       *Chrysobothris bacchari* 272  
   Borer, roundheaded  
     *Stenodontes lobigenis* 402  
   Carpenterworm  
     *Prionoxystus piger* 118  
   Caterpillars  
     *Oidaematophorus balanotes* 195  
     *Oidaematophorus kellicottii* 197  
   Roots, root collar  
     Caterpillars  
       *Oidaematophorus balanotes* 195  
       *Oidaematophorus kellicottii* 197  
*Baccharis, eastern*  
   Trunk, large branches  
     Carpenterworm  
       *Prionoxystus piger* 118  
     Caterpillars  
       *Oidaematophorus balanotes* 195  
       *Oidaematophorus kellicottii* 197  
   Roots, root collar  
     Caterpillars  
       *Oidaematophorus balanotes* 195  
       *Oidaematophorus kellicottii* 197  
*Baccharis, seepwillow (mulefat)*  
   Twigs, small branches  
     Borer, roundheaded  
       *Neoclytus tenuiscriptus* 466  
*Basewood*  
   Twigs, small branches  
     Beetle, ambrosia  
       *Xyleborus sayi* 565  
     Girdlers/pruners, roundheaded  
       *Anelaphus villosus* 431  
       *Oncideres cingulata cingulata* 324  
   Trunk, large branches  
     Beetles, ambrosia  
       *Corthylus columbianus* 541  
       *Monarthrum mali* 546

- Platypus compositus* 578  
*Xylosandrus germanus* 572  
 Beetle, timber  
   *Hylecoetus lugubris* 292  
 Beetle, bark  
   *Hylurgopinus rufipes* 512  
 Borers, flatheaded  
   *Chrysobothris femorata* 267  
   *Texania campestris* 280  
 Borers, roundheaded  
   *Dryobius sexnotatus* 438  
   *Neoclytus acuminatus* 464  
   *Parandra brunnea* 385  
   *Saperda lateralis* 363  
   *Saperda vestita* 353  
 Caterpillars  
   *Euzophera semifuneralis* 169  
   *Glyphipteryx linneella* 20  
 Roots, root collar  
   Borers, roundheaded  
     *Prionus laticollis* 390  
     *Saperda vestita* 353  
*Basswood, American*  
   Trunk, large branches  
     Beetle, ambrosia  
       *Corthylus columbianus* 541  
     Borer, roundheaded  
       *Saperda vestita* 353  
   Roots, root collar  
     Borer, roundheaded  
       *Saperda vestita* 353  
*Bayberry*  
   Trunk, large branches  
     Beetle, ambrosia  
       *Xylosandrus germanus* 572  
     Borer, clearwing  
       *Synanthedon scitula* 65  
     Borer, flatheaded  
       *Agrilus sayi* 249  
     Caterpillar  
       *Oidaematophorus balanotes* 195  
   Roots, root collar  
     Borer, flatheaded  
       *Agrilus sayi* 249  
     Caterpillar  
       *Oidaematophorus balanotes* 195  
*Beech*  
   Buds, shoots, petioles  
     Caterpillar  
       *Spilonota ocellana* 147  
   Twigs, small branches  
     Carpenterworm  
       *Zeuzera pyrina* 127  
     Girdler/pruner, roundheaded  
       *Xylotrechus quadrimaculatus* 457  
   Trunk, large branches  
     Beetles, ambrosia  
       *Corthylus columbianus* 541  
       *Monarthrum mali* 546  
       *Platypus compositus* 578  
       *Xyleborinus saxeseni* 566  
       *Xyleborus dispar* 564  
       *Xyleborus ferrugineus* 561  
       *Xyleborus xylographus* 563  
       *Xylosandrus germanus* 572  
       *Xyloterinus politus* 551  
     Beetles, bark  
       *Dryocoetes betulae* 532  
       *Pseudopityophthorus minutissimus* 534  
     Borer, clearwing  
       *Synanthedon scitula* 65  
     Borers, flatheaded  
       *Chrysobothris femorata* 267  
       *Chrysobothris mali* 270  
       *Texania campestris* 280  
     Borers, roundheaded  
       *Dryobius sexnotatus* 438  
       *Goes pulverulentus* 304  
       *Neoclytus acuminatus* 464  
       *Parandra brunnea* 385  
       *Strobiona nitens* 410  
     Carpenterworm  
       *Zeuzera pyrina* 127  
     Horntail  
       *Tremex columba* 597  
     Weevils  
       *Arrhenodes minutus* 476  
       *Conotrachelus anaglypticus* 490  
*Beech, American*  
   Trunk, large branches  
     Beetle, ambrosia  
       *Corthylus columbianus* 541

- Beetle, bark  
*Pseudopityophthorus pruinosus* 536
- Borer, roundheaded  
*Goes pulverulentus* 304
- Birch*
- Buds, shoots, petioles
- Caterpillars  
*Epinotia nisella* 151  
*Epinotia sollicitana* 149
- Twigs, small branches
- Beetle, ambrosia  
*Xyleborus sayi* 565
- Beetle, false powderpost  
*Melalgus confertus* 288
- Borer, flatheaded  
*Agrilus anxius* 217
- Girdlers/pruners, roundheaded  
*Anelaphus villosus* 431  
*Xylotrechus quadrimaculatus* 457
- Trunk, large branches
- Beetles, ambrosia  
*Corthylus columbianus* 541  
*Monarthrum fasciatum* 548  
*Monarthrum mali* 546  
*Platypus compositus* 578  
*Trypodendron betulae* 556  
*Xyleborus affinis* 560  
*Xyleborus dispar* 564  
*Xyleborus ferrugineus* 561  
*Xyleborus xylographus* 563  
*Xylosandrus germanus* 572  
*Xyloterinus politus* 551
- Beetles, bark  
*Dryocoetes betulae* 532  
*Pseudopityophthorus minutissimus* 534
- Beetle, timber  
*Hylecoetes lugubris* 292
- Borers, clearwing  
*Paranthrene robiniae* 48  
*Synantbedon culiciformis* 97  
*Synantbedon scitula* 65
- Borers, flatheaded  
*Agrilus anxius* 217  
*Agrilus pensus* 232  
*Chrysobothris mali* 270  
*Eupristocerus cogitans* 262
- Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Saperda obliqua* 359  
*Tylonotus bimaculatus* 413
- Miner, cambium  
*Phytobia betulivora* 624
- Weevils  
*Conotrachelus anaglypticus* 490  
*Cryptorhynchus lapathi* 492
- Roots, root collar
- Miner, cambium  
*Phytobia betulivora* 624
- Birch, gray*
- Buds, shoots, petioles
- Caterpillar  
*Epinotia sollicitana* 149
- Twigs, small branches
- Borer, flatheaded  
*Agrilus anxius* 217
- Trunk, large branches
- Borer, flatheaded  
*Agrilus anxius* 217
- Birch, paper*
- Twigs, small branches
- Borer, flatheaded  
*Agrilus anxius* 217
- Trunk, large branches
- Beetle, ambrosia  
*Trypodendron betulae* 556
- Beetle, bark  
*Dryocoetes betulae* 532
- Borer, flatheaded  
*Agrilus anxius* 217
- Birch, river*
- Twigs, small branches
- Borer, flatheaded  
*Agrilus anxius* 217
- Trunk, large branches
- Borers, flatheaded  
*Agrilus anxius* 217  
*Agrilus pensus* 232  
*Eupristocerus cogitans* 262
- Miner, cambium  
*Phytobia betulivora* 624
- Birch, sweet*
- Trunk, large branches

- Borer, flatheaded  
*Agrilus anxius* 217
- Birch, western paper*  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus anxius* 217
- Birch, white*  
 Buds, shoots, petioles  
 Caterpillar  
*Epinotia solicitana* 149
- Birch, yellow*  
 Twigs, small branches  
 Borer, flatheaded  
*Agrilus anxius* 217
- Trunk, large branches  
 Beetles, ambrosia  
*Corthylyus columbianus* 541  
*Trypodendron betulae* 556
- Beetle, bark  
*Dryocoetes betulae* 532
- Borer, flatheaded  
*Agrilus anxius* 217
- Blackbead*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres rhodosticta* 329
- Blackberry*  
 Buds, shoots, petioles  
 Caterpillar  
*Spilonota ocellana* 147
- Twigs, small branches, canes  
 Borers, clearwing  
*Pennisetia marginata* 101  
*Synanthedon tipuliformis* 99
- Borer, flatheaded  
*Agrilus ruficollis* 262
- Borers, roundheaded  
*Oberea bimaculata* 376  
*Oberea ocellata* 383
- Sawflies  
*Hartigia cressoni* 603  
*Hartigia trimaculata* 605
- Roots, root collar  
 Borer, clearwing  
*Pennisetia marginata* 101
- Borer, roundheaded
- Oberea ocellata* 383
- Caterpillars  
*Hepialis californicus* 10  
*Sibenopsis argenteomaculatus* 6
- Blackgum*  
 Trunk, large branches  
 Beetles, ambrosia  
*Monarthrum fasciatum* 548  
*Monarthrum mali* 546
- Borer, clearwing  
*Synanthedon rubrofascia* 87
- Borer, roundheaded  
*Aegomorphus morrissi* 332
- Blackhaw*  
 Buds, shoots, petioles  
 Sawfly  
*Janus bimaculatus* 611
- Blueberry*  
 Buds, shoots, petioles  
 Caterpillars  
*Grapholita packardi* 162  
*Hendecaneura shawiana* 152
- Twigs, small branches  
 Beetle, ambrosia  
*Corthylyus punctatissimus* 543
- Borer, roundheaded  
*Oberea tripunctata* 374
- Caterpillar  
*Grapholita packardi* 162
- Blue paloverde*  
 Roots, root collar  
 Borer, roundheaded  
*Stenodontes lobigenis* 402
- Boston ivy*  
 Roots, root collar  
 Borer, clearwing  
*Vitacea scepisiformis* 106
- Boxelder*  
 Buds, shoots, petioles  
 Caterpillars  
*Papaipema cataphracta* 205  
*Papaipema furcata* 207  
*Papaipema nebris* 202  
*Proteoteras aesculana* 143  
*Proteoteras arizonae* 140  
*Proteoteras crescentana* 142

- Proteoteras willingana* 137
- Twigs, small branches
- Caterpillars
- Proteoteras aesculana* 143
- Proteoteras arizonae* 140
- Proteoteras crescentana* 142
- Proteoteras willingana* 137
- Trunk, large branches
- Beetle, ambrosia
- Corthylus columbianus* 541
- Borer, clearwing
- Synanthedon acerrubri* 70
- Borers, flatheaded
- Agrilus masculinus* 252
- Chrysobothris femorata* 267
- Chrysobothris mali* 270
- Borer, roundheaded
- Stenodontes dasytomus dasytomus* 399
- Carpenterworm
- Prionoxystus robiniae* 112
- Roots, root collar
- Borer, roundheaded
- Archodontes melanopus melanopus* 396
- Box-thorn**
- Twigs, small branches
- Girdler/pruner, roundheaded
- Anelaphus inflaticollis* 433
- Buckeye**
- Buds, shoots, petioles
- Caterpillar
- Zeiraphera claypoleana* 147
- Trunk, large branches
- Beetle, ambrosia
- Xylosandrus germanus* 572
- Beetle, timber
- Hylecoetus lugubris* 292
- Buckeye, California**
- Trunk, large branches
- Borer, roundheaded
- Synapthaeta guexi* 316
- Buckeye, Ohio**
- Buds, shoots, petioles
- Caterpillar
- Zeiraphera claypoleana* 147
- Butternut**
- Buds, shoots, petioles
- Weevils
- Conotrachelus juglandis* 485
- Conotrachelus retentus* 489
- Twigs, small branches
- Beetle, false powderpost
- Amphicerus bicaudatus* 284
- Trunk, large branches
- Beetle, ambrosia
- Xylosandrus germanus* 572
- Beetle, bark
- Scolytus quadrispinosus* 504
- Borer, flatheaded
- Agrilus juglandis* 244
- Borers, roundheaded
- Saperda discoidea* 363
- Tylonotus bimaculatus* 413
- Buttonbush**
- Buds, shoots, petioles
- Caterpillars
- Mompha* n. sp. 17
- Papaipema furcata* 207
- Campbor-tree**
- Twigs, small branches
- Beetle, ambrosia
- Xylosandrus compactus* 569
- Catalpa**
- Buds, shoots, petioles
- Caterpillar
- Papaipema nebris* 202
- Catclaw**
- Trunk, large branches
- Borer, flatheaded
- Chrysobothris merkelii* 273
- Ceanothus**
- Trunk, large branches
- Borer, clearwing
- Synanthedon mellinipennis* 96
- Borer, flatheaded
- Chrysobothris mali* 270
- Ceanothus, blueblossom**
- Trunk, large branches
- Borer, clearwing
- Synanthedon mellinipennis* 96
- Cherry**
- Buds, shoots, petioles
- Caterpillars

- Anarsia lineatella* 22  
*Argyresthia oreasella* 28  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
*Spilonota ocellana* 147  
Twigs, small branches  
Beetles, false powderpost  
*Ampbicerus bicaudatus* 284  
*Melalgus confertus* 288  
Caterpillars  
*Anarsia lineatella* 22  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
Girdler/pruner, roundheaded  
*Anelaphus parallelus* 429  
Trunk, large branches  
Beetles, ambrosia  
*Monarthrum mali* 546  
*Platypus compositus* 578  
*Xyleborus dispar* 564  
*Xylosandrus crassiusculus* 575  
Beetles, bark  
*Phloeotribus liminaris* 521  
*Scolytus rugulosus* 506  
Borers, clearwing  
*Synanthedon exitiosa* 59  
*Synanthedon pictipes* 62  
*Synanthedon scitula* 65  
Borers, flatheaded  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270  
Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
*Synapbaeta guexi* 316  
Caterpillar  
*Euzophera semifuneralis* 169  
Miner, cambium  
*Phytobia pruni* 626  
Weevil  
*Magdalis aenescens* 495  
Roots, root collar  
Borer, clearwing  
*Synanthedon exitiosa* 59  
Borers, roundheaded  
*Prionus californicus* 393  
*Prionus laticollis* 390  
Caterpillar  
*Sthenopsis argenteomaculatus* 6  
Miner, cambium  
*Phytobia pruni* 626  
Cherry, black  
Trunk, large branches  
Beetles, ambrosia  
*Xyleborus affinis* 560  
*Xylosandrus germanus* 552  
*Xyloterinus politus* 551  
Beetles, bark  
*Phloeotribus liminaris* 521  
*Pseudopityophthorus minutissimus* 534  
*Pseudopityophthorus pruinosus* 536  
Borers, clearwing  
*Synanthedon exitiosa* 59  
*Synanthedon pictipes* 62  
Miner, cambium  
*Phytobia pruni* 626  
Roots, root collar  
Borer, clearwing  
*Synanthedon exitiosa* 59  
Miner, cambium  
*Phytobia pruni* 626  
Cherry, mahaleb  
Trunk, large branches  
Miner, cambium  
*Phytobia pruni* 626  
Roots, root collar  
Miner, cambium  
*Phytobia pruni* 626  
Cherry, sour  
Trunk, large branches  
Miner, cambium  
*Phytobia pruni* 626  
Roots, root collar  
Miner, cambium  
*Phytobia pruni* 626  
Cherry, wild  
Trunk, large branches  
Beetles, bark  
*Dryocoetes betulae* 532  
*Hylurgopinus rufipes* 512  
*Scolytus rugulosus* 506  
Chestnut

Twigs, small branches  
 Beetle, ambrosia  
   *Xyleborus sayi* 565  
 Borer, roundheaded  
   *Purpuricenus axillaris* 473  
 Girdlers/pruners, roundheaded  
   *Aneflomorpha subpubescens* 419  
   *Anelaphus villosus* 431  
 Carpenterworm  
   *Zeuzera pyrina* 127  
 Trunk, large branches  
 Beetles, ambrosia  
   *Corthylus columbianus* 541  
   *Monarthrum fasciatum* 548  
   *Platypus compositus* 578  
   *Platypus quadridentatus* 581  
   *Xyleborus affinis* 560  
   *Xyleborus dispar* 564  
   *Xyleborus ferrugineus* 561  
   *Xyleborus xylographus* 563  
   *Xyloterinus politus* 551  
 Beetles, bark  
   *Pseudopityophthorus minutissimus* 534  
   *Pseudopityophthorus pruinosus* 536  
 Beetles, timber  
   *Hylecoetus lugubris* 292  
   *Melittomma sericeum* 290  
 Borers, clearwing  
   *Synanthedon castaneae* 98  
   *Synanthedon scitula* 65  
 Borers, flatheaded  
   *Agrilus bilineatus* 214  
   *Chrysobothris femorata* 267  
 Borers, roundheaded  
   *Neoclytus acuminatus* 464  
   *Parandra brunnea* 385  
   *Strophiona nitens* 410  
   *Synapbaeta guexi* 316  
 Carpenterworm  
   *Zeuzera pyrina* 127  
 Weevil  
   *Conotrachelus anaglypticus* 490  
 Roots, root collar  
 Borers, roundheaded  
   *Prionus californicus* 393  
   *Prionus imbricornis* 388  
   *Prionus laticollis* 390  
 Caterpillar  
   *Sthenopsis argenteomaculatus* 6  
 Girdler/pruner, roundheaded  
   *Aneflomorpha subpubescens* 419  
*Chestnut, American*  
 Twigs, small branches  
 Borer, roundheaded  
   *Purpuricenus axillaris* 473  
 Trunk, large branches  
 Beetle, ambrosia  
   *Corthylus columbianus* 541  
 Beetle, timber  
   *Melittomma sericeum* 290  
 Borers, clearwing  
   *Parantbrene simulans* 35  
   *Synanthedon castaneae* 98  
 Borer, flatheaded  
   *Agrilus bilineatus* 214  
*Chokecherry*  
 Trunk, large branches  
 Beetle, bark  
   *Scolytus rugulosus* 506  
 Borer, roundheaded  
   *Saperda candida* 346  
 Miner, cambium  
   *Phytobia pruni* 626  
*Coralbean*  
 Twigs, small branches  
 Caterpillar  
   *Terastia meticulosalis* 187  
*Cotoneaster*  
 Trunk, large branches  
 Borer, flatheaded  
   *Chrysobothris mali* 270  
 Borer, roundheaded  
   *Saperda candida* 346  
*Cottonwood, black*  
 Buds, shoots, petioles  
 Caterpillar  
   *Epinotia nisella* 151  
 Twigs, small branches  
 Borer, clearwing  
   *Parantbrene robiniae* 48  
 Borer, flatheaded  
   *Descarpentriesina cyanipes* 274



- Borer, roundheaded  
*Saperda populnea tulari* 344
- Trunk, large branches  
 Beetle, ambrosia  
*Trypophloeus populi* 529
- Borers, clearwing  
*Paranthrene robiniae* 48  
*Sesia apiformis* 54  
*Sesia tibialis* 51
- Borers, flatheaded  
*Agrilus granulatus granulatus* 222  
*Agrilus granulatus liragus* 224  
*Agrilus granulatus populi* 227  
*Descarpentriesina cyanipes* 274  
*Dicerca tenebrica* 280
- Roots, root collar  
 Borers, clearwing  
*Sesia apiformis* 54  
*Sesia tibialis* 51
- Caterpillar  
*Sthenopis quadriguttatus* 3
- Cottonwood, eastern  
 Buds, shoots, petioles  
 Caterpillars  
*Gypsonoma baimbachiana* 134  
*Papaipema cataphracta* 205
- Sawfly  
*Janus abbreviatus* 608
- Twigs, small branches  
 Borers, clearwing  
*Paranthrene dollii* 45  
*Paranthrene tabaniformis* 42
- Borer, flatheaded  
*Descarpentriesina cyanipes* 274
- Borers, roundheaded  
*Oberea delongi* 370  
*Oberea schaumii* 367
- Trunk, large branches  
 Beetles, ambrosia  
*Trypodendron retusum* 553  
*Xylosandrus crassiusculus* 575
- Borers, clearwing  
*Paranthrene dollii* 45  
*Sesia apiformis* 54  
*Sesia tibialis* 51
- Borers, flatheaded  
*Agrilus granulatus granulatus* 222  
*Agrilus granulatus liragus* 224  
*Descarpentriesina cyanipes* 274
- Borer, roundheaded  
*Saperda calcarata* 334
- Roots, root collar  
 Borers, clearwing  
*Paranthrene dollii* 45  
*Sesia apiformis* 54  
*Sesia tibialis* 51
- Borer, roundheaded  
*Plectrodera scalator* 311
- Cottonwood, Fremont  
 Twigs, small branches  
 Borer, roundheaded  
*Oberea quadricollata* 370
- Trunk, large branches  
 Borer, clearwing borer  
*Sesia tibialis* 51
- Cottonwood, lanceleaf  
 Trunk, large branches  
 Beetle, ambrosia  
*Trypophloeus populi* 529
- Cottonwood, narrowleaf  
 Trunk, large branches  
 Beetle, ambrosia  
*Trypophloeus populi* 529
- Borer, flatheaded  
*Dicerca tenebrica* 280
- Cottonwood, plains  
 Twigs, small branches  
 Borer, roundheaded  
*Oberea schaumii* 367
- Cottonwood, swamp  
 Twigs, small branches  
 Borer, roundheaded  
*Oberea delongi* 370
- Coyote brush  
 Buds, shoots, petioles  
 Caterpillars  
*Coleotechnites bacchariella* 27  
*Gnorimoschema baccharisella* 25
- Twigs, small branches  
 Caterpillars  
*Coleotechnites bacchariella* 27  
*Gnorimoschema baccharisella* 25

- Trunk, large branches  
 Beetle, bark  
*Chrysobothris bacchari* 272  
 Caterpillars  
*Hepialus californicus* 10  
*Oidaematopoborus grandis* 199  
 Roots, root collar  
 Caterpillar  
*Hepialus californicus* 10
- Crabapple**  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus vittaticollis* 254  
 Borers, roundheaded  
*Saperda candida* 346  
*Saperda cretata* 349  
 Roots, root collar  
 Borer, flatheaded  
*Agrilus vittaticollis* 254
- Currant**  
 Buds, shoots, petioles  
 Sawfly  
*Janus integer* 613  
 Twigs, small branches, canes  
 Beetle, ambrosia  
*Corthylus punctatissimus* 543  
 Beetle, false powderpost  
*Melalgus confertus* 288  
 Borer, clearwing  
*Synanthedon tipuliformis* 99  
 Borer, roundheaded  
*Oberea ocellata* 383  
 Trunk, large branches  
 Borers, flatheaded  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270
- Dogwood**  
 Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565  
*Xylosandrus compactus* 569  
 Borers, roundheaded  
*Oberea bimaculata* 376  
*Oberea tripunctata* 374  
 Girdler/pruner, roundheaded  
*Oncideres cingulata cingulata* 324
- Trunk, large branches  
 Beetles, ambrosia  
*Xyleborinus saxeseni* 566  
*Xylosandrus germanus* 572  
 Beetle, bark  
*Pseudopityophthorus minutissimus* 534  
 Borers, clearwing  
*Synanthedon geliformis* 85  
*Synanthedon scitula* 65  
 Borer, flatheaded  
*Agrilus cephalicus* 244  
 Borer, roundheaded  
*Neoclytus acuminatus* 464  
 Weevil  
*Conotrachelus anaglypticus* 490  
 Roots, root collar  
 Borer, roundheaded  
*Prionus laticollis* 390  
 Caterpillar  
*Elasmopalpus lignosellus* 184
- Dogwood, flowering**  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon scitula* 65
- Ebony, blackbead**  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326
- Elder**  
 Buds, shoots, petioles  
 Caterpillars  
*Achatodes zae* 209  
*Papaipema cataphracta* 205  
*Papaipema nebris* 202  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569  
 Trunk, large branches  
 Borer, roundheaded  
*Desmocerus auripennis* 406  
 Roots, root collar  
 Borer, roundheaded  
*Desmocerus palliatus* 402
- Elder, American**  
 Roots, root collar

- Borer, roundheaded  
*Desmocerus palliatus* 402
- Elder, blackbead  
 Trunk, large branches  
 Borer, roundheaded  
*Desmocerus auripennis* 406
- Elder, blue  
 Trunk, large branches  
 Borers, roundheaded  
*Desmocerus auripennis* 406  
*Desmocerus californicus* 406
- Roots, root collar  
 Borer, roundheaded  
*Desmocerus californicus* 404
- Elder, European  
 Roots, root collar  
 Borer, roundheaded  
*Desmocerus palliatus* 402
- Elder, Pacific red  
 Trunk, large branches  
 Borer, roundheaded  
*Desmocerus auripennis* 406
- Elm  
 Buds, shoots, petioles  
 Caterpillar  
*Papaipema nebris* 202
- Twigs, small branches  
 Beetle, ambrosia  
*Corthylus punctatissimus* 543
- Beetle, bark  
*Scolytus multistriatus* 509
- Beetles, false powderpost  
*Melalgus confertus* 288  
*Xylobiops basilaris* 286
- Borers, roundheaded  
*Oberea bimaculata* 376  
*Oberea tripunctata* 374
- Carpenterworm  
*Zeuzera pyrina* 127
- Girdlers/pruners, roundheaded  
*Anelaphus parallelus* 429  
*Oncideres cingulata cingulata* 324
- Trunk, large branches  
 Beetles, ambrosia  
*Corthylus columbianus* 541  
*Monarthrum mali* 546
- Platypus compositus* 578  
*Xyleborus dispar* 564  
*Xylosandrus germanus* 572  
*Xyloterinus politus* 551
- Beetles, bark  
*Hylurgopinus rufipes* 512  
*Scolytus multistriatus* 509  
*Scolytus rugulosus* 506
- Beetle, false powderpost  
*Xylobiops basilaris* 286
- Borers, clearwing  
*Synanthedon geliformis* 85  
*Synanthedon scitula* 65
- Borers, flatheaded  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270
- Borers, roundheaded  
*Dryobius sexnotatus* 438  
*Goes pulverulentus* 304  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
*Physocnemum brevilineum* 441  
*Saperda lateralis* 363  
*Saperda tridentata* 356  
*Stenodontes dasytomus dasytomus* 399  
*Synaphaeta guexi* 316  
*Tylonotus bimaculatus* 413
- Carpenterworms  
*Prionoxystus robiniae* 112  
*Zeuzera pyrina* 127
- Caterpillar  
*Euzophera semifuneralis* 169
- Girdler/pruner, roundheaded  
*Anelaphus villosus* 431
- Horntail  
*Tremex columba* 597
- Weevils  
*Arrhenodes minutus* 476  
*Magdalis armicollis* 497  
*Magdalis barbata* 499
- Elm, American  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus crassiusculus* 575
- Borers, roundheaded  
*Physocnemum brevilineum* 441

- Saperda tridentata* 356  
 Weevils  
     *Magdalis armicollis* 497  
     *Magdalis barbata* 499  
*Elm, cedar*  
     Trunk, large branches  
         Borer, roundheaded  
             *Saperda tridentata* 356  
*Elm, slippery*  
     Trunk, large branches  
         Borer, roundheaded  
             *Saperda tridentata* 356  
*Eucalyptus*  
     Twigs, small branches  
         Beetle, ambrosia  
             *Xylosandrus compactus* 569  
         Beetle, false powderpost  
             *Xylobiops basilaris* 286  
         Girdler/pruner, roundheaded  
             *Oncideres cingulata cingulata* 324  
     Trunk, large branches  
         Beetle, false powderpost  
             *Xylobiops basilaris* 286  
         Borers, roundheaded  
             *Phoracantha semipunctata* 436  
             *Xylotrechus nauticus* 463  
     Roots, root collar  
         Borer, roundheaded  
             *Prionus californicus* 393  
*Eucalyptus, Blakely's red gum*  
     Trunk, large branches  
         Borer, roundheaded  
             *Phoracantha semipunctata* 436  
*Eucalyptus, blue gum*  
     Trunk, large branches  
         Borer, roundheaded  
             *Phoracantha semipunctata* 436  
*Eucalyptus, manna gum*  
     Trunk, large branches  
         Borer, roundheaded  
             *Phoracantha semipunctata* 436  
*Eucalyptus, sugar gum*  
     Trunk, large branches  
         Borer, roundheaded  
             *Phoracantha semipunctata* 436  
**Fig**  
     Twigs, small branches  
         Beetle, ambrosia  
             *Xylosandrus compactus* 569  
         Beetle, false powderpost  
             *Melalgus confertus* 288  
     Trunk, large branches  
         Borers, roundheaded  
             *Neoptychodes trilineatus* 314  
             *Stenodontes lobigenis* 402  
             *Synapbaeta guexi* 316  
*Fringetree*  
     Trunk, large branches  
         Borer, clearwing  
             *Podosesia syringae* 30  
**Ginkgo**  
     Trunk, large branches  
         Caterpillar  
             *Euzophera semifuneralis* 169  
*Golden-shower*  
     Twigs, small branches  
         Beetle, ambrosia  
             *Xylosandrus compactus* 569  
*Gooseberry*  
     Twigs, shoots, petioles  
         Borer, clearwing  
             *Synanthedon tipuliformis* 99  
     Roots, root collar  
         Borer, roundheaded  
             *Xylocrius agassizi* 443  
**Grape**  
     Twigs, small branches  
         Beetle, false powderpost  
             *Amphicerus bicaudatus* 284  
     Trunk, large branches  
         Beetles, ambrosia  
             *Xyleborus dispar* 564  
             *Xylosandrus crassiusculus* 575  
             *Xylosandrus germanus* 572  
     Weevils  
         *Ampelogypter ampelopsis* 502  
         *Ampelogypter sesostris* 500  
     Roots, root collar  
         Borer, clearwing  
             *Vitacea polistiformis* 104  
         Borers, roundheaded  
             *Prionus imbricornis* 388

- Prionus laticollis* 390
- Greasewood, black**  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Anelaphus inflaticollis* 433  
 Roots, root collar  
 Borer, roundheaded  
*Megacheuma brevipennis* 453
- Great leucaena**  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326
- Guajillo**  
 Trunk, large branches  
 Borer, flatheaded  
*Chrysobotris merkelii* 273  
 Girdler/pruner  
*Oncideres pustulatus* 326  
 Roots, root collar  
 Borer, roundheaded  
*Aneflus prolixus insoletus* 416
- Hackberry**  
 Twigs, small branches  
 Girdlers/pruners, roundheaded  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324  
 Trunk, large branches  
 Beetles, ambrosia  
*Xyleborinus saxeseni* 566  
*Xyleborus affinis* 560  
 Beetle, bark  
*Phloeotribus dentifrons* 526  
 Borer, flatheaded  
*Chrysobotris femorata* 267  
 Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Stenodontes dasytomus dasytomus* 399  
 Horntail  
*Tremex columba* 597  
 Roots, root collar  
 Borer, roundheaded  
*Archodontes melanopus melanopus* 396
- Hackberry, netleaf**  
 Trunk, large branches  
 Borer, roundheaded  
*Neoptychodes trilineatus* 314
- Hawthorn**  
 Buds, shoots, petioles  
 Caterpillars  
*Argyresthia oreasella* 28  
*Grapholita packardi* 162  
*Papaipema nebris* 202  
*Spilonota ocellana* 147  
 Twigs, small branches  
 Borer, roundheaded  
*Saperda fayi* 351  
 Caterpillar  
*Grapholita packardi* 162  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus dispar* 564  
 Beetle, bark  
*Scolytus rugulosus* 506  
 Borer, clearwing  
*Synanthedon pyri* 78  
 Borers, flatheaded  
*Agrilus crataegi* 258  
*Agrilus sinuatus* 256  
*Agrilus vittaticollis* 254  
*Chrysobotris femorata* 267  
*Dicerca lepida* 277  
 Borers, roundheaded  
*Saperda candida* 346  
*Saperda cretata* 349  
 Weevil  
*Magdalis aenescens* 495  
 Roots, root collar  
 Borer, flatheaded  
*Agrilus vittaticollis* 254
- Hawthorn, cockspur**  
 Twigs, small branches  
 Borer, roundheaded  
*Saperda fayi* 351
- Hawthorn, pear**  
 Twigs, small branches  
 Borer, roundheaded  
*Saperda fayi* 351
- Hazel (Hazelnut)**  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus dispar* 564  
 Borer, roundheaded

- Saperda obliqua* 359
- Roots, root collar
- Caterpillar
- Stenopis argenteomaculatus* 6
- Hickory
- Buds, shoots, petioles
- Caterpillars
- Acrobasis caryivorella* 180
- Acrobasis demotella* 175
- Gretchena bolliana* 155
- Weevils
- Conotrachelus aratus* 480
- Conotrachelus elegans* 485
- Conotrachelus schoofi* 482
- Twigs, small branches
- Beetles, ambrosia
- Xyleborus sayi* 565
- Xylosandrus compactus* 569
- Beetles, false powderpost
- Amphicerus bicaudatus* 284
- Xylobiops basilaris* 286
- Borer, flatheaded
- Agrilus arcuatus torquatus* 239
- Carpenterworm
- Cossula magnifica* 121
- Girdlers/pruners, roundheaded
- Anelaphus parallelus* 429
- Anelaphus villosus* 431
- Oncideres cingulata cingulata* 324
- Psyrassa unicolor* 417
- Purpuricenus axillaris* 473
- Trunk, large branches
- Beetles, ambrosia
- Monarthrum fasciatum* 548
- Platypus compositus* 578
- Xyleborinus saxeseni* 566
- Xyleborus affinis* 560
- Xyleborus celsus* 556
- Xyleborus ferrugineus* 561
- Xyleborus xylographus* 563
- Xylosandrus germanus* 572
- Xyloterinus politus* 551
- Beetles, bark
- Pseudopityophthorus minutissimus* 534
- Pseudopityophthorus pruinus* 536
- Scolytus quadrispinosus* 504
- Beetle, false powderpost
- Xylobiops basilaris* 286
- Borers, clearwing
- Synantbedon geliformis* 85
- Synantbedon scitula* 65
- Borers, flatheaded
- Agrilus ottosus* 242
- Chrysobothris femorata* 267
- Borers, roundheaded
- Goes pulcher* 308
- Neoclytus acuminatus* 464
- Parandra brunnea* 385
- Saperda discoidea* 363
- Saperda lateralis* 363
- Stenodontes dasytomus dasytomus* 399
- Strophiona nitens* 410
- Tylonotus bimaculatus* 413
- Carpenterworm
- Cossula magnifica* 121
- Horntail
- Tremex columba* 597
- Weevil
- Conotrachelus anaglypticus* 490
- Hickory, bitternut
- Buds, shoots, petioles
- Caterpillar
- Acrobasis demotella* 175
- Weevil
- Conotrachelus aratus* 480
- Trunk, large branches
- Beetle, bark
- Scolytus quadrispinosus* 504
- Borer, roundheaded
- Goes pulcher* 308
- Hickory, mockernut
- Buds, shoots, petioles
- Caterpillar
- Acrobasis caryivorella* 180
- Weevils
- Conotrachelus aratus* 480
- Conotrachelus schoofi* 482
- Trunk, large branches
- Borer, roundheaded
- Goes pulcher* 308
- Hickory, pignut
- Buds, shoots, petioles

- Caterpillars  
*Acrobasis demotella* 175  
*Acrobasis caryivorella* 180
- Weevils  
*Conotrachelus aratus* 480  
*Conotrachelus schoofi* 482
- Twigs, small branches  
 Girdler/pruner, roundheaded  
*Purpuricenus axillaris* 473
- Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus celsus* 556
- Hickory, shagbark  
 Buds, shoots, petioles  
 Weevils  
*Conotrachelus aratus* 480  
*Conotrachelus schoofi* 482
- Trunk, large branches  
 Beetle, bark  
*Scolytus quadrispinosus* 504
- Hickory, water  
 Trunk, large branches  
 Beetles, ambrosia  
*Xyleborus celsus* 556  
*Xylosandrus crassiusculus* 575
- Borer, flatheaded  
*Agrilus otiosus* 242
- Borer, roundheaded  
*Goes pulcher* 308
- Holly  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborinus saxeseni* 566
- Borer, clearwing  
*Synanthedon kathyae* 80
- Borer, roundheaded  
*Neoclytus acuminatus* 464
- Roots, root collar  
 Borer, clearwing  
*Synanthedon kathyae* 80
- Holly, American  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon kathyae* 80
- Roots, root collar  
 Borer, clearwing  
*Synanthedon kathyae* 80
- Synanthedon kathyae* 80
- Honeylocust  
 Twigs, small branches  
 Beetle, false powderpost  
*Xylobiops basilaris* 286
- Girdler/pruner, roundheaded  
*Oncideres cingulata cingulata* 324
- Trunk, large branches  
 Beetles, ambrosia  
*Monartbrum mali* 546  
*Xyleborinus saxeseni* 566  
*Xylosandrus crassiusculus* 575
- Beetle, false powderpost  
*Xylobiops basilaris* 286
- Borers, flatheaded  
*Agrilus bilineatus* 214  
*Agrilus difficilis* 246  
*Agrilus masculinus* 252
- Borer, roundheaded  
*Neoclytus acuminatus* 464
- Hop  
 Roots, root collar  
 Borer, roundheaded  
*Prionus californicus* 393
- Hophornbeam, eastern  
 Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xylosandrus compactus* 569
- Borer, flatheaded  
*Agrilus champlaini* 249
- Trunk, large branches  
 Beetles, bark  
*Pseudopityophthorus minutissimus* 534  
*Pseudopityophthorus pruinosus* 536
- Borers, flatheaded  
*Agrilus bilineatus* 214  
*Agrilus masculinus* 252  
*Dicerca lepida* 277
- Borer, roundheaded  
*Neoclytus acuminatus* 464
- Hornbeam, American  
 Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565

- Borer, flatheaded  
*Agrilus champlaini* 249  
 Girdler/pruner, roundheaded  
*Xylotrechus quadrimaculatus* 457  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus germanus* 572  
 Beetles, bark  
*Pseudopityophthorus minutissimus* 534  
*Pseudopityophthorus pruinosus* 536  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Weevils  
*Conotrachelus anaglypticus* 490
- Huisache**  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326  
 Trunk, large branches  
 Borer, roundheaded  
*Callona rimosa* 469  
 Roots, root collar  
 Borer, roundheaded  
*Callona rimosa* 469
- Indigobush**  
 Buds, shoots, petioles  
 Caterpillar  
*Hystriophora taleana* 155
- Jerusalem-thorn**  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326
- Kapok**  
 Twigs, small branches  
 Caterpillar  
*Terastia meticulosalis* 187
- Laurelcherry, Carolina**  
 Buds, shoots, petioles  
 Caterpillar  
*Episimus tyrius* 164
- Lilac**  
 Trunk, large branches  
 Borer, clearwing  
*Podosesia syringae* 30
- Borer, roundheaded  
*Neoclytus acuminatus* 464
- Linden, European**  
 Trunk, large branches  
 Borer, roundheaded  
*Saperda vestita* 353  
 Caterpillar  
*Glyptipteryx linneella* 20  
*Lindheimer mimosa*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326
- Locust**  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus affinis* 560  
 Roots, root collar  
 Borer, roundheaded  
*Megacyllene snowi snowi* 448
- Locust, black**  
 Buds, shoots, petioles  
 Caterpillar  
*Ecdytolopha insitiana* 157  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Twigs, small branches  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Caterpillar  
*Ecdytolopha insitiana* 157  
 Trunk, large branches  
 Borers, roundheaded  
*Megacyllene robiniae* 445  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
 Carpenterworm  
*Prionoxystus robiniae* 112  
 Roots, root collar  
 Caterpillar  
*Elasmopalpus lignosellus* 184
- Locust, New Mexico**  
 Roots, root collar  
 Borer, roundheaded  
*Megacyllene snowi snowi* 448
- Loquat**  
 Trunk, large branches



- Borer, clearwing  
*Synanthedon scitula* 65
- Borer, flatheaded  
*Chrysobotbris mali* 270
- Lupine**  
Trunk, large branches  
Carpenterworm  
*Comadia bertboldi* 133  
Caterpillar  
*Hepialis californicus* 10  
Roots, root collar  
Carpenterworm  
*Comadia bertboldi* 133  
Caterpillar  
*Hepialis californicus* 10
- Madrone**  
Trunk, large branches  
Beetle, ambrosia  
*Xyleborinus saxeseni* 566  
Borer, roundheaded  
*Xylotrechus nauticus* 463  
Roots, root collar  
Borer, roundheaded  
*Prionus californicus* 393
- Magnolia**  
Twigs, small branches  
Beetle, ambrosia  
*Xylosandrus compactus* 569  
Trunk, large branches  
Beetles, ambrosia  
*Platypus compositus* 578  
*Platypus quadridentatus* 581  
*Xylosandrus crassiusculus* 575  
*Xyloterinus politus* 551  
Caterpillar  
*Euzophera magnolialis* 172
- Magnolia, southern**  
Trunk, large branches  
Caterpillar  
*Euzophera magnolialis* 172
- Mabogany**  
Buds, shoots, petioles  
Caterpillar  
*Hypsipyla grandella* 182  
Trunk, large branches  
Borer, flatheaded  
*Chrysobotbris mali* 270
- Mango**  
Twigs, small branches  
Beetle, ambrosia  
*Xylosandrus compactus* 569  
Trunk, large branches  
Borer, roundheaded  
*Neoclytus cordifer* 468
- Mangrove**  
Trunk, large branches  
Borer, roundheaded  
*Neoclytus cordifer* 468
- Maple**  
Buds, shoots, petioles  
Caterpillars  
*Epinotia nisella* 151  
*Episimus tyrius* 164  
*Obrussa ochrefasciella* 13  
*Papaipema nebris* 202  
*Proteoteras aesculana* 143  
*Proteoteras crescentana* 142  
*Proteoteras moffatiana* 145  
*Proteoteras willingana* 137  
Sawfly  
*Caulocampus acericaulis* 585
- Twigs, small branches  
Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565  
Beetles, false powderpost  
*Amphicerus bicaudatus* 284  
*Melalgus confertus* 288  
Carpenterworm  
*Zeuzera pyrina* 127  
Caterpillars  
*Proteoteras aesculana* 143  
*Proteoteras crescentana* 142  
*Proteoteras willingana* 137  
Girdlers/pruners, roundheaded  
*Anelaphus villosus* 431  
*Xylotrechus quadrimaculatus* 457
- Trunk, large branches  
Beetles, ambrosia  
*Corthylus columbianus* 541  
*Monarthrum fasciatum* 548  
*Monarthrum mali* 546

- Platypus compositus* 578  
*Xyleborinus saxeseni* 566  
*Xyleborus dispar* 564  
*Xyleborus ferrugineus* 561  
*Xyleborus xylographus* 563  
*Xyloterinus politus* 551  
 Beetle, bark  
     *Pseudopityophthorus pruinosus* 536  
 Borers, clearwing  
     *Synantbedon acerni* 68  
     *Synantbedon acerrubri* 70  
 Borers, flatheaded  
     *Agrilus masculinus* 252  
     *Agrilus politus* 229  
     *Chrysobothris femorata* 267  
     *Chrysobothris mali* 270  
     *Texania campestris* 280  
 Borers, roundheaded  
     *Dryobius sexnotatus* 438  
     *Glycobius speciosus* 451  
     *Neoclytus acuminatus* 464  
     *Parandra brunnea* 385  
     *Saperda lateralis* 363  
     *Strophiona nitens* 410  
     *Synaphaeta guexi* 316  
     *Xylotrechus aceris* 454  
 Carpenterworm  
     *Zeuzera pyrina* 127  
 Horntails  
     *Tremex columba* 597  
     *Xiphydria maculata* 600  
 Miner, cambium  
     *Phytobia setosa* 621  
 Weevil  
     *Conotrachelus anaglypticus* 490  
 Roots, root collar  
     Borer, roundheaded  
         *Prionus laticollis* 388  
     Caterpillars  
         *Stenopis argenteomaculatus* 6  
         *Stenopis thule* 8  
     Miner, cambium  
         *Phytobia setosa* 621  
*Maple, bigleaf*  
     Buds, shoots, petioles  
     Caterpillar  
         *Proteoteras aesculana* 143  
     Twigs, small branches  
         Caterpillar  
             *Proteoteras aesculana* 143  
*Maple, black*  
     Buds, shoots, petioles  
     Caterpillar  
         *Obrussa ochrefasciella* 13  
*Maple, dwarf*  
     Trunk, large branches  
     Borer, flatheaded  
         *Agrilus politus* 229  
*Maple, Florida*  
     Twigs, small branches  
     Beetle, ambrosia  
         *Xylosandrus compactus* 569  
*Maple, mountain*  
     Roots, root collar  
     Caterpillar  
         *Stenopis thule* 8  
*Maple, Norway*  
     Buds, shoots, petioles  
     Sawfly  
         *Caulocampus acericaulis* 585  
     Trunk, large branches  
     Borer, roundheaded  
         *Xylotrechus aceris* 454  
*Maple, planetree*  
     Buds, shoots, petioles  
     Sawfly  
         *Caulocampus acericaulis* 585  
*Maple, red*  
     Buds, shoots, petioles  
     Caterpillars  
         *Episimus tyrius* 164  
         *Proteoteras aesculana* 143  
         *Proteoteras moffatiana* 145  
     Twigs, small branches  
     Beetles, ambrosia  
         *Corthylyus punctatissimus* 543  
         *Xyleborus sayi* 565  
         *Xylosandrus compactus* 569  
     Trunk, large branches  
     Beetles, ambrosia  
         *Corthylyus columbianus* 541  
         *Xylosandrus germanus* 572

- Borers, clearwing  
*Synanthedon acerni* 68  
*Synanthedon acerrubri* 70
- Borer, flatheaded  
*Agrilus masculinus* 252
- Borer, roundheaded  
*Xylotrechus aceris* 454
- Horntail  
*Xiphydria maculata* 600
- Miner, cambium  
*Phytobia setosa* 621
- Roots, root collar  
 Caterpillar  
*Sthenopsis thule* 8
- Miner, cambium  
*Phytobia setosa* 621
- Maple, Rocky Mountain*  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus politus* 229
- Maple, silver*  
 Buds, shoots, petioles  
 Caterpillars  
*Episimus tyrius* 164  
*Proteoteras aesculana* 143  
*Proteoteras moffatiana* 145
- Twigs, small branches  
 Caterpillar  
*Proteoteras aesculana* 143
- Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541
- Borer, clearwing  
*Synanthedon acerni* 68
- Horntail  
*Xiphydria maculata* 600
- Maple, southern sugar*  
 Buds, shoots, petioles  
 Caterpillar  
*Obrussa ocbrefasciella* 13
- Maple, striped*  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus politus* 229
- Roots, root collar  
 Caterpillar  
*Sthenopsis thule* 8
- Maple, sugar*  
 Buds, shoots, petioles  
 Caterpillars  
*Obrussa ocbrefasciella* 13  
*Proteoteras aesculana* 143  
*Proteoteras moffatiana* 145
- Sawfly  
*Caulocampus acericaulis* 585
- Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565
- Trunk, large branches  
 Borers, clearwing  
*Synanthedon acerni* 68  
*Synanthedon acerrubri* 70
- Borer, flatheaded  
*Agrilus masculinus* 252
- Borers, roundheaded  
*Dryobius sexnotatus* 438  
*Glycobius speciosus* 451  
*Xylotrechus aceris* 454
- Horntail  
*Xiphydria maculata* 600
- Miner, cambium  
*Phytobia setosa* 621
- Mesquite*  
 Twigs, small branches  
 Borer, clearwing  
*Carmenita prosopis* 110
- Girdlers/pruners, roundheaded  
*Oncideres pustulatus* 326  
*Oncideres rhodosticta* 329
- Trunk, large branches  
 Borers, flatheaded  
*Chrysobotbris gemmata* 273  
*Chrysobotbris merkelii* 273
- Borers, roundheaded  
*Archodontes melanopus serrulatus* 398  
*Callona rimoso* 469  
*Megacyllene robusta* 450  
*Stenodontes lobigenis* 402
- Roots, root collar  
 Borers, roundheaded

- Aneflus protensus* 416  
*Callona rimosa* 469  
**Mesquite, boney**  
 Twigs, small branches  
 Borer, clearwing  
*Carmenta prosopis* 110  
 Girdlers/pruners, roundheaded  
*Oncideres pustulatus* 326  
*Oncideres rhodosticta* 329  
 Trunk, large branches  
 Borer, flatheaded  
*Chrysobothris merkelii* 273  
 Borers, roundheaded  
*Callona rimosa* 469  
*Megacyllene robusta* 450  
 Roots, root collar  
 Borer, roundheaded  
*Callona rimosa* 469  
**Mesquite, western boney**  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Oncideres pustulatus* 326  
**Mimosa**  
 Twigs, small branches  
 Borer, clearwing  
*Carmenta prosopis* 110  
 Girdler/pruner, roundheaded  
*Oncideres rhodosticta* 329  
 Trunk, large branches  
 Beetles, ambrosia  
*Monarthrum fasciatum* 548  
*Xyleborinus saxeseni* 566  
*Xyleborus affinis* 560  
**Mistletoe**  
 Trunk, large branches  
 Borer, clearwing  
*Carmenta pboradendri* 108  
**Mountain-asb, American**  
 Trunk, large branches  
 Beetle, bark  
*Scolytus rugulosus* 506  
 Borers, clearwing  
*Podosesia syringae* 30  
*Synanthedon scitula* 65  
 Borer, flatheaded  
*Chrysobothris femorata* 267  
 Borer, roundheaded  
*Saperda candida* 346  
 Caterpillar  
*Euzophera semifuneralis* 169  
**Mountain-laurel**  
 Buds, shoots, petioles  
 Caterpillar  
*Spilonota ocellana* 147  
 Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon rhododendri* 75  
**Mountain-mabogany**  
 Twigs, small branches  
 Beetle, ambrosia  
*Corthylus punctatissimus* 543  
 Trunk, large branches  
 Borer, roundheaded  
*Neoclytus acuminatus* 464  
**Mulberry**  
 Twigs, small branches  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Borer, roundheaded  
*Oberea tripunctata* 374  
 Trunk, large branches  
 Beetle, bark  
*Phloeotribus frontalis* 524  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Borers, roundheaded  
*Dorcaschema alternatum* 321  
*Dorcaschema wildii* 318  
*Neoptycbodes trilineatus* 314  
 Caterpillar  
*Euzophera semifuneralis* 169  
**Mulberry, red**  
 Trunk, large branches  
 Beetle, bark  
*Phloeotribus frontalis* 524  
 Borers, roundheaded  
*Dorcaschema alternatum* 321  
*Dorcaschema wildii* 318

- Parelaphidion incertum* 435
- Mulberry, white**  
 Trunk, large branches  
 Borer, roundheaded  
*Dorcaschema alternatum* 321
- Nannyberry**  
 Buds, shoots, petioles  
 Sawfly  
*Janus bimaculatus* 611
- Nectarine**  
 Buds, shoots, petioles  
 Caterpillars  
*Anarsia lineatella* 22  
*Grapholita molesta* 160  
 Twigs, small branches  
 Caterpillars  
*Anarsia lineatella* 22  
*Grapholita molesta* 160  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus dispar* 564  
 Beetle, bark  
*Scolytus rugulosus* 506  
 Borer, clearwing  
*Synanthedon exitiosa* 59  
 Roots, root collar  
 Borer, clearwing  
*Synanthedon exitiosa* 59
- Ninebark**  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon scitula* 65  
 Borer, flatheaded  
*Dicerca pugionata* 279
- Oak**  
 Buds, shoots, petioles  
 Caterpillars  
*Argyresthia oreasella* 28  
*Spilonota ocellana* 147  
 Sawflies  
*Janus quercusae* 616  
*Janus rufiventris* 618  
 Twigs, small branches  
 Beetles, false powderpost  
*Melalgus confertus* 288  
*Xylobiops basilaris* 286
- Borers, clearwing  
*Carmenta prosopis* 110  
*Synanthedon decipiens* 83  
*Synanthedon sapygaeformis* 83
- Borers, roundheaded  
*Oberea gracilis* 381  
*Goes debilis* 302
- Carpenterworms  
*Cossula magnifica* 121  
*Zeuzera pyrina* 127
- Girdler/pruner, flatheaded  
*Agrilus angelicus* 237
- Girdlers/pruners, roundheaded  
*Aneflomorpha lineare* 421  
*Aneflomorpha subpubescens* 419  
*Anelaphus parallelus* 429  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324  
*Oncideres quercus* 331  
*Psyrassa unicolor* 417  
*Pupuricenens axillaris* 473  
*Pupuricenens dimidiatus* 471  
*Styloxus fulleri* 411
- Trunk, large branches  
 Beetles, ambrosia  
*Corthylus columbianus* 541  
*Monarthrum fasciatum* 548  
*Monarthrum mali* 546  
*Platypus compositus* 578  
*Platypus quadridentatus* 581  
*Xyleborinus saxeseni* 566  
*Xyleborus affinis* 560  
*Xyleborus dispar* 564  
*Xyleborus ferrugineus* 561  
*Xyleborus xylographus* 563  
*Xylosandrus crassiusculus* 575  
*Xylosandrus germanus* 572  
*Xyloterinus politus* 551
- Beetles, bark  
*Pseudopityophthorus minutissimus* 534  
*Pseudopityophthorus pruinosis* 536  
*Pseudopityophthorus pubipennis* 539
- Borers, clearwing  
*Paranthrene asilipennis* 40  
*Paranthrene pellucida* 38  
*Paranthrene simulans* 35

*Synantbedon geliformis* 85  
*Synantbedon resplendens* 72  
*Synantbedon scitula* 65  
Borers, flatheaded  
*Agrilus acutipennis* 234  
*Agrilus bilineatus* 214  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270  
*Texania campestris* 280  
Borers, roundheaded  
*Crioprosopus magnificus* 471  
*Enaphalodes cortiphagus* 426  
*Enaphalodes rufulus* 422  
*Goes pulverulentus* 304  
*Goes tessellatus* 299  
*Goes tigrinus* 296  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
*Saperda lateralis* 363  
*Stenodontes dasytomus dasytomus* 399  
*Strophiona nitens* 410  
*Synaphtaeta guexi* 316  
Carpenterworms  
*Cossula magnifica* 121  
*Prionoxystus macmurtrei* 116  
*Prionoxystus robiniae* 112  
*Zeuzera pyrina* 127  
Caterpillar  
*Euzophera semifuneralis* 169  
Horntail  
*Tremex columba* 597  
Weevils  
*Arrhenodes minutus* 476  
*Conotrachelus anaglypticus* 490  
Roots, root collar  
Borers, clearwing  
*Parantbrene asilipennis* 40  
*Parantbrene pellucida* 38  
*Parantbrene simulans* 35  
Borers, roundheaded  
*Aneflomorpha subpubescens* 419  
*Archodontes melanopus melanopus* 396  
*Oberea gracilis* 381  
*Prionus californicus* 393  
*Prionus imbricornis* 388  
*Prionus laticollis* 390  
Caterpillar  
*Sthenopsis argenteomaculatus* 6  
Oak, Arizona white  
Twigs, small branches  
Borer, clearwing  
*Carmenita querci* 110  
Girdler/pruner, roundheaded  
*Aneflomorpha lineare* 421  
Trunk, large branches  
Borer, roundheaded  
*Crioprosopus magnificus* 471  
Oak, black  
Twigs, small branches  
Borer, clearwing  
*Synantbedon decipiens* 83  
Borers, roundheaded  
*Goes debilis* 302  
*Oberea gracilis* 381  
Girdlers/pruners, roundheaded  
*Aneflomorpha subpubescens* 419  
*Anelaphus parallelus* 429  
*Purpuricenus axillaris* 473  
Carpenterworms  
*Cossula magnifica* 121  
*Prionoxystus macmurtrei* 116  
Trunk, large branches  
Beetle, ambrosia  
*Corthylus columbianus* 541  
Beetle, bark  
*Pseudopityophthorus minutissimus* 534  
Borers, clearwing  
*Parantbrene asilipennis* 40  
*Parantbrene pellucida* 38  
*Parantbrene simulans* 35  
Borer, flatheaded  
*Agrilus bilineatus* 214  
Borers, roundheaded  
*Enaphalodes rufulus* 422  
*Goes pulverulentus* 304  
Carpenterworms  
*Cossula magnifica* 121  
*Prionoxystus macmurtrei* 116  
Roots, root collar  
Borers, clearwing  
*Parantbrene asilipennis* 40  
*Parantbrene pellucida* 38

- Parantbrene simulans* 35  
 Borer, roundheaded  
*Oberea gracilis* 381  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419  
*Oak, blackjack*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419  
 Roots, root collar  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419  
*Oak, bur*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Anelaphus parallelus* 429  
*Oak, California black*  
 Twigs, small branches  
 Girdler/pruner, flatheaded  
*Agrilus angelicus* 237  
 Trunk, large branches  
 Beetle, bark  
*Pseudopityopbthorus pubipennis* 539  
*Oak, California scrub*  
 Twigs, small branches  
 Borer, roundheaded  
*Leptura pacifica* 408  
 Girdler/pruner, roundheaded  
*Purpuricenus dimidiatus* 471  
*Oak, canyon live*  
 Twigs, small branches  
 Girdler/pruner, flatheaded  
*Agrilus angelicus* 237  
*Oak, cberrybark*  
 Trunk, large branches  
 Borer, clearwing  
*Parantbrene simulans* 35  
 Borer, roundheaded  
*Goes pulverulentus* 304  
*Oak, cbestnut*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Purpuricenus axillaris* 473  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borers, roundheaded  
*Enaphalodes cortipbagus* 426  
*Goes tessellatus* 299  
*Goes tigrinus* 296  
*Parelaphidion incertum* 435  
*Oak, chinkapin*  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541  
 Borer, roundheaded  
*Enaphalodes cortipbagus* 426  
*Oak, coast live*  
 Twigs, small branches  
 Girdler/pruner, flatheaded  
*Agrilus angelicus* 237  
 Girdlers/pruners, roundheaded  
*Aneflomorpha lineare* 421  
*Purpuricenus dimidiatus* 471  
*Styloxus fulleri* 411  
 Trunk, large branches  
 Beetle, bark  
*Pseudopityopbthorus pruinosus* 536  
 Borer, clearwing  
*Synantbedon resplendens* 72  
 Carpenterworm  
*Prionoxystus robiniae* 112  
*Oak, Dunn*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Purpuricenus dimidiatus* 471  
*Oak, Emory*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Aneflomorpha lineare* 421  
 Trunk, large branches  
 Borer, roundheaded  
*Crioprosopus magnificus* 471  
*Oak, Engelmann*  
 Twigs, small branches  
 Girdler/pruner, flatheaded  
*Agrilus angelicus* 237  
*Oak, interior live*  
 Twigs, small branches  
 Girdler/pruner, flatheaded  
*Agrilus angelicus* 237  
 Girdler/pruner, roundheaded

- Styloxus fulleri* 411  
*Oak, laurel*  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569  
*Oak, live*  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569  
 Borers, clearwing  
*Synanthedon decipiens* 83  
*Synanthedon sapygaeformis* 83  
 Girdler/pruner, roundheaded  
*Oncideres cingulata cingulata* 324  
 Trunk, large branches  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borer, roundheaded  
*Goes novus* 307  
 Roots, root collar  
 Borer, roundheaded  
*Archodontes melanopus melanopus* 396  
*Oak, Mexican blue*  
 Twigs, small branches  
 Borer, clearwing  
*Carmenta prosopis* 110  
*Oak, northern red*  
 Twigs, small branches  
 Beetle, ambrosia  
*Xyleborus sayi* 565  
 Borer, roundheaded  
*Goes debilis* 302  
 Girdler/pruner, roundheaded  
*Anelaphus parallelus* 429  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541  
 Borer, clearwing  
*Paranthrene simulans* 35  
 Borer, roundheaded  
*Enaphalodes rufulus* 422  
 Carpenterworm  
*Prionoxystus macmurtrei* 116  
 Roots, root collar  
 Borer, clearwing  
*Paranthrene simulans* 35  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
*Oak, Nuttall*  
 Buds, shoots, petioles  
 Sawfly  
*Janus quercusae* 616  
 Twigs, small branches  
 Girdlers/pruners, roundheaded  
*Anelaphus parallelus* 429  
*Oncideres cingulata cingulata* 324  
 Trunk, large branches  
 Borer, clearwing  
*Paranthrene simulans* 35  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borers, roundheaded  
*Enaphalodes rufulus* 422  
*Goes pulverulentus* 304  
 Carpenterworm  
*Prionoxystus robiniae* 112  
 Roots, root collar  
 Borer, clearwing  
*Paranthrene simulans* 35  
*Oak, Oregon white*  
 Buds, shoots, petioles  
 Sawfly  
*Janus rufiventris* 618  
 Trunk, large branches  
 Beetle, bark  
*Pseudopityophthorus pubipennis* 539  
*Oak, overcup*  
 Twigs, small branches  
 Borer, roundheaded  
*Goes debilis* 302  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541  
 Borer, flatheaded  
*Agrilus acutipennis* 234  
 Borers, roundheaded  
*Enaphalodes rufulus* 422  
*Goes tigrinus* 296  
 Carpenterworm  
*Prionoxystus robiniae* 112  
*Oak, pin*  
 Twigs, small branches



- Borer, clearwing  
*Synanthedon decipiens* 83
- Trunk, large branches  
 Borers, clearwing  
*Paranthrene asilipennis* 40  
*Paranthrene pellucida* 38  
*Paranthrene simulans* 35
- Roots, root collar  
 Borers, clearwing  
*Paranthrene asilipennis* 40  
*Paranthrene pellucida* 38  
*Paranthrene simulans* 35
- Oak, post*  
 Twigs, small branches  
 Borer, roundheaded  
*Goes debilis* 302  
 Carpenterworm  
*Cossula magnifica* 121  
 Girdlers/pruners, roundheaded  
*Aneflomorpha subpubescens* 419  
*Oncideres cingulata cingulata* 324  
*Purpuricenus axillaris* 473  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541  
 Borer, roundheaded  
*Goes tigrinus* 296  
 Carpenterworm  
*Cossula magnifica* 121  
 Roots, root collar  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419
- Oak, scarlet*  
 Twigs, small branches  
 Carpenterworm  
*Cossula magnifica* 121  
 Trunk, large branches  
 Beetle, bark  
*Pseudopityophthorus minutissimus*  
 534  
 Borer, clearwing  
*Paranthrene asilipennis* 40  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borer, roundheaded  
*Enaphalodes rufulus* 422
- Carpenterworm  
*Cossula magnifica* 121  
 Weevil  
*Arrhenodes minutus* 476  
 Roots, root collar  
 Borer, clearwing  
*Paranthrene asilipennis* 40
- Oak, scrub*  
 Twigs, small branches  
 Borers, clearwing  
*Synanthedon decipiens* 83  
*Synanthedon sapygaeformis* 83
- Oak, Shumard*  
 Trunk, large branches  
 Borer, clearwing  
*Paranthrene simulans* 35
- Oak, silverleaf*  
 Trunk, large branches  
 Borer, roundheaded  
*Crioprosopus magnificus* 471
- Oak, southern red*  
 Twigs, small branches  
 Borer, roundheaded  
*Oberea gracilis* 381  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541
- Oak, swamp chestnut*  
 Trunk, large branches  
 Borer, roundheaded  
*Goes tigrinus* 296
- Oak, swamp white*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Purpuricenus axillaris* 473
- Oak, turkey*  
 Roots, root collar  
 Borer, roundheaded  
*Archodontes melanopus melanopus* 396
- Oak, water*  
 Buds, shoots, petioles  
 Sawfly  
*Janus quercusae* 616  
 Twigs, small branches

- Borers, clearwing  
*Synanthedon decipiens* 83  
*Synanthedon sapygaeformis* 83
- Girdlers/pruners, roundheaded  
*Aneflomorpha subpubescens* 419  
*Oncideres cingulata cingulata* 324
- Trunk, large branches  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borers, roundheaded  
*Enaphalodes rufulus* 422  
*Goes pulverulentus* 304
- Roots, root collar  
 Borer, roundheaded  
*Archodontes melanopus melanopus* 396  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419
- Oak, white*  
 Twigs, small branches  
 Borers, roundheaded  
*Goes debilis* 302  
*Oberea gracilis* 381  
 Carpenterworm  
*Cossula magnifica* 121  
 Girdlers/pruners, roundheaded  
*Aneflomorpha subpubescens* 419  
*Anelaphus parallelus* 429  
 Trunk, large branches  
 Beetle, ambrosia  
*Corthylus columbianus* 541  
 Beetle, timber  
*Melittomma sericeum* 290  
 Borer, flatheaded  
*Agrilus bilineatus* 214  
 Borers, roundheaded  
*Enaphalodes cortiphagus* 426  
*Goes tessellatus* 299  
*Goes tigrinus* 296  
 Carpenterworm  
*Cossula magnifica* 121  
 Roots, root collar  
 Borer, roundheaded  
*Oberea gracilis* 381  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419
- Oak, willow*  
 Twigs, small branches  
 Girdler/pruner, roundheaded  
*Aneflomorpha subpubescens* 419  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus crassiusculus* 575  
 Borer, roundheaded  
*Goes pulverulentus* 304
- Olive*  
 Twigs, small branches  
 Beetle, bark  
*Hylesinus californicus* 517  
 Beetle, false powderpost  
*Melalgus confertus* 288  
 Trunk, large branches  
 Beetle, bark  
*Hylesinus californicus* 517  
 Caterpillar  
*Euzophera semifuneralis* 169
- Orange*  
 Twigs, small branches  
 Beetle, false powderpost  
*Melalgus confertus* 288  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Trunk, large branches  
 Beetle, ambrosia  
*Monarthrum mali* 546  
 Borer, roundheaded  
*Neoclytus cordifer* 468
- Osage-orange*  
 Twigs, small branches  
 Beetles, false powderpost  
*Amphicerus bicaudatus* 284  
*Xylobiops basilaris* 286  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Trunk, large branches  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Borers, roundheaded  
*Dorcaschema alternatum* 321  
*Dorcaschema wildii* 318  
*Neoclytus acuminatus* 464
- Parkinsonia**  
 Twigs, small branches

- Girdler/pruner, roundheaded  
*Oncideres rhodosticta* 329
- Peach
- Buds, shoots, petioles
- Caterpillars
- Anarsia lineatella* 22  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
*Ostrinia nubilalis* 189  
*Papaipema nebris* 202  
*Spilonota ocellana* 147
- Twigs, small branches
- Beetles, false powderpost
- Amphicerus bicaudatus* 284  
*Melalgus confertus* 288  
*Xylobiops basilaris* 286
- Borers, roundheaded
- Oberea bimaculata* 376  
*Oberea ocellata* 383
- Caterpillars
- Anarsia lineatella* 22  
*Grapholita molesta* 160  
*Ostrinia nubilalis* 189
- Girdlers/pruners, roundheaded
- Anelaphus parallelus* 429  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324
- Trunk, large branches
- Beetles, ambrosia
- Monarthrum fasciatum* 548  
*Xyleborinus saxeseni* 566  
*Xyleborus dispar* 564  
*Xylosandrus crassiusculus* 575
- Beetles, bark
- Phloeotribus liminaris* 521  
*Scolytus rugulosus* 506
- Beetle, false powderpost
- Xylobiops basilaris* 286
- Borers, clearwing
- Synanthedon exitiosa* 59  
*Synanthedon pictipes* 62
- Borers, flatheaded
- Chrysobothris femorata* 267  
*Chrysobothris mali* 270
- Borers, roundheaded
- Neoclytus acuminatus* 464
- Xylotrechus nauticus* 463
- Caterpillar
- Euzophera semifuneralis* 169
- Weevil
- Conotrachelus anaglypticus* 490
- Roots, root collar
- Borer, clearwing
- Synanthedon exitiosa* 59
- Borer, roundheaded
- Prionus californicus* 393
- Pear
- Buds, shoots, petioles
- Caterpillars
- Grapholita molesta* 160  
*Ostrinia nubilalis* 189  
*Spilonota ocellana* 147
- Twigs, small branches
- Beetle, ambrosia
- Xyleborus dispar* 564
- Beetles, false powderpost
- Amphicerus bicaudatus* 284  
*Melalgus confertus* 288  
*Xylobiops basilaris* 286
- Borer, roundheaded
- Oberea ocellata* 383
- Carpenterworm
- Zeuzera pyrina* 127
- Caterpillars
- Grapholita molesta* 160  
*Ostrinia nubilalis* 189
- Girdlers/pruners, roundheaded
- Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324
- Trunk, large branches
- Beetles, ambrosia
- Xyleborus dispar* 564  
*Xylosandrus germanus* 572
- Beetles, bark
- Dryocoetes betulae* 532  
*Scolytus rugulosus* 506
- Beetle, false powderpost
- Xylobiops basilaris* 286
- Borer, clearwing
- Synanthedon pyri* 78
- Borers, flatheaded
- Agrilus sinuatus* 256

- Agrilus vittaticollis* 254  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270  
Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385  
*Saperda candida* 346  
*Synapbaeta guexi* 316  
Carpenterworm  
*Zeuzera pyrina* 127  
Caterpillar  
*Euzophera semifuneralis* 169  
Horntail  
*Tremex columba* 597  
Roots, root collar  
Borer, flatheaded  
*Agrilus vittaticollis* 254  
Borers, roundheaded  
*Prionus californicus* 393  
*Prionus imbricornis* 388  
Pecan  
Buds, shoots, petioles  
Caterpillars  
*Acrobasis caryivorella* 180  
*Acrobasis demotella* 175  
*Acrobasis nuxvorella* 177  
*Gretchena bolliana* 155  
Weevils  
*Conotrachelus aratus* 480  
*Conotrachelus elegans* 485  
*Conotrachelus schoofi* 482  
Twigs, small branches  
Beetle, ambrosia  
*Xylosandrus compactus* 569  
Beetles, false powderpost  
*Amphicerus bicaudatus* 284  
*Xylobiops basilaris* 286  
Borer, flatheaded  
*Agrilus arcuatus torquatus* 239  
Carpenterworm  
*Cossula magnifica* 121  
Girdlers/pruners, roundheaded  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324  
*Psyrrassa unicolor* 417  
Trunk, large branches  
Beetles, ambrosia  
*Platypus compositus* 578  
*Xyleborinus saxeseni* 566  
*Xylosandrus germanus* 572  
Beetle, bark  
*Scolytus quadrispinosus* 504  
Borers, clearwing  
*Synantbedon geliformis* 85  
*Synantbedon scitula* 65  
Borers, flatheaded  
*Agrilus otiosus* 242  
*Chrysobothris femorata* 267  
Borer, roundheaded  
*Goes pulcher* 308  
Carpenterworm  
*Cossula magnifica* 121  
Caterpillar  
*Euzophera semifuneralis* 169  
Weevil  
*Conotrachelus anaglypticus* 490  
Roots, root collar  
Beetle, ambrosia  
*Xyleborus affinis* 560  
Borers, roundheaded  
*Archodontes melanopus melanopus* 396  
*Prionus imbricornis* 388  
*Prionus laticollis* 390  
Pentstemon  
Roots, root collar  
Caterpillar  
*Hepialis californicus* 10  
Peppertree  
Trunk, large branches  
Borer, roundheaded  
*Stenodontes lobigenis* 402  
Persimmon  
Buds, shoots, petioles  
Caterpillar  
*Grapholita molesta* 160  
Twigs, small branches  
Beetle, false powderpost  
*Xylobiops basilaris* 286  
Borer, roundheaded  
*Oberea bimaculata* 376  
Caterpillar  
*Grapholita molesta* 160

- Girdler/pruner, roundheaded  
*Oncideres cingulata cingulata* 324
- Trunk, large branches
- Beetles, ambrosia  
*Platypus compositus* 578  
*Xyleborinus saxeseni* 566  
*Xyleborus affinis* 560  
*Xylosandrus crassiusculus* 575
- Beetle, false powderpost  
*Xylobiops basilaris* 286
- Borer, clearwing  
*Sannina uroceriformis* 56
- Borers, flatheaded  
*Agrilus fuscipennis* 260  
*Chrysobothris femorata* 267
- Borer, roundheaded  
*Neoclytus acuminatus* 464
- Caterpillar  
*Euzophera semifuneralis* 169
- Roots, root collar
- Borer, clearwing  
*Sannina uroceriformis* 56
- Borer, flatheaded  
*Agrilus fuscipennis* 260
- Borer, roundheaded  
*Archodontes melanopus melanopus* 396
- Photinia*
- Buds, shoots, petioles
- Caterpillar  
*Grapholita molesta* 160
- Pigeon plum*
- Buds, shoots, petioles
- Caterpillar  
*Hexeris enbydris* 192
- Twigs, small branches
- Caterpillar  
*Hexeris enbydris* 192
- Plum*
- Buds, shoots, petioles
- Caterpillars  
*Anarsia lineatella* 22  
*Grapholita molesta* 160  
*Grapholita packardi* 162  
*Papaipema nebris* 202  
*Spilonota ocellana* 147
- Twigs, small branches
- Beetle, false powderpost  
*Amphicerus bicaudatus* 284
- Borers, roundheaded  
*Oberea bimaculata* 376  
*Oberea ocellata* 383
- Carpenterworm  
*Zeuzera pyrina* 127
- Caterpillars  
*Anarsia lineatella* 22  
*Grapholita molesta* 160  
*Grapholita packardi* 162
- Girdlers/pruners, roundheaded  
*Anelaphus parallelus* 429  
*Anelaphus villosus* 431  
*Oncideres cingulata cingulata* 324
- Trunk, large branches
- Beetles, ambrosia  
*Monarthrum mali* 546  
*Xyleborus dispar* 564  
*Xylosandrus crassiusculus* 575
- Beetles, bark  
*Phloeotribus liminaris* 521  
*Scolytus rugulosus* 506
- Borers, clearwing  
*Synanthedon exitiosa* 59  
*Synanthedon pictipes* 62
- Borers, flatheaded  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270
- Borers, roundheaded  
*Neoclytus acuminatus* 464  
*Parandra brunnea* 385
- Carpenterworm  
*Zeuzera pyrina* 127
- Caterpillar  
*Euzophera semifuneralis* 169
- Miner, cambium  
*Phytobia pruni* 626
- Weevil  
*Magdalis aenescens* 495
- Roots, root collar
- Borer, clearwing  
*Synanthedon exitiosa* 59
- Borer, roundheaded  
*Prionus californicus* 393
- Miner, cambium

- Phytobia pruni* 626
- Plum, beach*  
Trunk, large branches  
Borer, clearwing  
*Synanthedon pictipes* 62
- Plum, Chickasaw*  
Trunk, large branches  
Beetle, bark  
*Pseudopityophthorus pruinosus* 536
- Plum, Chinese*  
Trunk, large branches  
Caterpillar  
*Euzophera semifumeralis* 169
- Plum, garden*  
Trunk, large branches  
Miner, cambium  
*Phytobia pruni* 626  
Roots, root collar  
Miner, cambium  
*Phytobia pruni* 626
- Poison ivy/poison oak*  
Twigs, small branches  
Beetle, false powderpost  
*Xylobiops basilaris* 286  
Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
Trunk, large branches  
Beetle, ambrosia  
*Xylosandrus compactus* 569  
Borers, roundheaded  
*Saperda discoidea* 363  
*Saperda lateralis* 363
- Pomegranate*  
Trunk, large branches  
Beetle, ambrosia  
*Xyleborus dispar* 564  
Borer, roundheaded  
*Neocyttus cordifer* 468
- Poplar*  
Buds, shoots, petioles  
Caterpillars  
*Epinotia nisella* 151  
*Gypsonoma haimbachiana* 134  
*Meroptera cviatella* 187  
*Ostrinia nubilalis* 189  
*Papaipema nebris* 202
- Gallformer  
*Ectoedema populella* 15
- Sawfly  
*Janus abbreviatus* 608
- Twigs, small branches  
Borers, clearwing  
*Parantbrene dollii* 45  
*Parantbrene robiniae* 48  
*Parantbrene tabaniformis* 42  
Borer, flatheaded  
*Descarpentriesina cyanipes* 274  
Borers, roundheaded  
*Oberea delongi* 370  
*Oberea quadricollata* 370  
*Oberea schaumii* 367  
*Oberea tripunctata* 374  
*Saperda concolor* 338  
*Saperda inornata* 339  
*Saperda populnea moesta* 342  
*Saperda populnea tulari* 344  
Caterpillars  
*Gypsonoma haimbachiana* 134  
*Ostrinia nubilalis* 189
- Trunk, large branches  
Beetles, ambrosia  
*Monarthrum fasciatum* 548  
*Platypus compositus* 578  
*Trypodendron retusum* 553  
*Trypobloeus populi* 529  
*Xyleborus dispar* 564  
*Xyloterinus politus* 551  
Beetle, timber  
*Hylecoetus lugubris* 292  
Borers, clearwing  
*Parantbrene dollii* 45  
*Parantbrene robiniae* 48  
*Sesia apiformis* 54  
*Sesia tibialis* 51  
Borers, flatheaded  
*Agrilus granulatus granulatus* 222  
*Agrilus granulatus liragus* 224  
*Agrilus granulatus populi* 227  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270  
*Descarpentriesina californica* 276  
*Descarpentriesina cyanipes* 274

- Dicerca tenebrica* 280
- Borers, roundheaded
- Parandra brunnea* 385
- Saperda calcarata* 334
- Synapbaeta guexi* 316
- Xylotrechus oblitteratus* 461
- Carpenterworms
- Acossus centerensis* 124
- Acossus populi* 127
- Prionoxystus robiniae* 112
- Zeuzera pyrina* 127
- Caterpillar
- Euzophera semifuneralis* 169
- Horntail
- Tremex columba* 597
- Weevils
- Arrhenodes minutus* 476
- Cryptorhynchus lapathi* 492
- Roots, root collar
- Borers, clearwing
- Paranthrene dollii* 45
- Sesia apiformis* 54
- Sesia tibialis* 51
- Borer, flatheaded
- Agrilus horni* 220
- Borers, roundheaded
- Archodontes melanopus melanopus* 396
- Plectrodera scalator* 311
- Prionus californicus* 393
- Prionus laticollis* 390
- Xylotrechus oblitteratus* 461
- Caterpillars
- Stbenopsis argenteomaculatus* 6
- Stbenopsis quadriguttatus* 3
- Poplar, balsam*
- Buds, shoots, petioles
- Caterpillar
- Epinotia nisella* 151
- Sawfly
- Janus abbreviatus* 608
- Twigs, small branches
- Borers, clearwing
- Paranthrene dollii* 45
- Paranthrene robiniae* 48
- Borers, roundheaded
- Saperda inornata* 339
- Saperda populnea moesta* 342
- Trunk, large branches
- Borers, clearwing
- Paranthrene dollii* 45
- Paranthrene robiniae* 48
- Sesia apiformis* 54
- Sesia tibialis* 51
- Borers, flatheaded
- Agrilus granulatus liragus* 224
- Agrilus horni* 220
- Borer, roundheaded
- Saperda calcarata* 334
- Carpenterworm
- Acossus centerensis* 124
- Weevil
- Cryptorhynchus lapathi* 492
- Roots, root collar
- Borers, clearwing
- Paranthrene dollii* 45
- Sesia apiformis* 54
- Borer, flatheaded
- Agrilus horni* 220
- Poplar, Lombardy*
- Twigs, small branches
- Borer, roundheaded
- Oberea schaumii* 367
- Trunk, large branches
- Borer, flatheaded
- Agrilus granulatus granulatus* 222
- Poplar, white*
- Twigs, small branches
- Borer, clearwing
- Paranthrene robiniae* 48
- Trunk, large branches
- Borers, clearwing
- Paranthrene robiniae* 48
- Sesia apiformis* 54
- Sesia tibialis* 51
- Borer, flatheaded
- Agrilus horni* 220
- Roots, root collar
- Borers, clearwing
- Paranthrene robiniae* 48
- Sesia apiformis* 54
- Sesia tibialis* 51

- Privet*  
 Trunk, large branches  
 Borer, clearwing  
*Podosesia syringae* 30  
 Borer, roundheaded  
*Tylonotus bimaculatus* 413
- Prune*  
 Buds, shoots, petioles  
 Caterpillar  
*Anarsia lineatella* 22  
 Twigs, small branches  
 Beetle, false powderpost  
*Melalgus confertus* 288  
 Caterpillar  
*Anarsia lineatella* 22  
 Trunk, large branches  
 Borer, clearwing  
*Synanthedon exitiosa* 59  
 Borers, flatheaded  
*Chrysobothris femorata* 267  
*Chrysobothris mali* 270  
 Weevil  
*Magdalis aenescens* 495  
 Roots, root collar  
 Borer, clearwing  
*Synanthedon exitiosa* 59
- Pyracantha*  
 Buds, shoots, petioles  
 Caterpillar  
*Graptolita packardi* 162
- Quince**  
 Buds, shoots, petioles  
 Caterpillars  
*Graptolita molesta* 160  
*Spilonota ocellana* 147  
 Twigs, small branches  
 Beetle, false powderpost  
*Melalgus confertus* 288  
 Caterpillar  
*Graptolita molesta* 160  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Trunk, large branches  
 Beetle, ambrosia  
*Xyleborus dispar* 564  
 Beetle, bark  
*Scolytus rugulosus* 506
- Borers, flatheaded  
*Agrilus sinuatus* 256  
*Chrysobothris femorata* 267  
 Borers, roundheaded  
*Prionus californicus* 393  
*Saperda candida* 346
- Raspberry**  
 Buds, shoots, petioles  
 Caterpillar  
*Spilonota ocellana* 147  
 Twigs, small branches, canes  
 Borer, clearwing  
*Pennisetia marginata* 101  
 Borers, flatheaded  
*Agrilus aurichalceus* 264  
*Agrilus ruficollis* 262  
 Borer, roundheaded  
*Oberea bimaculata* 376  
 Sawfly  
*Hartigia cressoni* 603  
 Roots, root collar  
 Borer, clearwing  
*Pennisetia marginata* 101
- Redbay*  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569
- Redbud, eastern*  
 Twigs, small branches  
 Beetle, ambrosia  
*Xylosandrus compactus* 569  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus germanus* 572  
 Beetle, false powderpost  
*Xylobiops basilaris* 286  
 Borers, flatheaded  
*Chrysobothris femorata* 267  
*Ptosima gibbicollis* 282  
 Borer, roundheaded  
*Neoclytus acuminatus* 464



- Rhododendron*  
 Twigs, small branches  
 Beetle, ambrosia  
*Corthylus punctatissimus* 543  
 Borer, roundheaded  
*Oberea tripunctata* 374  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus germanus* 572  
 Borer, clearwing  
*Synanthedon rhododendri* 75  
 Roots, root collar  
 Borer, roundheaded  
*Prionus laticollis* 390
- Rose*  
 Buds, shoots, petioles  
 Caterpillar  
*Grapholita packardi* 162  
 Twigs, small branches, canes  
 Borer, flatheaded  
*Agrilus aurichalceus* 264  
 Borer, roundheaded  
*Oberea bimaculata* 376  
 Caterpillar  
*Grapholita packardi* 162  
 Sawflies  
*Hartigia cressoni* 603  
*Hartigia trimaculata* 605
- Saltbush**  
 Roots, root collar  
 Borer, roundheaded  
*Megacheuma brevipennis* 453
- Saltbush, fourwing*  
 Twigs, small branches  
 Borer, roundheaded  
*Amannus pectoralis* 474
- Saltbush, Gardner*  
 Roots, root collar  
 Borer, roundheaded  
*Megacheuma brevipennis* 453
- Saltbush, Parry*  
 Roots, root collar  
 Borer, roundheaded  
*Megacheuma brevipennis* 453
- Saltbush, sbadscale*  
 Roots, root collar
- Borer, roundheaded  
*Megacheuma brevipennis* 453
- Sassafras*  
 Buds, shoots, petioles  
 Borer, roundheaded  
*Oberea ruficollis* 379  
 Twigs, small branches  
 Beetles, ambrosia  
*Corthylus punctatissimus* 543  
*Xyleborus sayi* 565  
 Borer, roundheaded  
*Oberea ruficollis* 379  
 Girdler/pruner, roundheaded  
*Anelaphus villosus* 431  
 Trunk, large branches  
 Beetle, ambrosia  
*Xylosandrus germanus* 572  
 Borer, roundheaded  
*Neoclytus acuminatus* 464
- Seagrape*  
 Buds, shoots, petioles  
 Caterpillar  
*Hexeris enhydris* 192  
 Twigs, small branches  
 Caterpillar  
*Hexeris enhydris* 192
- Serviceberry*  
 Buds, shoots, petioles  
 Caterpillar  
*Argyresthia oreasella* 28  
 Trunk, large branches  
 Beetles, bark  
*Pseudopityophthorus minutissimus* 534  
*Scolytus rugulosus* 506  
 Borers, flatheaded  
*Agrilus sinuatus* 256  
*Agrilus vittaticollis* 254  
*Cbrysobotris femorata* 267  
 Borers, roundheaded  
*Saperda candida* 346  
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## Common and Scientific Names of Host Plants

<b>acacia</b>	<i>Acacia</i> spp.
ailanthus	<i>Ailanthus altissima</i> (Mill.) Swingle
alder	<i>Alnus</i> spp.
black	<i>Alnus glutinosa</i> (L.) Gaertn.
Italian	<i>Alnus cordata</i> Desf.
mountain	<i>Alnus tenuifolia</i> Nutt.
Oregon	<i>Alnus</i> sp.
speckled	<i>Alnus rugosa</i> (Du Roi) Spreng.
white	<i>Alnus incana</i> Moench.
alkali blite	<i>Suaeda fruticosa</i> (L.) Forsk.
almond	<i>Prunus dulcis</i> (Miller) D.A. Webb
American cranberrybush	<i>Viburnum trilobum</i> Marsh.
antelope brush	<i>Purshia</i> sp.
apple	<i>Malus domestica</i> Borkh.
apricot	<i>Prunus armeniaca</i> L.
Arizona cypress	<i>Cupressus arizonica</i> Greene
arrowwood	<i>Viburnum dentatum</i> L.
ash	<i>Fraxinus</i> spp.
black	<i>Fraxinus nigra</i> Marsh.
Carolina	<i>Fraxinus caroliniana</i> Mill.
European	<i>Fraxinus excelsior</i> L.
green	<i>Fraxinus pennsylvanica</i> Marsh.
Oregon	<i>Fraxinus latifolia</i> Benth.
white	<i>Fraxinus americana</i> L.
aspen	<i>Populus</i> spp.
bigtooth	<i>Populus grandidentata</i> Michx.
European	<i>Populus tremula</i> L.
quaking	<i>Populus tremuloides</i> Michx.
(see also poplar)	
(see also cottonwood)	
Australian pine	<i>Casuarina equisetifolia</i> L.
avocado	<i>Persea americana</i> Mill.
azalea	<i>Rhododendron</i> spp.
<b>baccharis</b>	<i>Baccharis</i> spp.
eastern	<i>Baccharis halimifolia</i> L.
seepwillow (mulefat)	<i>Baccharis glutinosa</i> Pers.
baldcypress	<i>Taxodium distichum</i> (L.) Rich.
basswood	<i>Tilia</i> spp.
American	<i>Tilia americana</i> (L.)
(see also linden)	
bayberry	<i>Myrica pensylvanica</i> Lois.
beech	<i>Fagus</i> sp.
American	<i>Fagus grandifolia</i> Ehrh.
birch	<i>Betula</i> spp.
gray	<i>Betula populifolia</i> Marsh.

paper	<i>Betula papyrifera</i> Marsh.
river	<i>Betula nigra</i> L.
sweet	<i>Betula lenta</i> L.
western paper	<i>Betula papyrifera</i> var. <i>commutata</i> (Regel) Fern.
white	<i>Betula</i> sp.
yellow	<i>Betula alleghaniensis</i> Britton
blackbead	<i>Pithecellobium</i> spp.
blackberry	<i>Rubus</i> sp.
blackgum	<i>Nyssa sylvatica</i> Marsh.
(see also black tupelo)	
blackhaw	<i>Viburnum prunifolium</i> L.
blueberry	<i>Vaccinium</i> spp.
blue paloverde	<i>Cercidium floridum</i> Benth. ex Gray
Boston ivy, Japanese ivy	<i>Parthenocissus tricuspidata</i> (Siebold & Zucc.) Planchon
boxelder	<i>Acer negundo</i> L.
box-thorn	<i>Lycium</i> sp.
boysenberry (loganberry)	<i>Rubus loganobaccus</i> L.H. Bailey
buckeye	<i>Aesculus</i> spp.
California	<i>Aesculus californica</i> (Spach.) Nutt.
Ohio	<i>Aesculus glabra</i> Willd.
burdock	<i>Arctium</i> spp.
bursera	<i>Bursera</i> spp.
butternut	<i>Juglans cinerea</i> L.
buttonbush	<i>Cephalanthus occidentalis</i> L.
<b>California boxelder</b>	<i>Acer negundo</i> ssp. <i>californicum</i> (Torr. & Gray) Wesmael
camphor-tree	<i>Cinnamomum camphora</i> (L.) J.S. Presl
catalpa	<i>Catalpa</i> spp.
catclaw	<i>Acacia greggii</i> Gray
ceanothus	<i>Ceanothus</i> spp.
blueblossom	<i>Ceanothus thyrsiflorus</i> Eschsch.
cedar	
eastern redcedar	<i>Juniperus virginiana</i> L.
Spanish	<i>Cedrela odorata</i> L.
cherry	<i>Prunus</i> spp.
black	<i>Prunus serotina</i> Ehrh.
mahaleb	<i>Prunus mahaleb</i> L.
sour	<i>Prunus cerasus</i> L.
wild	<i>Prunus</i> spp.
chestnut	<i>Castanea</i> spp.
American	<i>Castanea dentata</i> (Marsh.) Borkh.
chokecherry	<i>Prunus virginiana</i> L.
coralbean	<i>Erythrina fusca</i> Lour.



corn	<i>Zea mays</i> L.
cotoneaster	<i>Pyracantha coccinea</i> Roem.
cottonwood	<i>Populus</i> spp.
black	<i>Populus trichocarpa</i> Torr. & Gray
eastern	<i>Populus deltoides</i> Bartr. ex Marsh.
Fremont	<i>Populus fremontii</i> Wats.
lanceleaf	<i>Populus acuminata</i> Rydb.
narrowleaf	<i>Populus angustifolia</i> James
plains	<i>Populus deltoides</i> var. <i>occidentalis</i> Rydb.
swamp (see also: poplar and aspen)	<i>Populus heterophylla</i> L.
coyote brush	<i>Baccharis pilularis</i> DC.
crabapple	<i>Malus sylvestris</i> (L.) Mill.
currant	<i>Ribes</i> spp.
<b>dewberry</b>	<i>Rubus</i> spp.
dogwood	<i>Cornus</i> spp.
red-osier	<i>Cornus stolonifera</i> Michx.
<b>ebony</b>	<i>Pitbecellobium</i> spp.
blackbead	<i>Pitbecellobium flexicaule</i> (Benth.) Coul.
elder	<i>Sambucus</i> spp.
American	<i>Sambucus canadensis</i> L.
blackbead	<i>Sambucus</i> sp.
blue	<i>Sambucus cerulea</i> Raf.
European	<i>Sambucus nigra</i> L.
Pacific red	<i>Sambucus callicarpa</i> Greene
elm	<i>Ulmus</i> spp.
American	<i>Ulmus americana</i> L.
cedar	<i>Ulmus crassifolia</i> Nutt.
English	<i>Ulmus procera</i> Salisb.
slippery	<i>Ulmus rubra</i> Muhl.
eucalyptus	<i>Eucalyptus</i> spp.
Blakely's red gum	<i>Eucalyptus blakelyi</i> Maiden
Blue gum	<i>Eucalyptus globulus</i> Labill.
manna gum	<i>Eucalyptus viminalis</i> Benth.
sugar gum	<i>Eucalyptus cladocalyx</i> F. Muell.
<b>fig</b>	<i>Ficus</i> spp.
fringetree	<i>Chionanthus virginicus</i> L.
<b>giant ragweed</b>	<i>Ambrosia trifida</i> L.
gingko	<i>Gingko biloba</i> L.

goldenrod	<i>Solidago</i> spp.
golden-shower	<i>Cassia fistula</i> L.
gooseberry	<i>Ribes</i> spp.
grape	<i>Vitis</i> spp.
greasewood	<i>Sarcobatus</i> sp.
black	<i>Sarcobatus vermiculatus</i> (Hook.) Torrey
great leucaena	<i>Leucaena pulverulenta</i> (Schlecht.) Benth.
guajillo	<i>Acacia berlandieri</i> Benth.
gumbo-limbo	<i>Bursera simaruba</i> (L.) Sarg.
<b>hackberry</b>	<i>Celtis</i> spp.
netleaf	<i>Celtis reticulata</i> Torr.
hawthorn	<i>Crataegus</i> spp.
cockspur	<i>Crataegus crus-galli</i> L.
pear	<i>Crataegus calpodendron</i> (Ehrh.) Medic.
hazel (hazelnut)	<i>Corylus</i> spp.
hemlock	<i>Tsuga</i> spp.
hickory	<i>Carya</i> spp.
bitternut	<i>Carya cordiformis</i> (Wangenh.) Koch
mockernut	<i>Carya tomentosa</i> (Poir.) Nutt.
pignut	<i>Carya glabra</i> (Mill.) Sweet
shagbark	<i>Carya ovata</i> (Mill.) Koch
water	<i>Carya aquatica</i> (Michx.) Nutt.
(see also pecan)	
holly	<i>Ilex</i> spp.
American	<i>Ilex opaca</i> Ait.
honeylocust	<i>Gleditsia triacanthos</i> L.
hop	<i>Humulus lupulus</i> L.
hophornbeam	<i>Ostrya</i> spp.
eastern	<i>Ostrya virginiana</i> (Mill.) Koch
hornbeam	<i>Carpinus</i> sp.
American	<i>Carpinus caroliniana</i> Walt.
horsebean	<i>Parkinsonia aculeata</i> L.
horsechestnut	<i>Aesculus</i> spp.
(see buckeye)	
huisache	<i>Acacia farnesiana</i> (L.) Willd.
<b>indigobush</b>	
(see smokethorn)	
<b>Jerusalem-thorn</b>	<i>Parkinsonia aculeata</i> L.
<b>kapok</b>	<i>Ceiba pentandra</i> (L.) Gaertner
<b>larch</b>	<i>Larix</i> spp.

laurel (mountain-laurel)	<i>Kalmia</i> spp.
laurelcherry	<i>Prunus</i> spp.
Carolina	<i>Prunus caroliniana</i> (Mill.) Ait.
leadplant	<i>Amorpha canescens</i> Pursh.
lilac	<i>Syringa vulgaris</i> L.
linden	<i>Tilia</i> spp.
European	<i>Tilia cordata</i> Mill.
(see also basswood)	
lindheimer mimosa	<i>Mimosa lindheimeri</i> Gray
locust	<i>Robinia</i> spp.
black	<i>Robinia pseudoacacia</i> L.
New Mexico	<i>Robinia neomexicana</i> Gray
loquat	<i>Eriobotrya japonica</i> (Thunb.) Lindley
lupine	<i>Lupinus</i> spp.
<b>madrone</b>	<i>Arbutus</i> spp.
magnolia	<i>Magnolia</i> spp.
southern	<i>Magnolia grandiflora</i> L.
mahogany	<i>Swietenia</i> spp.
mango	<i>Mangifera indica</i> L.
mangrove	<i>Rhizophora mangle</i> L.
manzanita	<i>Manzanita</i> spp.
maple	<i>Acer</i> spp.
bigleaf	<i>Acer macrophyllum</i> Pursh.
black	<i>Acer nigrum</i> Michx.
Florida	<i>Acer barbatum</i> Michx.
mountain	<i>Acer spicatum</i> Lam.
Norway	<i>Acer platanoides</i> L.
planetree	<i>Acer pseudoplatanus</i> L.
red	<i>Acer rubrum</i> L.
Rocky Mountain	<i>Acer glabrum</i> Torr.
silver	<i>Acer saccharinum</i> L.
southern sugar	<i>Acer barbatum</i> Michx.
(see Florida maple)	
striped	<i>Acer pensylvanicum</i> L.
sugar	<i>Acer saccharum</i> Marsh.
mazzard (sweet cherry)	<i>Prunus avium</i> (L.)
mesquite	<i>Prosopis</i> spp.
honey	<i>Prosopis glandulosa</i> Torr.
western honey	<i>Prosopis glandulosa</i> var. <i>torreyana</i> (L. Benson) M.C. Johnst.
mimosa	<i>Albizia julibrissin</i> Durazzini
mistletoe	<i>Phoradendron</i> spp.
mountain-ash, American	<i>Sorbus americana</i> Marsh.
mountain-laurel	<i>Kalmia latifolia</i> L.
mountain-mahogany	<i>Cercocarpus</i> spp.

mulberry	<i>Morus</i> spp.
red	<i>Morus rubra</i> L.
Russian (see white)	
white	<i>Morus alba</i> L.
<b>nannyberry</b>	<i>Viburnum lentago</i> L.
nectarine	<i>Prunus persica</i> var. <i>nuciperscia</i> (Suckow) C. Schneider
ninebark	<i>Physocarpus opulifolius</i> (L.) Maxim.
<b>oak</b>	<i>Quercus</i> spp.
Arizona white	<i>Quercus arizonica</i> Sarg.
bear	<i>Quercus ilicifolia</i> Wangenh.
black	<i>Quercus velutina</i> Lam.
blackjack	<i>Quercus marilandica</i> Muenchh.
bur	<i>Quercus macrocarpa</i> Michx.
California black	<i>Quercus kelloggii</i> Newb.
California scrub	<i>Quercus dumosa</i> Nutt.
canyon live	<i>Quercus chrysolepis</i> Liebm.
cherrybark	<i>Quercus falcata</i> var. <i>pagodifolia</i> Ell.
chestnut	<i>Quercus prinus</i> L.
chinkapin	<i>Quercus muehlenbergii</i> Engelm.
coast live	<i>Quercus agrifolia</i> Nee
Dunn	<i>Quercus dumii</i> Kellogg
Emory	<i>Quercus emoryi</i> Torr.
Engelmann	<i>Quercus engelmannii</i> Greene
Gambel	<i>Quercus gambelii</i> Nutt.
interior live	<i>Quercus wislizeni</i> A. DC.
laurel	<i>Quercus laurifolia</i> Michx.
live	<i>Quercus virginiana</i> Mill.
Mexican blue	<i>Quercus oblongifolia</i> Torr.
northern red	<i>Quercus rubra</i> L.
Nuttall	<i>Quercus nuttallii</i> Palmer
Oregon white	<i>Quercus garryana</i> Dougl. ex Hook.
overcup	<i>Quercus lyrata</i> Walt.
pin	<i>Quercus palustris</i> Muenchh.
post	<i>Quercus stellata</i> Wangenh.
scarlet	<i>Quercus coccinea</i> Michx.
scrub	<i>Quercus</i> sp.
Shumard	<i>Quercus shumardii</i> Buckl.
silverleaf	<i>Quercus hypoleuroides</i> A. Camus
southern red	<i>Quercus falcata</i> Michx.
swamp chestnut	<i>Quercus michauxii</i> Nutt.
swamp white	<i>Quercus bicolor</i> Willd.
turkey	<i>Quercus laevis</i> Walt.
water	<i>Quercus nigra</i> L.

white	<i>Quercus alba</i> L.
willow	<i>Quercus pbellos</i> L.
olive	<i>Olea europaea</i> L.
orange (sweet)	<i>Citrus sinensis</i> (L.) Osbeck
Osage-orange	<i>Maclura pomifera</i> (Raf.) Schneid.
<b>paperbark-tree</b> (bottlebrush or cajeput-tree)	<i>Melaleuca quinquenervia</i> (Cav.) S.T. Blake
paulownia	<i>Paulownia tomentosa</i> (Thunb.) Sieb. & Zucc. ex Steud.
peach	<i>Prunus persica</i> Batsch.
peanut	<i>Arachis hypogaea</i> L.
pear	<i>Pyrus communis</i> L.
pecan (see also hickory)	<i>Carya illinoensis</i> (Wangenh.) K. Koch
pentstemon	<i>Pentstemon</i> spp.
peppertree (California)	<i>Schinus molle</i> L.
persimmon	<i>Diospyros</i> spp.
common	<i>Diospyros virginiana</i> L.
Japanese	<i>Diospyros kaki</i> L.
photinia	<i>Heteromeles</i> spp.
pigeon plum	<i>Coccoloba diversifolia</i> Jacq.
pine	<i>Pinus</i> spp.
plum	<i>Prunus</i> spp.
beach	<i>Prunus maritima</i> Marshall
Chickasaw	<i>Prunus angustifolia</i> Marshall
Chinese	<i>Prunus</i> sp.
garden	<i>Prunus domestica</i> L.
wild	<i>Prunus</i> sp.
poison ivy	<i>Toxicodendron radicans</i> (L.) Kuntze
poison oak	<i>Toxicodendron diversilobum</i> (Torrey & A. Gray) E. Greene
pomegranate	<i>Punica granatum</i> L.
poplar	<i>Populus</i> spp.
balsam	<i>Populus balsamifera</i> L.
Lombardy	<i>Populus nigra</i> var. <i>italica</i> Muenchh.
white (silver) (see also aspen and cottonwood)	<i>Populus alba</i> L.
privet	<i>Ligustrum</i> spp.
pyracantha	<i>Pyracantha</i> spp.
<b>quince</b>	<i>Cydonia oblonga</i> Miller
<b>raspberry</b>	<i>Rubus</i> spp.

redbay	<i>Persea borbonia</i> (L.) Spreng.
redbud	<i>Cercis</i> spp.
eastern	<i>Cercis canadensis</i> L.
rhododendron	<i>Rhododendron</i> spp.
rose	<i>Rosa</i> spp.
rush beebia	<i>Bebbia juncea</i> (P.H. Timberlake)
<b>Saltbush</b>	
fourwing	<i>Atriplex</i> sp.
Gardner	<i>Atriplex canescens</i> (Pursh.) Nutt.
Parry	<i>Atriplex gardneri</i> (Moq.) D. Dietr.
shadscale	<i>Atriplex parryi</i> Wats.
	<i>Atriplex confertifolia</i> (Torr. & Frem.)
sassafras	<i>Sassafras albidum</i> (Nutt.) Nees
seagrape	<i>Coccoloba uvifera</i> (L.) L.
serviceberry	<i>Amelanchier</i> spp.
downy	<i>Amelanchier arborea</i> (Michx.) Fern.
western	<i>Amelanchier alnifolia</i> (Nutt.) Nutt.
smokethorn	<i>Dalea spinosa</i> Gray
sneezeweed	<i>Helenium</i> sp.
sourwood	<i>Oxydendrum arboreum</i> (L.) DC.
Spanish cedar	<i>Cedrela odorata</i> L.
spicebush	<i>Lindera benzoin</i> (L.) Blume
spruce	<i>Picea</i> spp.
sugarberry	<i>Celtis laevigata</i> Willd.
(see also hackberry)	
sumac	<i>Rhus</i> spp.
smooth (common)	<i>Rhus glabra</i> L.
poison-sumac	<i>Rhus vernix</i> L.
sweetfern	<i>Comptonia peregrina</i> (L.) J.M. Coulter
sweetgum	<i>Liquidambar styraciflua</i> L.
sweetleaf	<i>Symplocos tinctoria</i> (L.) L'Her.
sycamore	<i>Platanus occidentalis</i> L.
Arizona	<i>Platanus wrightii</i> Wats.
California	<i>Platanus racemosa</i> Nutt.
<b>thistle</b>	
tupelo	<i>Carduus</i> spp.
water	<i>Nyssa</i> spp.
black	<i>Nyssa aquatica</i> L.
(see also blackgum)	<i>Nyssa sylvatica</i> Marsh.
<b>viburnum</b>	
Virginia creeper	<i>Viburnum</i> spp.
	<i>Parthenocissus quinquefolia</i> L. Planch.

<b>walnut</b>	<i>Juglans</i> spp.
black	<i>Juglans nigra</i> L.
English	<i>Juglans regia</i> L.
Japanese	<i>Juglans sieboldiana</i> Maxim.
willow	<i>Salix</i> spp.
acute leaf	<i>Salix</i> sp.
arroyo	<i>Salix lasiolepis</i> Benth.
black	<i>Salix nigra</i> Marsh.
Bonpland	<i>Salix bonplandiana</i> H.B.K.
crack	<i>Salix fragilis</i> L.
European yellow	<i>Salix</i> sp.
golden leaf	<i>Salix</i> sp.
laurel leaf	<i>Salix pentandra</i> Lorbeerweide
meadow	<i>Salix petiolaris</i> J.E. Sm.
Pacific	<i>Salix lasiandra</i> Benth.
sandbar (coyote)	<i>Salix exigua</i> (Nutt.)
Scouler	<i>Salix scoulerana</i> Barrett ex Hook.
weeping	<i>Salix babylonica</i> L.
wisteria	<i>Wisteria</i> spp.
witch-hazel	<i>Hamamelis virginiana</i> L.
<b>yellow-poplar</b>	<i>Liriodendron tulipifera</i> L.
<b>Zelkova</b>	<i>Zelkova</i> sp.
Japanese	<i>Zelkova serrata</i> (Thunb.) Makino





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