Sample monitoring calendar for landscape plants (May and June)
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Pest/Stage	*Host*	*"When to Treat" GDD*	*Comments/Plant Indicators (PPI)*
Aphids (eggs) (active stages)	Hawthorn, Euonymus, Cotoneaster, Birch, others	7–20 (dormant oils) 250–2800	Petal fall of flowering dogwood (= PPI) Honeydew or sooty mold Deformed leaf terminals Yellow foliage
Birch Leaf Miner (larvae)	Paper Birch European White Birch	123–290	Redbud bloom = PPI Adults appear—larvae half expanded Larvae inside leaves—10 days, then drop to ground 2 generations: 2nd in early June
Southern Red Mite (egg Hatch)	Jap Holly Blue Hollies Pyracantha	69–157	Norway maple flower bud break = PPI Fine stippling discolors leaf surface Dark red eggs on undersides of leaves Use beating tray and hand lens to determine population levels—Treat ASAP! Second generation mid-June
Native Holly Leaf Miner (adults)	American Holly	147–265	Pin oak leaf bud break = PPI Larvae produce serpentine mines in leaf Larvae overwinter within mines (handpick) Adult feeding causes leaf punctures
Cankerworms Spring & Fall (larvae)	Maple, Oak, Linden Fruit trees	148–290	Pin Oak leaf bud break = PPI Up to 1″ long, green or brown "inchworms" - inch worms may hang on threads Shothole damage on leaves in light Infestations-defoliation when heavy
Taxus Mealy Bugs (nymphs)	Yew, Maple, Dogwood, Rhododendron	246–618	End of crabapple bloom = PPI Honeydew and sooty mold, sparse foliage Insect covered with white powdery wax with four stripes
Elm Leaf Beetle (larvae & adult)	Many Elms Jap. Zelkova	363–530	Full bloom of Weigela = PPI Pointed yellow eggs laid on undersides Adults skeletonize leaves Rasping mouthparts of larvae cause leaves to turn bronze color
Azalea Lace Bugs (nymphs)	Azaleas	372–618	Begin bloom of the Japanese lilac tree Yellow to white stippling damage visible on upper leaf surfaces Black "varnish" spots on undersides of leaves (excrement) Overwinters as eggs near leaf mid-vein

Pest/Stage	*Host*	*"When to Treat" GDD*	*Comments/Plant Indicators (PPI)*
Bronze Birch Borer (adult)	White-barked Birches	400–880	Begin bloom of the mountain laurel = PPI Dead leader-raised ridges in bark Winding galleries under bark Adults chew "D"-shaped exit holes in bark No pheromone traps available
Black Vine Weevil (adults)	Yew, Hemlock, Rhododendron Azalea, (broadleaf evergreens)	400–900	Full bloom of American Holly Small crescent shaped notches along leaf margins Look for first notching on new growth before treating Check for bark feeding at root crown
Boxwood Leaf Miner (larvae)	Boxwood	448–700	Begin bloom of the Japanese lilac tree Yellow blisters or mines most noticeable on undersides of leaves Most mining damage done in the fall and early spring
Azalea Whitefly (immatures)	Azaleas	448–700	Begin bloom of the Japanese lilac tree Cloud of tiny white insects fly when plant is shaken Honeydew & sooty mold Mottled discoloration of foliage Treat only high populations
Pine Needle Scale (crawlers) (1st Gen)	Pines Douglas Fir	298–448	Begin bloom of Kousa Dogwood = PPI Reddish brown crawlers in May & July Many white scales/needle Check scale covers for parasitic wasp emergence holes Feed in clusters at branch crotches
Rhododendron Borer (adults) 1st Gen.	Rhododendron Mt. Laurel Azalea (decid)	509–696	Weigela full bloom = PPI Plant appears drought stressed Holes in bark/check limb crotches One limb only may be dead Monitor adults with pheromone traps
Rhododendron Tip Midge (adults)	Rhododendron	192–363	Flowering dogwood bloom = PPI Adults emerge when new leaves first form Young (two inches or less) infested leaves develop inwardly rolled margins Developed swollen greenish yellow tissue stunted, distorted leaves may turn brown

Pest/Stage	*Host*	*"When to Treat" GDD*	*Comments/Plant Indicators (PPI)*
Hemlock wooly adelgid (50% egg hatch)	Hemlock —Canadian —Carolina	350	Full bloom of Weigela, *Leucothoe* species = PPI Reddish eggs within tufts of white wax at base of needles Dark colored crawlers moving about Infestations cause premature leaf-drop & die back
Elongate Hemlock scale (crawlers) (1st Gen.)	Hemlock	360–700	Full bloom of *Leucothoe*, Weigela species = PPI Yellow blotchy needles Premature needle drop "Scurfy" appearance to underside of leaves Crawlers can be transported by wind and birds to other hemlocks
Peach Tree Borer (adults-emerge)	Cherry Peach Plum	600–1800	Begin bloom of common Smoketree = PPI "Gummosis" present on main trunk; Extended adult flight & egg laying period At least 2 bark spray treatments required
Birch Leaf Miner (adults) (2nd Gen.)	Birch	530–700	Begin bloom of Catalpa tree = PPI Adults only lay eggs in new soft, leaves Treat only if 1st geeration damage was severe A third generation in July is usually
Euonymus Scale (crawlers) (1st Gen.)	Euonymus (not *E. alatus*) Pachysandra Bittersweet	533–820	Begin bloom of Catalpa tree = PPI White male scales mostly on leaves Brown female scales mostly on stems Prune out severely infested branches
White Prunicola Scale (crawlers) (1st Gen.)	J. Flowering Cherry, Privet, Lilac	707–1151	Begin bloom of *Clematis* ssp. = PPI Yellow foliage initially; then brown Yellow crawlers Female scale coves are white & circular Prune out severely infested branches
Oak Spider Mite	Oak	802–1265	Begin bloom of *Koelreutaria* (Golden Rain Tree) = PPI Upper surface of leaves have bronze stippling discoloration Oak mites feed on upper surfaces

SAMPLE MONITORING CALENDAR FOR A SPECIFIC PLANT

Common boxwood (*Buxus sempervirens*)

Key: A = adult, N = nymph, C = crawler, L = larvae, E = egg

1. ***First monitoring visit: May/June***

GDD: 300–500
PPI: *Weigela florida* (common Weigela)

a. Monitor for (treat as needed):
—Boxwood mite (E.N.A.: 250–600 GDD)
—monitor E with hand lens, N with beating tray
—Boxwood leafminer (A: 86–139 GDD; L: 300–700 GDD)
—shake plants to monitor adults @ 200–300 GDD)
—Boxwood psyllid (N: 300–450 GDD)
—monitor for cupping of terminals
—Oystershell scale (C: 360–700 GDD)
—monitor bark for brown/gray scales with eggs. Crawlers hatching.

b. Monitor for signs/symptoms of leaf spot, leaf and stem blight (*Volutella*). Prune out as necessary.

2. ***Second monitoring visit: late June/July***

GDD: 550–1000
PPI: *Robinia* (black locust); *Cornus kousa* (Kousa dogwood)

—Boxwood mite (N.A.: 200–2000 GDD)
—monitor every other week with beating tray during this period
—Boxwood leafminer (L: 450–700 GDD)
—new mines not obvious on underside of leaves—look for blisters
—Boxwood psyllid (A)
—shake plants to observe flying adults
—Oystershell scale (C: 300–700 GDD)
—monitor with sticky tape: treat if necessary after peak emergence

3. ***Third monitoring visit: late September***

—Boxwood leafminer (L)
—mines are obvious. Treat if necessary
—Annual inspection: Collect samples and examine to determine the presence/absence and population/damage of key pests.
—Boxwood mite (stippling)
—Boxwood leafminer (swollen leaves)
—Boxwood psyllid (twisted terminals)
—Oystershell scale (actual insects on stems)
—Leaf blight (bronze discoloration of foliage, dying/dead sections)
—Leaf spot (small spots on foliage

Consider replacement with resistant variety