Of the more than 120 species of thrushes (family Turdidae) worldwide, there are eight species that are regularly observed in Pennsylvania, six nesting species and two passage migrants. Thrushes are songbirds that have thin bills, plump bodies, and strong legs. They often forage on the ground, searching in leaf litter and on lawns for insects and other invertebrates such as spiders, earthworms, and snails. They eat berries in late summer, in fall, and (if they do not migrate south) in winter. Juveniles’ spotted breasts help camouflage them. Thrushes are important dispersal agents for wild fruit- and berry-producing shrubs and trees. Hawks, falcons, owls, foxes, mink, and house cats prey on thrushes. Blue jays, grackles, crows, raccoons, weasels, squirrels, chipmunks, and snakes eat eggs and nestlings. Except for the eastern bluebird and the American robin, Pennsylvania thrushes are forest birds. Although often associated with human habitations, the American robin also lives in wooded habitats.

Many thrushes sing complex mellifluous songs that delight human listeners. Thrushes have the special adaptation of two voice boxes that allow individuals to vocalize two notes independently allowing simultaneous melodies in their songs. Many thrushes sing not only in the early morning, but also at dusk. These choruses can be memorable events to anyone visiting Penn’s Woods in the evening. The spotted forest thrushes of the genus Catharus are sometimes called “nightingale-thrushes” because of their vocal abilities. Most thrushes build open cup-shaped nests secured to branches of low trees and shrubs. Some robins nest on building ledges and other flat surfaces; bluebirds choose tree cavities or artificial nesting boxes; and hermit thrushes and veeries often nest on the ground. Females do most of the actual nest construction. The typical clutch is four or five eggs. All of the species breeding in the Northeast lay pale blue or blue-green eggs. Females do most of the incubating, and both parents feed the young.

**Eastern Bluebird** *(Sialia sialis)*

This familiar species nests across much of the East and winters south to Nicaragua. A bluebird is six inches long and weighs about an ounce. Males have a vivid blue back and wings and a ruddy breast while the females have a more muted blue-gray back and less vividly colored breast. When not nesting, bluebirds wander in small feeding flocks sometimes with house finches and other songbirds. They favor semi-open habitats: orchards, pastures, hayfields, fence lines, cut over or burned areas, forest clearings, open woodlots, and suburban gardens and parks. The song consists of three or more soft, melodious and mellow whistled notes (“tury cherwee, cheye-ley,” as one observer has rendered it). Bluebirds eat crickets, grasshoppers, beetles, caterpillars, and many other insects, and they take spiders, centipedes, earthworms, and snails. Often they sit on a low perch, then flutter down to catch prey from vegetation or the ground. In fall and winter they turn to fruits, including those of sumac, dogwood, Virginia creeper, poison ivy, pokeweed, elderberry, wild cherry, bittersweet, honeysuckle, and wild grape. On sunny or warm winter days, they can turn back to insects for food if they are available.

The courting male sings to the female and flutters close to her with his wings and tail spread; he may pass food to her. Mated pairs preen each other’s feathers. A study in New York found that bluebird territories used for mating, nesting, and feeding averaged over five acres. Bluebirds nest in abandoned woodpecker holes, tree cavities, hollow fence posts, and artificial boxes put up for them by humans. Bluebirds may face stiff competition for these sites from European starlings, house sparrows, tree swallows, and...
house wrens, all of which have been known to kill adult bluebirds. Bluebirds tend to like more open situations for nesting than competing house wrens, informing us as to the better locations for nest box placement. The female builds a loose nest inside the cavity out of grasses and weed stalks, sometimes lining a central cup with feathers or animal hair. Early nesters, bluebirds lay first clutches by late March or early April and second clutches by early June. Some pairs will nest three times in a season. The three to six eggs (usually four or five) are pale blue and unmarked. The female incubates them for about two weeks. Both parents feed the nestlings. After about eighteen days, fledglings leave the nest. Second and third clutches will usually have one fewer egg than a first clutch produced by the same pair.

Bluebirds are permanent residents in the southern parts and lower elevations of their range. In winter, bluebirds from northern areas and higher elevations may shift southward and to the valleys. In mild winters you may see many bluebirds in the agricultural valleys of central Pennsylvania. If they ever left their nesting ground, bluebirds return to their breeding grounds in March and April, welcomed as harbingers of spring by winter weary rural folk. Bluebirds nest statewide in Pennsylvania, avoiding deep woods and wooded ridges. The population of *Sialia sialis* probably peaked around 1900, when farmland covered two thirds of the state. The number of bluebirds waned for many years thereafter as unprofitable acres were abandoned and grew back up in forest, but bluebird numbers have risen over the last several decades thanks to thousands of bluebird boxes put up by humans.

**Veery (Catharus fuscens)**

Named for its call, this woodland thrush has a reddish brown head, back, and tail and a faintly spotted breast. It breeds in southern Canada and in the northern United States, south in the Appalachians to Georgia. In Pennsylvania, where it arrives in May, it is most common in the northern half of the state, especially on the Pocono Plateau. The veery favors damp deciduous forest with a dense undergrowth of shrubs and ferns. Veery pairs often nest in streamside shrubby woods and swampy areas. Where its range overlaps that of the wood thrush and hermit thrush, the veery will be found in wetter, younger woods. Its song is a delicate, flutelike *da vee ur; vee ur, veer, veer* that cascades down the musical scale. The beautiful song has an echoing quality that is described indelicately as sounding like somebody whistling into a sewer pipe. They sing not only in the morning but also at dusk. The veery has a distinctive “veer” or “phew.” Mainly a ground forager, the veery feeds on insects (60 percent of its diet) and fruit (40 percent). In an Ontario study, individual territories averaged slightly more than half an acre.

The female builds a nest in a dense shrub near ground level or on the ground itself, often hiding it in vegetation at the base of a bush or small tree or in a brushpile. She lays three to five (usually four) pale blue eggs and incubates them for ten to 14 days. Brown-headed cowbirds lay eggs in the nests of veeries, they make no attempt to remove the eggs and raise the cowbird(s) along with their own young. Chipmunks sometimes prey on eggs and nestlings. The male helps to rear the brood, and the young leave the nest ten to twelve days after hatching. Veeries migrate at night. A recent study has clarified that veeries winter in central and southern Brazil, rather than a broader area in South America as previously suspected.

**Gray-cheeked Thrush (Catharus minimus)**

This shy, elusive bird breeds in spruce forests and in alder and willow thickets in northern Canada and Alaska. Gray-cheeked thrushes pass through Pennsylvania in May and again in September and October. They forage on the ground, usually in dense woods, and birdwatchers must be both stealthy and patient to catch a glimpse. They winter in South America.

The closely-related Bicknell’s Thrush (*Catharus bicknelli*) has been separated as a distinct species from the more widespread gray-cheeked thrush. Nesting in mountain-tops of New York, New England and in Maritime Canada, it probably passes through the state annually but is rarely distinguished from the very similar gray-cheeked thrush. It nests as close as the Catskill Mountains of New York and winters in the West Indies, primarily the island of Hispaniola.

**Swainson’s Thrush (Catharus ustulatus)**

A common migrant seen in woodlots and parks during spring and fall, this shy thrush nests regularly in Pennsylvania, in a scattering of northern tier counties. It breeds in New England, across Canada and Alaska, and in the U. S. Northwest. The Swainson’s thrush (also called the olive-backed thrush) can be distinguished by bold buffy rings that surround its dark eyes. The melodious call features flute like phrases going up the scale. They also can be detected by their call notes that sound like dripping water or the call of a spring peeper. Swainson’s thrushes inhabit coniferous woods, generally spruce but also hemlock, where it nests in shrubby trees two to ten feet above ground. Like the other thrushes, it feeds mainly on insects and berries but is more likely to engage in flycatching than other thrushes. Swainson’s thrushes winter in tropical forests of Central and South America. Remarkably, the Swainson’s thrushes that nest in Alaska and western Canada
fly east across the North American continent before migrating south to South America wintering grounds. The species’ name memorializes an English ornithologist.

**Hermit Thrush (Catharus guttatus)**

Many observers credit this thrush with the loveliest of all bird songs, described as *Oh, holy holy-ah, purity purity, eeh, sweetly sweetly*. The hermit thrush has a rufous tail and an olive head (in contrast with the wood thrush, which has an olive tail and a rufous head) and a spotted breast. When startled, a hermit thrush will usually fly to a perch and stare at an intruder while flicking its wings and slowly raising and lowering its tail. This behavior makes identification of hermit thrushes easier in the dark woods where they are seen.

The species’ breeding range extends from Canada south into mountainous northern and central Pennsylvania. Hermit thrushes inhabit cool, damp mixed deciduous and coniferous woods. As quiet and unobtrusive as their name implies, they spend much time in the lower branches of undergrowth, and on the forest floor where they forage for insects (including beetles, caterpillars, bees, ants, wasps, flies, bugs) by hopping, then stopping, staring, and thrusting with the bill. Animal matter makes up ninety percent of the diet in spring, forty percent in winter. Hermit thrushes eat fruits of viburnum, elderberry, pokeberry, dogwood, greenbrier, juneberry, sumac, poison ivy, and other plants. Males arrive on the breeding range in April, in advance of females. Late snowstorms that cover up food sources may kill many early birds. Females usually build their nests on the ground (but also sometimes in trees two to eight feet above ground), hiding them beneath boughs, weaving together twigs, bark fibers, ferns, mosses, and grasses, and adding a soft lining of conifer needles, plant fibers, and rootlets. The three to four eggs are pale blue. The female incubates them for about twelve days and the young are able to fly after an additional twelve days. Some pairs raise two broods, continuing the nesting season into early August. Individuals have been known to survive more than eight years, but most do not live that long. The well-camouflaged female hermit thrushes are reluctant to leave their nests, sometimes not flushing until almost directly underfoot. The hermit thrush winters over much of the southern United States, south through Mexico to Guatemala. The only nightingale-thrush to winter in North America, the hermit thrush has not had its population harmed as badly as those of some other thrushes by the rampant cutting of tropical forests.

**Wood Thrush (Hylocichla mustelina)**

The song of the wood thrush has represented wilderness since the days of Henry David Thoreau, perhaps even more so in the modern age when the loss of forest habitat has precipitated the loss of wildlife. The flute-like song is usually rendered as *ee o lay*, and it goes on increasingly through May, especially at dawn and dusk. Wood thrushes have reddish heads, olive backs and tails, and prominently spotted breasts. They are not as shy as other forest thrushes nor as bold as robins. Wood thrushes feed on beetles, caterpillars, crickets, ants, moths, and sowbugs, plus spiders, earthworms, and snails. They also eat many fruits and berries. Wood thrushes nest throughout eastern North America. They are statewide in Pennsylvania in moist lowland woods, dry upland forest, wooded ravines, orchards, city parks, and wooded suburbs. Territories range in size from a quarter of an acre to two acres.

The female builds her nest on a branch or in a fork of a tree six to fifty feet above ground (on average, ten feet high), using grasses, moss, bark, and leaves cemented together with mud. An inner cup is lined with rootlets. The nest looks like a robin’s nest but is smaller (a maximum of five and a half inches in diameter, compared to the robin’s six and a half inches). Three to four eggs are usual for a first clutch, any later ones will have two to three eggs. The eggs are pale greenish blue. The young hatch after two weeks and leave the nest some twelve days later. Brown-headed cowbirds frequently parasitize wood thrush nests, although in some cases the foreign young may not affect the growth or success of the host’s young. House cats, black rat snakes, flying squirrels, grackles, blue jays, weasels, chipmunks, and white-footed mice take eggs, nestlings, and young. In Delaware, a study of 378 wood thrush nests that did not fledge young found that 71 percent had been lost to predation.

Wood thrushes stop singing in late summer but continue to sound *bwubububub* contact notes and *bweeebeeebeebee* alarm calls. They head south in August and September to forests from southeastern Mexico to Panama, especially Honduras and Nicaragua.

Pennsylvania’s forests are very important for the future of wood thrushes since it supports a high percentage of the wood thrush’s total nesting population. It is estimated that 8 percent of the species’ nests are in Pennsylvania. The wood thrush population has declined markedly since the 1980s, perhaps because fragmented forests in the Northeast make thrush nests more accessible to predators and to brown-headed cowbirds, that are nest parasites. Air pollution that
wood thrush

has reduced the availability of calcium in the soil may also have played a role in the loss of snails and other invertebrates on which thrushes feed. Wood thrushes have also lost crucial habitat through deforestation on their wintering range.

American Robin (*Turdus migratorius*)

This widespread, adaptable songbird is found in many different habitats, including towns, cities, farmland, cut over areas, woods edges, and deep woods. The American robin is the largest, most widespread, and common thrush of the United States. Early settlers named it after the European robin, which also has a red breast and is a familiar bird of gardens. The American species is about ten inches long and has dark upperparts and a brick red breast, both colors more intense in males than in females, plus a white eye ring. Juveniles have paler colors and spotted breasts. Only the males sing, a hearty *cheeriup, cheerily, cheeriup* given repeatedly. Robins feed on beetles and other insects, earthworms, and fruits, both wild and cultivated. Fruit makes up some sixty percent of the annual diet. Robins often hunt for prey on lawns; they take earthworms that surface after the soil has been soaked by rain. Robins locate their prey mainly by sight rather than by sound.

Robins arrive on their breeding territories in late March and early April. Individuals may have wintered far to the south, or close by in wooded or brushy swamps. Many robins also spend the winter in sheltered woods and thickets of Pennsylvania where they can find sufficient wild fruits and berries. These winter robins are probably migrants from places north of Pennsylvania where they also are common nesting birds. Males home strongly to areas where they were hatched. They begin to establish territories which, as the breeding season progresses, resolve themselves into about a third of an acre. The territories of several males may overlap along their edges. Males may roost communally at night, then resume defending their territories during the day. Ornithologists have not discerned any specific courtship behavior; pairs simply get together. The male brings nest material to the female, and she weaves together grasses, weedstalks, and string, plastering them with mud and repeatedly forming a central cup with her own body. Females often show a muddy band on the breast during nest building. The use of mud make these nests very sturdy (once dried) and distinguishes robin nests from the nests of other thrushes. The cup is lined with fine grasses. Nests may be built in trees (in conifers for first broods, before deciduous trees have put forth leaves), on porch supports, windowsills, sturdy shrubs, and bridge and barn beams; sometimes robins repair and reuse their nest from the previous year.

The female lays three to seven eggs (usually four), which are colored the distinctive “robin’s egg” blue. Unlike many other thrushes, robins discern and eject cowbird eggs. The female does all of the incubating and leaves the nest for about ten minutes per hour to feed herself. Male robins sing most vociferously just before broods hatch, some twelve to fourteen days after the eggs are laid. Both parents feed the young, mainly on insects and earthworms, and they leave the nest after about fourteen days. The male may take over feeding a first brood while his mate begins a second nesting. Pairs start breaking up and communal flocks begin forming in July and August. The flocks move around to find trees and shrubs that have good crops of berries, and in October most of the flocks fly south. Although some robins winter in the north, most migrate to the southern states, with some going as far as Guatemala. Robins may share winter roosts with European starlings, common grackles, and brown headed cowbirds. The adaptable American robin is one of the most abundant birds of the state.