

Glossary

Acadian orogeny – Mountain-building period that occurred between 350-400 million years ago.

accipiter -- A forest-dwelling hawk with short, rounded wings and a long tail. Flies with several rapid wing beats and a short glide (e.g., sharp-shinned hawk, northern goshawk).

acid rain (precipitation) – Precipitation which is more acidic than normal (i.e., < 5.6 pH) caused by sulphur and nitrogen oxide pollution.

adaptation -- Characteristics that enhance survival and reproductive success (e.g., a hawk's beak is an adaptation for tearing flesh).

algal bloom – An explosive increase in the amount of algae growing in an area. Algal blooms reduce the amount of oxygen available to other organisms often resulting in their death.

alkaline – A substance that can neutralize an acid.

Alleghenian orogeny – Mountain-building period that occurred between 250 and 300 million years ago.

bedding plane – The surface of a sedimentary rock parallel to the surface of deposition. The plane may be marked by changes in grain size or color.

biomass -- Total weight of all organisms in a particular habitat or area.

biome – A regional ecological community characterized by distinctive plants and animals.

breeding – Reproduction in animals.

broadleaf tree – A deciduous tree that loses its leaves each year.

brood – To keep young chicks warm and protected in the nest by sitting over them.

buteo -- Open habitat raptor known for its soaring flight (e.g., Red-tailed Hawk, Broad-winged Hawk).

canopy – The uppermost plant layer in forests. The branches and leaves of the tallest trees form the canopy.

Carboniferous period – Geological time period 350 to 280 million years ago.

carnivore -- An animal that eats other animals.

carrying capacity -- The number of animals (usually a particular species) that the habitat can sustain for a long period.

chlorophyll – The green plant pigment that absorbs the sunlight needed in photosynthesis.

chloroplasts – Organelles in plant cells that contain chlorophyll; where photosynthesis occurs.

clutch – A set of eggs laid in succession, then incubated together.

Glossary

continued ...

complete metamorphosis – An insect life cycle involving changes from larva, to pupa, to adult.

conifer – A tree whose seeds develop inside cones.

conservation -- The careful preservation and protection of something.

consumer – An organism that feeds on another organism (plant or animal) or organic matter.

courtship – To perform actions (i.e.: singing, displays) in order to attract a mate.

crystallize – To take on the form of a substance having plane faces arranged in a symmetrical, three-dimensional pattern.

deciduous tree – A tree that loses all of its leaves each year.

deforestation – The clearing (usually by cutting or burning) of forests.

diurnal -- Active during daylight hours.

ecological equivalents – When two different species use the same habitat and have similar niches, either in the same place at different times, or in different places.

ecological succession – The gradual change and replacement of plant and animal species in an area.

ecology -- The study of the interrelationships of living things with their environment.

environment -- The geologic, atmospheric, and biological setting that sustains a network of life forms. Living and nonliving surroundings.

ephemeral – Short-lived or transient.

evergreen tree – A plant that retains its leaves or needles year round.

exotic – An organism or species that has been introduced into an area.

fertilization – The union of egg and sperm to form a new organism.

fish kills – Death of large numbers of fishes as a result of algal blooms, water pollution or other sudden changes in aquatic environments.

fledge – When a grown chick leaves the nest.

flower – The seed producing part of a flowering plant.

food chain -- The path by which energy and materials are cycled through the environment.

forest – A large area of closely canopied trees.

forest fragmentation – Breaking a large forest into smaller areas, with non-forested lands in between.

fruit – The seed-bearing part of a flowering plant.

Glossary

continued ...

habitat -- The place where a plant or an animal lives (e.g., a deer lives in a forest habitat, a fish lives in a stream habitat).

herbivore -- An animal that eats plants.

home range -- The area -- usually around the roost, nest, or den, in which an animal normally travels in search of food.

igneous -- Rock produced by volcanic action.

incubation -- To heat eggs by sitting over them.

larva -- Molten materials extruded on the surface from within the Earth.

lithification -- Cementing and compressing sediments to form sedimentary rock.

magma -- Volcanic materials from within the Earth that solidify before reaching the surface of the Earth.

metamorphic -- Igneous or sedimentary rock that has been changed to a new type of rock as a result of heat or pressure.

migration -- Seasonal two-way movements of an animal from one habitat or location to another; usually over long distances.

native -- Plants and animals that occur naturally within an area, (*i.e.* not introduced by humans).

needles -- Flat, thin, pointed leaves, most often found on coniferous trees.

niche -- The animal's function or role in its environment.

nitrogen oxides -- Pollutants produced primarily from the burning of fossil fuels that contributes to the formation of acid precipitation.

nocturnal -- Active at night.

old growth forest -- A forest that has not been cleared by people; contains a mix of very old trees and younger trees, and a mostly closed canopy.

omnivore -- An animal that eats both plants and animals.

opportunistic omnivore -- An animal that feeds on both plant and animal materials depending upon the availability.

Ordovician period -- Geological time period 500 to 440 million years ago.

orogeny -- The process of mountain building.

periglacial -- Geological activity adjacent to but not within a glacier.

phloem -- Plant tissue used for distributing food.

photosynthesis -- The process by which plants use the sun's energy to convert carbon dioxide and water into sugar, with oxygen and water as the by-products.

Glossary

continued ...

pine cone – The structure where seeds are formed in conifers.

plumage – A bird's feathers.

pollination – The transfer of pollen to the pistil of a flower.

Pre-Cambrian – A geological era ending 570 million years ago.

predator -- An animal that obtains food primarily by killing and eating other animals (e.g., an osprey, a red fox.)

preservation -- Protecting natural resources.

prey -- Any animal that is eaten by a predator.

primary producers – Plants; organisms that produce complex sugars from simple inorganic materials including sunlight, carbon dioxide and water.

protoplasm – A semi-fluid water-based material found in all plant and animal cells.

rainforest – Tropical forests with at least 100 inches of rainfall each year.

range map -- A map showing the geographical distribution of an animal.

raptor -- A bird of prey (hawk, eagle, falcon, owl, etc.) that captures food with its talons. From the Latin word *rapaces* meaning to seize or grab, plunder.

resource -- Any part of the environment that can be used by an animal (e.g., food, nest materials, tree cavity.)

sanctuary -- A place of refuge for the protection of plants and wildlife (e.g. Hawk Mountain Sanctuary.)

sedimentary – A rock composed of sediments that have been compressed and cemented together in layers.

Silurian period – Geological time period 440 to 410 million years ago.

solifluction – The slow downhill flow of large boulders over a frozen surface.

species -- A group of reproducing organisms that are reproductively isolated from other organisms.

stomata – Small pores in leaves and some stems that open to take in carbon dioxide and to release oxygen.

sub-canopy – Layer of trees below the canopy.

sub-nivean – Beneath the snow.

sulphur oxides – A type of pollutant that is produced primarily from the burning of fossil fuels and that contributes to the formation of acid precipitation.

surface tension – The force exhibited by the molecules in the surface layer of water making the surface behave as if it were an impenetrable layer.

Glossary

continued ...

Taconic orogeny – Mountain building period 440 to 480 million years ago.

talon -- The claw of a bird of prey.

territory -- An area or space occupied by an animal or group of animals of the same species from which other individuals of the same species are repelled.

thermal -- A rising column or pocket of warm air, created when solar radiation differentially heats the Earth's surface.

toxin -- Poisonous substance.

Tuscarora sandstone – Resistant sedimentary rock formed about 400 million years ago from stream gravel.

updraft -- The upward movement of air created when horizontal winds are deflected up and over a mountain or hill.

wildflower – Wild-growing flowering plant.

wingspan -- The distance from the tip of one outstretched wing to the tip of the other outstretched wing.

xylem – Woody tissue of a plant that transfers water from the roots.

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Teaching and Learning Resources

Hawk Mountain Sanctuary, the world's first refuge for birds of prey, offers year-round Sanctuary and off-site education programs for students, teachers, members, and the general public.

Guided Field Trips

Tuesday through Friday, Guided Field Trips are available for schools and other groups. The program begins with a 45-minute introduction to raptors and Hawk Mountain history. Naturalists lead the group on a hike to observe trees, wildflowers, migratory songbirds, mushrooms, insects, and other Appalachian flora and fauna; the hike includes a stop at one of the Sanctuary's lookouts, where the group eats lunch and watches for migrating hawks, followed by a hike down the mountain and returning at the Visitor Center. (Time: 3-4 hours)

Advanced Activities

Special advanced activities can be scheduled for groups for up to 15; these include pond studies, raptor care, winter ecology, introduction to field research, and other selected topics designed especially for students or other groups that have visited Hawk Mountain previously. (Time: 1.5-3 hours)

Group Discounts

Group discounts are available year-round. Advanced registration is required at least two weeks prior to your visit. Discounts are available on a first-come, first-serve basis. Groups can explore the trails, look-outs, and Visitor Center with their teachers or group leaders. Several trail guides and natural history information is available at the Visitor Center to guide you during your visit. Groups can also register (in advance) for a 45 minute introductory presentation about raptors and Hawk Mountain Sanctuary. (Cost for introductory program: \$25, plus trail fees)

Off-site Programs

These programs are presented on a limited basis to schools, scout troops, church and civic groups, and natural history organizations. Programs vary in length and content. Contact the Education Department for more information and fees.

College-level Courses

College-level courses are offered on birding and raptors through Cedar Crest College and the Sanctuary. Courses vary annually, call for details. Academic and in-service credits are available for these courses. Most courses earn one credit hour and meet for three hours on a Friday and all day on the following Saturday and Sunday. Students taking courses for credit are required to submit a short research paper that deals with an aspect of the subject matter of the course. Contact the Visitor Center for more information and schedule.

Teaching and Learning Resources

Teacher Workshops

Several teacher workshops are offered for in-service credit each year, often in cooperation with Berks County Intermediate Unit. Summer Teacher Internships are also offered.

International Internship Program

Conservation Science internships are available to college students and recent graduates in the Spring and Fall. The internship program is one of Hawk Mountain's most exciting educational opportunities, with interns coming from the U.S. and abroad. The Sanctuary hosts 10-12 interns annually.

Education Volunteer Program

Hawk Mountain has approximately 250 volunteers who are vital to the operation of all aspects of the Sanctuary. Education volunteers participate in weekend natural and cultural history programs and guided field trip programs. Volunteers are required to attend training workshops to prepare for their specific duties. Practicing teachers or those with an educational background are especially encouraged to volunteer. Please contact the Volunteer Coordinator for more information on volunteer opportunities available at the Sanctuary.

Calendar of Events

Special programs are offered throughout the year to Sanctuary members and visitors. Events are advertised in the "Calendar of Events" and on the Hawk Mountain website. Programs include adult, family, and junior forays, lectures, workshops, and excursions. Some events require advanced registration and may fill up, so register early. (Cost and content varies for each event).

Weekend Naturalist Programs

Natural history programs are held at the Sanctuary regularly on weekends from April through November. The numbers and types of programs vary with the season. Programs may include Hawk Mountain History, raptor identification, natural and cultural history, garden walks, guided hikes, and specialty talks. Refer to the "Calendar of Events" for a complete list and schedule.

Mountain Moonwalks

Once a month, a Sanctuary naturalist leads a night walk by moonlight visiting the lower lookouts along the trail. Because Hawk Mountain trails close at dusk, this is a unique opportunity to stroll through darkened woods and sit spellbound as the full moon rises over the Kittatinny Ridge. Includes natural history instruction about creatures of the night, from owls, to bats and insects. Contact the Visitor Center for dates and fees. (Advanced registration is required. Time: 2-2.5 hours).

Teaching and Learning Resources

Web Page

Hawk Mountain's website (www.hawkmountain.org) provides general information about the Sanctuary. The website provides special pages for teachers, students and family learners, a list of weekend programs, articles, special events and an updated daily migration count during the Fall.

Education Resource Materials and Facilities

The Sanctuary has education materials including, videos, tapes, slides, books, teacher guides, and trail guides that are available to educators. Many of these materials are also for sale in the bookstore. The Common Room education facility is available for use on a limited basis by conservation and educational groups for meetings or workshops.

Preparing for your field trip to Hawk Mountain Sanctuary: Important Guidelines

Ground Rules

We need your cooperation and that of your students to make their visit to Hawk Mountain Sanctuary as productive as possible. Not everyone realizes the difference between a Sanctuary and other outdoor sites.

All wild things are protected at Hawk Mountain Sanctuary. We ask visitors not to disturb plants or animals. Emphasis is placed on learning about wildlife through observation.

You likely will be sharing the Sanctuary with other people on the day of your visit. Quiet solitude and the opportunity to observe wildlife are very important to our visitors. Please be sure that your presence does not detract from the quality of their visit.

Please discuss these points with your students and chaperones before your visit. Help the students understand why loud voices and rambunctious behavior are inappropriate and will not be tolerated in this outdoor setting.

If students are properly prepared for their visit, they will have a fun, safe, and memorable experience at Hawk Mountain Sanctuary.

We guarantee you, and all other visitors an enjoyable experience if you **DO** the following:

Do be quiet. You should see more wildlife if you are quiet and alert.

Do stay together on lookouts and trails.

Do have a *minimum* of one chaperone per 10 students.

Do pack-in, pack-out everything, including fruit remains.

Do use the Visitor Center appropriately. Only 30 students accompanied by chaperones are allowed in the Visitor Center at any one time.

Do enjoy your visit to the Sanctuary, and allow other visitors to enjoy it as well.

Planning your trip

1. How to Prepare

- Consult the *Enjoying Hawk Mountain Teacher Guide* and develop a lesson to prepare your students for their visit.
- Review the packet of information that was sent prior to your visit
- Make copies of relevant portions of the enclosed field notebooks for your students. Review the field notebooks with students and have them prepare questions to ask during their trip.
- Review “What to Wear and What to Bring” on the following page with your students.
- Review “Some Ground Rules” with the students and chaperones.
- Using the enclosed silhouette stencils, have students make name tags.

Preparing for your field trip to Hawk Mountain Sanctuary: Important Guidelines

2. What to Wear and What to Bring

- sturdy walking shoes
- pack lunch (best carried in daypacks for hiking)
- water or other beverage with a resealable top
- binoculars (if possible)
- proper clothing for the weather (layering is best)
- field guides (optional)
- Hawk Mountain field notebook

3. While at Hawk Mountain

- Please arrive at the time that you scheduled your visit. If there are problems with this time, please notify the Sanctuary.
- In case of rain or questionable weather, call the Sanctuary to discuss your options.
- For a **Guided Field Trip**, check-in at the **Common Room** (not the Visitor Center), please refer to the map for directions. For a **Self-guided Group** or an **Introductory Program**, you should check-in at the Visitor Center. If you are unsure, please call *in advance* to find out.
- Upon arrival, please tally the number of students and adults in your group. Give this information along with the correct amount of payment (in cash or a single check) to Sanctuary staff.
- We require *a minimum* of 1 adult (including teacher) per 10 students.
- Review *Ground Rules* with your students prior to your visit. Disruptive groups will not be tolerated and asked to leave the Sanctuary.
- Restrooms are located in the Visitor Center, Common Room, education trail, near the North and South Lookouts, and near the amphitheater.
- Lunches may be eaten at the lookouts, shelters, Common Room or amphitheater. You must provide your own lunches and beverages, the Sanctuary does not sell food or drinks except for light snacks and bottled water. All trash must be taken back with you, there are no trash receptacles located on the Sanctuary.
- A gift shop and bookstore are located in the Visitor Center. Classes wishing to visit the bookstore should make arrangements to do so after their Guided Field Trip.
- Use your field notebook while at Hawk Mountain. Most of the questions in the booklet will be answered during your visit.
- Please encourage your students to participate and ask lots of questions.

4. Nametag Silhouettes

The silhouettes on the following pages can be used as stencils to make nametags for your students. Prior to your visit, have your students trace the stencils onto heavy paper. Students can cut them out, write their names on them, and color them as they wish. The nametags will familiarize your students with the shapes and names of some of the animals and plants they may observe at Hawk Mountain and help your guides address students by name during their visit.

Appendixes

Checklist of Plants at Hawk Mountain.....	ii
Checklist of Animals at Hawk Mountain	v
What to do With Injured Wildlife	X

Checklist of Plants at Hawk Mountain

Ferns and Fern Allies

Wolf's Claw Clubmoss (*Lycopodium clavatum*)
 Running Pine (*Lycopodium complanatum*)
 Bog Clubmoss (*Lycopodium inundatum*)
 Shining Clubmoss (*Lycopodium lucidulum*)
 Ground Pine (*Lycopodium obscurum*)
 Field Horsetail (*Equisetum arvense*)
 Cut-leaved Grape Fern (*Botrychium dissectum*)
 Daisy-leaf Grape Fern (*Botrychium matricariifolium*)
 Rattlesnake Fern (*Botrychium virginianum*)
 Cinnamon Fern (*Osmunda cinnamomea*)
 Interrupted Fern (*Osmunda claytoniana*)
 Royal Fern (*Osmunda regalis*)
 Maidenhair Fern (*Adiantum pedatum*)
 Ebony Spleenwort (*Asplenium platyneuron*)
 Maidenhair Spleenwort (*Asplenium trichomanes*)
 Lady Fern (*Athyrium filix-femina*)
 Silvery Spleenwort (*Athyrium thelypteroides*)
 Walking Fern (*Camptosorus rhizophyllus*)
 Fragile Fern (*Cystopteris fragilis*)
 Hay-scented Fern (*Dennstaedtia punctilobula*)
 Spinulose Woodfern (*Dryopteris spinulosa*)
 Marginal Shield Fern (*Dryopteris marginalis*)
 American Shield Fern (*Dryopteris intermedia*)
 Ostrich Fern (*Matteuccia struthiopteris*)
 Sensitive Fern (*Onoclea sensibilis*)
 Purple-stemmed Cliffbrake (*Pellaea atropurpurea*)
 Common Polypody (*Polypodium vulgare*)
 Christmas Fern (*Polystichum acrostichoides*)
 Bracken Fern (*Pteridium aquilinum*)
 New York Fern (*Thelypteris noveboracensis*)
 Broad Beech Fern (*Thelypteris hexagonoptera*)
 Blunt-lobed Woodsia (*Woodsia obtusa*)
 Virginia Chain Fern (*Woodwardia virginica*)

Trees

Pitch Pine (*Pinus rigida*)
 White Pine (*Pinus strobus*)
 Eastern Hemlock (*Tsuga canadensis*)
 Long-beaked Willow (*Salix bebbiana*)
 Pussy Willow (*Salix discolor*)

Trembling Aspen (*Populus tremuloides*)
 Large-toothed Aspen (*Populus grandidentata*)
 Shag-bark Hickory (*Carya ovata*)
 Mockernut Hickory (*Carya tomentosa*)
 Bitternut Hickory (*Carya cordiformis*)
 Pignut Hickory (*Carya glabra*)
 Mockernut (*Carya alba*)
 Black Walnut (*Juglans nigra*)
 Butternut (*Juglans cinerea*)
 Smooth Alder (*Alnus rugosa*)
 Sweet Birch (*Betula lenta*)
 Yellow Birch (*Betula alleghaniensis*)
 River Birch (*Betula nigra*)
 Gray Birch (*Betula populifolia*)
 American Hazelnut (*Corylus americana*)
 Beaked Hazelnut (*Corylus cornuta*)
 American Chestnut (*Castanea dentata*)
 Beech (*Fagus grandifolia*)
 White Oak (*Quercus alba*)
 Scarlet Oak (*Quercus coccinea*)
 Scrub Oak (*Quercus ilicifolia*)
 Chestnut Oak (*Quercus prinus*)
 Red Oak (*Quercus rubra*)
 Blackjack Oak (*Quercus marilandica*)
 Black Oak (*Quercus velutina*)
 Tulip Tree (*Liriodendron tulipifera*)
 Sassafras (*Sassafras albidum*)
 Witch Hazel (*Hammelis virginiana*)
 American Mountain Ash (*Sorbus americana*)
 Shadbush (*Amelanchier intermedia arborea*)
 Fire Cherry (*Prunus pensylvanica*)
 Black Cherry (*Prunus serotina*)
 Choke Cherry (*Prunus virginiana*)
 Staghorn Sumac (*Rhus typhina*)
 Dwarf Sumac (*Rhus copallina*)
 Red Maple (*Acer rubrum*)
 Striped Maple (*Acer pensylvanicum*)
 Black Gum (*Nyssa sylvatica*)
 Alternate-leaved Dogwood (*Cornus alternifolia*)
 Flowering Dogwood (*Cornus florida*)
 Red-osier Dogwood (*Cornus stolonifera*)

Checklist of Plants at Hawk Mountain

continued ...

Persimmon (*Diospyros virginiana*)
 White Ash (*Fraxinus americana*)
 Northern Catalpa (*Catalpa speciosa*)

Shrubs

Sweet Fern (*Comptonia peregrina*)
 Multiflora Rose (*Rosa multiflora*)
 Black Raspberry (*Rubus occidentalis*)
 Spice Bush (*Lindera benzoin*)
 Wild Gooseberry (*Ribes cynosbati*)
 Frostweed (*Helianthemum canadense*)
 Poison Ivy (*Rhus radicans*)
 Red Chokeberry (*Aronia arbutifolia*)
 Juneberry (*Amelanchier canadensis*)
 Mountain Holly
 (*Ilex montana*)
 (*Ilex opaca*)
 (*Ilex verticillata*)
 (*Nemopanthus mucronata*)
 Bittersweet (*Celastrus scandens*)
 Virginia Creeper (*Parthenocissus quinquefolia*)
 Fox Grape (*Vitis labrusca*)
 Summer Grape (*Vitis aestivalis*)
 Frost Grape (*Vitis vulpina*)
 Autumn Olive (*Elaeagnus umbellata*)
 Huckleberry (*Gaylussacia baccata*)
 Lambkill (*Kalmia angustifolia*)
 Mountain Laurel (*Kalmia latifolia*)
 Rhododendron (*Rhododendron maximum*)
 Pinkster Flower (*Rhododendron nudiflorum*)
 High-bush Blueberry (*Vaccinium corymbosum*)
 Low-bush Blueberry (*Vaccinium angustifolium*)
 Partridge Berry (*Mitchella repens*)
 Tartarian Honeysuckle (*Lonicera tatarica*)
 Common Elderberry (*Sambucus canadensis*)
 Red Elderberry (*Sambucus racemosa*)
 Maple-leaved Viburnum (*Viburnum acerifolium*)
 Checkerberry (*Gaultheria procumbrens*)

Flowers of the Forest and Forest Edge

Jack-in-the-Pulpit (*Arisaema triphyllum*)
 Lily-of-the-Valley (*Convallaria majalis*)
 Day Lily (*Heimerocallis fulva*)
 Trout Lily (*Erythronium americanum*)
 Wild Lily-of-the-Valley (*Maianthemum canadense*)
 Indian Cucumber (*Medeola virginiana*)
 False Solomon's Seal (*Smilacina racemosa*)
 Great Solomon's Seal (*Polygonatum canaliculatum*)
 Greenbrier (*Smilax rotundifolia*)
 Cat-Brier (*Smilax glauca*)
 Carrion-flower (*Smilax herbacea*)
 Painted Trillium (*Trillium undulatum*)
 Pink Lady's Slipper (*Cypripedium acaule*)
 Yellow-fringed Orchis (*Habenaria ciliaris*)
 Ragged-fringed Orchis (*Habenaria lacera*)
 Showy Orchis (*Orchis spectabilis*)
 Downy Rattlesnake Plantain (*Goodyera pubescens*)
 Whorled Pogonia (*Isotria verticillata*)
 Lamb's Quarters (*Chenopodium album*)
 Pokeweed (*Phytolacca americana*)
 Spring Beauty (*Claytonia virginica*)
 Deptford Pink (*Dianthus armeria*)
 Starry Campion (*Silene stellata*)
 Bladder Campion (*Silene cacubalus*)
 Fire Pink (*Silene virginica*)
 Bugbane (*Cimicifuga racemosa*)
 Wild Columbine (*Aquilegia canadensis*)
 Hepatica (*Hepatica americana*)
 May Apple (*Podophyllum peltatum*)
 Bloodroot (*Sanguinaria canadensis*)
 Celandine (*Chelidonium majus*)
 Common Wintercress (*Barbarea vulgaris*)
 Round-leaved Sundew (*Drosera rotundifolia*)
 Common Cinquefoil (*Potentilla simplex*)
 Crown Vetch (*Coronilla varia*)
 Rabbit's-foot Clover (*Trifolium arvense*)
 Red Clover (*Trifolium pratense*)
 White Clover (*Trifolium repens*)
 Common Wood Sorrel (*Oxalis montana*)
 Yellow Wood Sorrel (*Oxalis europaea*)

Checklist of Plants at Hawk Mountain

continued ...

- Erect Wood Sorrel (*Oxalis stricta*)
 Fringed Polygala (*Polygala paucifolia*)
 Spotted Touch-Me-Not (*Impatiens capensis*)
 Pale Touch-Me-Not (*Impatiens pallida*)
 Northern Blue Violet (*Viola septentrionalis*)
 Sweet White Violet (*Viola blanda*)
 Downy Yellow Violet (*Viola pubescens*)
 Bristly Sarsaparilla (*Aralia hispida*)
 Dwarf Ginseng (*Panax trifolium*)
 Round-leaved Pyrola (*Pyrola rotundifolia*)
 Pipsissewa (*Chimaphila umbellata*)
 Spotted Wintergreen (*Chimaphila maculata*)
 Trailing Arbutus (*Epigaea repens*)
 Indian-Pipe (*Monotropa uniflora*)
 Pine-Sap (*Monotropa hypopithys*)
 Pimpemel (*Anagallis arvensis*)
 Whorled Loosetrife (*Lysimachia quadrifolia*)
 Starflower (*Trientalis borealis*)
 Butterfly-weed (*Asclepias tuberosa*)
 Common Milkweed (*Asclepias syriaca*)
 Swamp Milkweed (*Asclepias incarnata*)
 Viper's Bugloss (*Echium vulgare*)
 Gill-over-the-Ground (*Glechoma hederacea*)
- Basil Balm (*Monarda clinopodia*)
 Wild Bergamot (*Monarda fistulosa*)
 Selfheal (*Prunella vulgaris*)
 Common Mullein (*Verbascum thapsus*)
 Common Speedwell (*Veronica officinalis*)
 Squawroot (*Conopholis americana*)
 Venus' Looking-glass (*Specularia perfoliata*)
 Cardinal Flower (*Lobelia cardinalis*)
 Pearly Everlasting (*Anaphalis margaritacea*)
 Common Ragweed (*Ambrosia artemisiifolia*)
 Common Burdock (*Arctium minus*)
 Spotted Knapweed (*Centaurea maculosa*)
 Wild Lettuce (*Lactuca canadensis*)
 Wavy-leaved Aster (*Aster undulatus*)
 Large-leaved Aster (*Aster macrophyllus*)
 Sweet Joe-Pye Weed (*Eupatorium purpureum*)
 Trumpetweed (*Eupatorium fistulosum*)
 White Snakeroot (*Eupatorium rugosum*)
 Daisy Fleabane (*Erigeron annuus*)
 Woodland Sunflower (*Helianthus strumosus*)
 Bull Thistle (*Cirsium vulgare*)
 Canada Thistle (*Cirsium arvense*)
 Common Chicory (*Cichorium intybus*)
 Orange Hawkweed (*Hieracium aurantiacum*)
 Mouse-ear Hawkweed (*Hieracium pilosella*)
 Rattlesnake Weed (*Hieracium venosum*)
 Two-flowered Cynthia (*Krigia biflora*)
 Downy Goldenrod (*Solidago puberula*)

Checklist of Animals at Hawk Mountain

Mammals

Virginia Opossum (*Didelphis marsupialis*)
 Masked Shrew (*Sorex cinereus*)
 Smoky Shrew (*Sorex fumeus*)
 Pygmy Shrew (*Microsorex hoyi*)
 Northern Short-tailed Shrew (*Blarina brevicauda*)
 Eastern Pipistrel (*Pipistrellus subflavus*)
 Little Brown Myotis (*Myotis lucifugus*)
 Big Brown Bat (*Eptesicus fuscus*)
 Red Bat (*Lasiurus borealis*)
 Black Bear (*Ursus americanus*)
 Raccoon (*Procyon lotor*)
 Long-tailed Weasel (*Mustela frenata*)
 Mink (*Mustela vison*)
 Striped Skunk (*Mephitis mephitis*)
 Coyote (*Canis latrans*)
 Gray Fox (*Urocyon cinereoargenteus*)
 Red Fox (*Vulpes fulva*)
 Bobcat (*Lynx rufus*)
 Woodchuck (*Marmota monax*)
 Eastern Chipmunk (*Tamias striatus*)
 Eastern Gray Squirrel (*Sciurus carolinensis*)
 Eastern Fox Squirrel (*Sciurus niger*)
 Red Squirrel (*Tamiasciurus hudsonicus*)
 Southern Flying Squirrel (*Glaucomys volans*)
 Beaver (*Castor canadensis*)
 Allegheny Woodrat (*Neotoma alleghiensis*)
 White-footed Mouse (*Peromyscus leucopus*)
 Redback Vole (*Clethrionomys gapperi*)
 Meadow Vole (*Microtus pennsylvanicus*)
 Pine Vole (*Pitymys pinetorum*)
 Woodland Jumping Mouse (*Napaeozapus insignis*)
 Porcupine (*Erethizon dorsatum*)
 Eastern Cottontail (*Sylvilagus floridanus*)
 Virginia Whitetail Deer (*Odocoileus virginianus*)

Reptiles and Amphibians

Snapping Turtle (*Chelydra serpentina*)
 Spotted Turtle (*Clemmys guttata*)
 Wood Turtle (*Clemmys insculpta*)
 Eastern Box Turtle (*Terrapene carolina carolina*)
 Midland Painted Turtle (*Chrysemys picta marginata*)
 Northern Water Snake (*Natrix sipedon*)
 Northern Brown Snake (*Storeria dekayi*)
 Northern Redbelly Snake (*Storeria occipitomaculata*)
 Eastern Garter Snake (*Thamnophis sirtalis*)
 Eastern Hognose Snake (*Heterodon platyrhinos*)
 Northern Ringneck Snake (*Diadophis punctatus*)
 Northern Black Racer (*Coluber constrictor*)
 Smooth Green Snake (*Opheodrys vernalis*)
 Black Rat Snake (*Elaphe obsoleta*)
 Eastern Milk Snake (*Lampropeltis triangulum*)
 Northern Copperhead (*Agkistrodon contortrix*)
 Timber Rattlesnake (*Crotalus horridus*)
 Five-lined Skink (*Eumeces fasciatus*)
 Spotted Salamander (*Ambystoma maculatum*)
 Marbled Salamander (*Ambystoma opacum*)
 Long-tailed Salamander (*Eurycea longicauda*)
 Red-spotted Newt (*Notophthalmus viridescens*)
 Northern Dusky Salamander (*Desmognathus fuscus*)
 Red-backed Salamander (*Plethodon cinereus cinereus*)
 Slimy Salamander (*Plethodon glutinosus*)
 Spring Salamander (*Gyrinophilus porphyriticus*)
 Northern Red Salamander (*Pseudotriton ruber*)
 Northern Two-lined Salamander (*Eurycea bislineata*)
 American Toad (*Bufo americanus*)
 Northern Cricket Frog (*Acris crepitans*)
 Spring Peeper (*Hyla crucifer*)
 Gray Treefrog (*Hyla versicolor*)
 Bullfrog (*Rana catesbiana*)
 Green Frog (*Rana clamitans melanota*)
 Pickerel Frog (*Rana palustris*)
 Wood Frog (*Rana sylvatica*)

Checklist of Animals at Hawk Mountain

continued ...

Birds

- Red-throated Loon (*Gavia stellata*)
 Common Loon (*Gavia immer*)
 Red-necked Grebe (*Podiceps grisegena*)
 Horned Grebe (*Podiceps auritus*)
 Double-crested Cormorant (*Phalacrocorax auritus*)
 American Bittern (*Botaurus lentiginosus*)
 Great Blue Heron (*Ardea herodias*)
 Great Egret (*Casmerodius albus*)
 Snowy Egret (*Egretta thula*)
 Tricolored Heron (*Egretta tricolor*)
 Green-backed Heron (*Butorides striatus*)
 Black-crowned Night-Heron (*Nycticorax nycticorax*)
 Yellow-crowned Night-Heron (*Nyctanassa violacea*)
 Glossy Ibis (*Plegadis falcinellus*)
 White Ibis (*Eudocimus albus*)
 Tundra Swan (*Cygnus columbianus*)
 Mute Swan (*Cygnus olor*)
 Snow Goose (*Chen caerulescens*)
 Canada Goose (*Branta canadensis*)
 Brant (*Branta bernicla*)
 Wood Duck (*Aix sponsa*)
 Mallard (*Anas platyrhynchos*)
 American Black Duck (*Anas rubripes*)
 Northern Pintail (*Anas acuta*)
 Green-winged Teal (*Anas crecca*)
 Blue-winged Teal (*Anas discors*)
 American Wigeon (*Anas americana*)
 Redhead (*Aythya americana*)
 Canvasback (*Aythya valisineria*)
 Lesser Scaup (*Aythya affinis*)
 Bufflehead (*Bucephala albeola*)
 Oldsquaw (*Clangula hyemalis*)
 White-winged Scoter (*Melanitta fusca*)
 Black Scoter (*Melanitta nigra*)
 Red-breasted Merganser (*Mergus serrator*)
 Common Merganser (*Mergus merganser*)
 Black Vulture (*Coragyps atratus*)
 Turkey Vulture (*Cathartes aura*)
 Osprey (*Pandion haliaetus*)
 Bald Eagle (*Haliaeetus leucocephalus*)
 Northern Harrier (*Circus cyaneus*)
 Sharp-shinned Hawk (*Accipiter striatus*)
 Cooper's Hawk (*Accipiter cooperii*)
 Northern Goshawk (*Accipiter gentilis*)
 Red-shouldered Hawk (*Buteo lineatus*)
 Broad-winged Hawk (*Buteo platypterus*)
 Swainson's Hawk (*Buteo swainsoni*)
 Red-tailed Hawk (*Buteo jamaicensis*)
 Rough-legged Hawk (*Buteo lagopus*)
 Golden Eagle (*Aquila chrysaetos*)
 American Kestrel (*Falco sparverius*)
 Merlin (*Falco columbarius*)
 Peregrine Falcon (*Falco peregrinus*)
 Gyrfalcon (*Falco rusticolus*)
 Ring-necked Pheasant (*Phasianus colchicus*)
 Ruffed Grouse (*Bonasa umbellus*)
 Wild Turkey (*Meleagris gallopavo*)
 Northern Bobwhite (*Colinus virginianus*)
 Virginia Rail (*Rallus limicola*)
 Sora (*Porzana carolina*)
 American Coot (*Fulica americana*)
 Sandhill Crane (*Grus canadensis*)
 Black-bellied Plover (*Pluvialis squatarola*)
 Lesser Golden Plover (*Pluvialis dominica*)
 Killdeer (*Charadrius vociferus*)
 American Avocet (*Recurvirostra americana*)
 Greater Yellowlegs (*Tringa melanoleuca*)
 Lesser Yellowlegs (*Tringa flavipes*)
 Solitary Sandpiper (*Tringa solitaria*)
 Willet (*Catoptrophorus semipalmatus*)
 Upland Sandpiper (*Bartramia longicauda*)
 Spotted Sandpiper (*Actitis macularia*)
 Ruddy Turnstone (*Arenaria interpres*)
 Semipalmated Sandpiper (*Calidris pusilla*)
 Least Sandpiper (*Calidris minutilla*)
 Pectoral Sandpiper (*Calidris melanotos*)
 Dunlin (*Calidris alpina*)
 Long-billed Dowitcher (*Limnodromus scolopaceus*)
 Common Snipe (*Gallinago gallinago*)
 American Woodcock (*Scolopax minor*)
 Bonaparte's Gull (*Larus philadelphia*)

Checklist of Animals at Hawk Mountain

continued ...

- Ring-billed Gull (*Larus delawarensis*)
 Herring Gull (*Larus argentatus*)
 Great Black-backed Gull (*Larus marinus*)
 Lesser Black-backed Gull (*Larus fuscus*)
 Sabine's Gull (*Xema sabini*)
 Common Tern (*Sterna hirundo*)
 Rock Dove (*Columba livia*)
 Mourning Dove (*Zenaida macroura*)
 Black-billed Cuckoo (*Coccyzus erythrophthalmus*)
 Yellow-billed Cuckoo (*Coccyzus americanus*)
 Common Barn Owl (*Tyto alba*)
 Eastern Screech-Owl (*Otus asio*)
 Great Horned Owl (*Bubo virginianus*)
 Barred Owl (*Strix varia*)
 Long-eared Owl (*Asio otus*)
 Short-eared Owl (*Asio flammeus*)
 Northern Saw-whet Owl (*Aegolius acadicus*)
 Common Nighthawk (*Chordeiles minor*)
 Whip-poor-will (*Caprimulgus vociferus*)
 Chuck-will's-widow (*Caprimulgus carolinensis*)
 Chimney Swift (*Chaetura pelagica*)
 Ruby-throated Hummingbird (*Archilochus colubris*)
 Belted Kingfisher (*Ceryle alcyon*)
 Red-headed Woodpecker (*Melanerpes erythrocephalus*)
 Red-bellied Woodpecker (*Melanerpes carolinus*)
 Yellow-bellied Sapsucker (*Sphyrapicus varius*)
 Downy Woodpecker (*Picoides pubescens*)
 Hairy Woodpecker (*Picoides villosus*)
 Black-backed Woodpecker (*Picoides arcticus*)
 Northern Flicker (*Colaptes auratus*)
 Pileated Woodpecker (*Dryocopus pileatus*)
 Olive-sided Flycatcher (*Contopus borealis*)
 Eastern Wood-Pewee (*Contopus virens*)
 Yellow-bellied Flycatcher (*Empidonax flaviventris*)
 Acadian Flycatcher (*Empidonax virescens*)
 Alder Flycatcher (*Empidonax alnorum*)
 Least Flycatcher (*Empidonax minimus*)
 Eastern Phoebe (*Sayornis phoebe*)
 Great-crested Flycatcher (*Myiarchus crinitus*)
 Eastern Kingbird (*Tyrannus tyrannus*)
 Horned Lark (*Eremophila alpestris*)
 Purple Martin (*Progne subis*)
 Tree Swallow (*Tachycineta bicolor*)
 Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
 Bank Swallow (*Riparia riparia*)
 Cliff Swallow (*Hirundo pyrrhonata*)
 Barn Swallow (*Hirundo rustica*)
 Blue Jay (*Cyanocitta cristata*)
 American Crow (*Corvus brachyrhynchos*)
 Fish Crow (*Corvus ossifragus*)
 Common Raven (*Corvus corax*)
 Black-capped Chickadee (*Parus atricapillus*)
 Carolina Chickadee (*Parus carolinensis*)
 Boreal Chickadee (*Parus hudsonicus*)
 Tufted Titmouse (*Parus bicolor*)
 Red-breasted Nuthatch (*Sitta canadensis*)
 White-breasted Nuthatch (*Sitta carolinensis*)
 Brown Creeper (*Certhia americana*)
 Carolina Wren (*Thryothorus ludovicianus*)
 Bewick's Wren (*Thryomanes bewickii*)
 House Wren (*Troglodytes aedon*)
 Winter Wren (*Troglodytes troglodytes*)
 Marsh Wren (*Cistothorus palustris*)
 Golden-crowned Kinglet (*Regulus satrapa*)
 Ruby-crowned Kinglet (*Regulus calendula*)
 Blue-gray Gnatcatcher (*Polioptila caerulea*)
 Eastern Bluebird (*Sialia sialis*)
 Townsend's Solitaire (*Myadestes townsendi*)
 Veery (*Catharus fuscescens*)
 Gray-cheeked Thrush (*Catharus minimus*)
 Swainson's Thrush (*Catharus ustulatus*)
 Hermit Thrush (*Catharus guttatus*)
 Wood Thrush (*Hylocichla mustelina*)
 American Robin (*Turdus migratorius*)
 Gray Catbird (*Dumetella carolinensis*)
 Northern Mockingbird (*Mimus polyglottos*)
 Brown Thrasher (*Toxostoma rufum*)
 Water Pipit (*Anthus rubescens*)
 Bohemian Waxwing (*Bombycilla garrulus*)
 Cedar Waxwing (*Bombycilla cedrorum*)
 Northern Shrike (*Lanius excubitor*)
 European Starling (*Sturnus vulgaris*)

Checklist of Animals at Hawk Mountain

continued ...

- White-eyed Vireo (*Vireo griseus*)
 Solitary Vireo (*Vireo solitarius*)
 Yellow-throated Vireo (*Vireo flavifrons*)
 Warbling Vireo (*Vireo gilvus*)
 Philadelphia Vireo (*Vireo philadelphicus*)
 Red-eyed Vireo (*Vireo olivaceus*)
 Blue-winged Warbler (*Vermivora pinus*)
 Golden-winged Warbler (*Vermivora chrysoptera*)
 Tennessee Warbler (*Vermivora peregrina*)
 Orange-crowned Warbler (*Vermivora celata*)
 Nashville Warbler (*Vermivora ruficapilla*)
 Northern Parula (*Parula americana*)
 Yellow Warbler (*Dendroica petechia*)
 Chestnut-sided Warbler (*Dendroica pensylvanica*)
 Magnolia Warbler (*Dendroica magnolia*)
 Cape May Warbler (*Dendroica tigrina*)
 Black-throated Blue Warbler (*Dendroica caerulescens*)
 Yellow-rumped Warbler (*Dendroica coronata*)
 Black-throated Green Warbler (*Dendroica nigrescens*)
 Blackburnian Warbler (*Dendroica fusca*)
 Yellow-throated Warbler (*Dendroica dominica*)
 Pine Warbler (*Dendroica pinus*)
 Prairie Warbler (*Dendroica discolor*)
 Palm Warbler (*Dendroica palmarum*)
 Bay-breasted Warbler (*Dendroica castanea*)
 Blackpoll Warbler (*Dendroica striata*)
 Cerulean Warbler (*Dendroica cerulea*)
 Black-and-white Warbler (*Mniotilta varia*)
 American Redstart (*Setophago ruticilla*)
 Prothonotary Warbler (*Protonotaria citrea*)
 Worm-eating Warbler (*Helmitheros vermivorus*)
 Ovenbird (*Seiurus aurocapillus*)
 Northern Waterthrush (*Seiurus noveboracensis*)
 Louisiana Waterthrush (*Seiurus motacilla*)
 Kentucky Warbler (*Oporornis formosus*)
 Connecticut Warbler (*Oporornis agilis*)
 Mourning Warbler (*Oporornis philadelphia*)
 Common Yellowthroat (*Geothlypis trichas*)
 Hooded Warbler (*Wilsonia citrina*)
 Wilson's Warbler (*Wilsonia pusilla*)
 Canada Warbler (*Wilsonia canadensis*)
 Yellow-breasted Chat (*Icteria virens*)
 Summer Tanager (*Piranga rubra*)
 Scarlet Tanager (*Piranga olivacea*)
 Northern Cardinal (*Cardinalis cardinalis*)
 Rose-breasted Grosbeak (*Pheucticus ludovicianus*)
 Blue Grosbeak (*Guiraca caerulea*)
 Indigo Bunting (*Passerina cyanea*)
 Dickcissel (*Spiza americana*)
 Rufous-sided Towhee (*Pipilo erythrophthalmus*)
 American Tree Sparrow (*Spizella arborea*)
 Chipping Sparrow (*Spizella passerina*)
 Field Sparrow (*Spizella pusilla*)
 Vesper Sparrow (*Pooecetes gramineus*)
 Savannah Sparrow (*Passerculus sandwichensis*)
 Grasshopper Sparrow (*Ammodramus savannarum*)
 Henslow's Sparrow (*Ammodramus henslowii*)
 Fox Sparrow (*Passerella iliaca*)
 Song Sparrow (*Melospiza melodia*)
 Lincoln's Sparrow (*Melospiza lincolni*)
 Swamp Sparrow (*Melospiza georgiana*)
 White-throated Sparrow (*Zonotrichia albicollis*)
 White-crowned Sparrow (*Zonotrichia leucophrys*)
 Dark-eyed Junco (*Junco hyemalis*)
 Lapland Longspur (*Calcarius lapponicus*)
 Snow Bunting (*Plectrophenax nivalis*)
 Bobolink (*Dolichonyx oryzivorus*)
 Red-winged Blackbird (*Agelaius phoeniceus*)
 Eastern Meadowlark (*Sturnella magna*)
 Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)
 Rusty Blackbird (*Euphagus carolinus*)
 Brewer's Blackbird (*Euphagus cyanocephalus*)
 Common Grackle (*Quiscalus quiscula*)
 Brown-headed Cowbird (*Molothrus ater*)
 Orchard Oriole (*Icterus spurius*)
 Northern "Baltimore" Oriole (*Icterus galbula*)
 Pine Grosbeak (*Pinicola enucleator*)
 Purple Finch (*Carpodacus purpureus*)
 House Finch (*Carpodacus mexicanus*)
 Red Crossbill (*Loxia curvirostra*)
 White-winged Crossbill (*Loxia leucoptera*)
 Common Redpoll (*Carduelis flammea*)

Checklist of Animals at Hawk Mountain

continued ...

Hoary Redpoll (*Carduelis homemanni*)
Pine Siskin (*Carduelis pinus*)
American Goldfinch (*Carduelis tristis*)
Evening Grosbeak (*Coccothraustes vespertinus*)
House Sparrow (*Passer domesticus*)

What To Do With Injured Wildlife

(1) Think *safety* first!! Do not attempt to rescue or help injured wildlife if it jeopardizes your own well being. Some wildlife can transmit life-threatening diseases, cause serious pain, or infection. Environmental conditions may be such that rescue is not safe. For example, a busy interstate may not be the best setting for rescuing injured wildlife. As in any emergency situations, survey your scene and know your options and risks before you proceed.

(2) Be aware that by helping injured wildlife you may be in violation of state and federal laws. The possession of most birds and some mammals and endangered wildlife is illegal in many situations, even for a short period of time. Questions concerning wildlife laws should be directed to the Pennsylvania Game Commission and/or the United States Fish & Wildlife Service.

(3) Wildlife in your possession should be referred and transferred to trained professionals as soon as possible. These professionals include licensed wildlife rehabilitators, veterinarians, and regional Wildlife Conservation Officers (Pennsylvania Game Commission).

(4) Not all wildlife is in need of help. Be sure your attempts to help wildlife are warranted. For example, many young birds leave the nest before they are able to fly. The parents continue to care for the bird away from the nest. Young mammals, such as rabbits, may appear to be abandoned by their parents, however the parents are probably very close by and still caring for their young. Often in these situations no help is needed. Also, many wild animals die from

natural selection. These dead animals are an integral part of the food web and are valuable sources of food for other wildlife.

(5) Whenever possible, contact a professional wildlife rehabilitator before capturing or transporting wildlife. **The professional will be able to help you assess the situation and determine the best method of transfer and capture.**

(6) Contact your regional office of the Pennsylvania Game Commission for a list of wildlife rehabilitators or for advice on what to do with injured wildlife. **With a little forethought you can be prepared to help injured wildlife.** Contact a rehabilitator or two close to your home and open up a line of communication with him or her. By doing so, you can **establish a plan** for getting injured wildlife to them quickly and safely. A list of regional toll-free numbers and addresses for the Pennsylvania Game Commission are listed below.

Injured Wildlife Referral Numbers

Pennsylvania Game Commission Regional Offices

Southeast Region: Berks, Bucks, Chester, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill, and York counties.

448 Snyder Rd.
Reading, Pa 19605
1-610-926-3136

What To Do With Injured Wildlife

continued ...

Northeast Region: Bradford, Carbon, Columbia, Lackawanna, Luzerne, Monroe, Montour, Northumberland, Pike, Sullivan, Susquehanna, Wayne, and Wyoming counties.

P.O. Box 220
Dallas, PA 18612-0220
1-570-675-1143

Southcentral Region: Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin, Perry, and Snyder counties.

8627 William Penn Highway
Huntingdon, PA 16652
1-814-643-1831

Northcentral Region: Cameron, Centre, Clearfield, Clinton, Elk, Lycoming, Mckean, Potter, Tioga, and Union counties.

P.O. Box 5038
Jersey Shore, PA 17740
1-570-398-4744

Southwest Region: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, and Westmorland counties.

4820 Route 711
Bolivar, PA 15923
1-724-238-9523

Northwest Region: Butler, Clarion, Crawford, Erie, Forest, Jefferson, Lawrence, Mercer, Venango, and Warren counties.

P.O. Box 31
Franklin, PA 16323
1-814-432-3187

Other Contact Numbers and Rehabilitators. Listed by County.

A complete list of certified wildlife rehabilitators in your area can be found at: www.pawr.com

Berks County:

Berks Mobile Veterinary Service, Temple
Carol Yeisley
610-929-1035

Bucks County:

AARK Wildlife Rehab. & Ed. Ctr., Doylestown
Mary Jane Stretch
215-968-4963

Carbon County:

Carbon County Envir. Educ. Ctr., Jim Thorpe
Susan Gallagher
570-929-3084

Lehigh County:

Lehigh Wild Care, Emmaus
Teresa Stevenson
610-966-1855

Poole Wildlife Sanctuary, Emmaus
Karen Haase
610-966-4745

Monroe County:

Pocono Wildlife Rehab. Center
Kathy Dubin-Uhler
570-402-0223

Montgomery County:

White Flicker Wild Bird Rehab. Center
Miriam Moyer
215-643-1263

What To Do With Injured Wildlife

Northampton County:

PA Raptor & Wildlife, Mt. Bethel
Hope Anwyll
570-897-6659

Schuylkill County:

Helping Hands Wildlife Center
Lynn Dierwechter
570-385-1887

Red Creek Wildlife Center*, Schuylkill Haven
Peggy Sue Hentz
717-739-4393
www.redcreekwildlifecenter.com

*Closest distance Hawk Mountain Sanctuary

Veterinarians that may be of assistance:

Berks County:

Kutztown Animal and Bird Hospital,
Kutztown
610-683-5353

Schuylkill County:

Mountain Shadow Vet., Schuylkill Haven
570-739-4VET

St. Francis Animal Hospital, Tamaqua
570-386-5313

Notes and Sketches



FIELD-TRIP NOTEBOOK

Name: _____

School: _____

Teacher: _____

Grade: _____

Date of visit: _____

Approximate temperature: _____

Below, circle the words that best describe the weather conditions on the day of your visit to Hawk Mountain.

sky cover: clear partly cloudy cloudy

precipitation: none drizzle heavy rain fog snow

wind direction: N NE E SE S SW W NW

wind speed: none slight breezy windy

Write a description of the forest habitat and terrain at Hawk Mountain. Include the names of some of the rocks, plants, and animals that you saw or might expect to see there.

Before Hawk Mountain was a sanctuary, people went there to:

Now, thousands of people visit Hawk Mountain each year. List reasons why people visit Hawk Mountain today:

Are birds of prey protected by law today? _____

Why or why not?

Name two endangered species that can be seen migrating over Hawk Mountain:


1. _____

2. _____

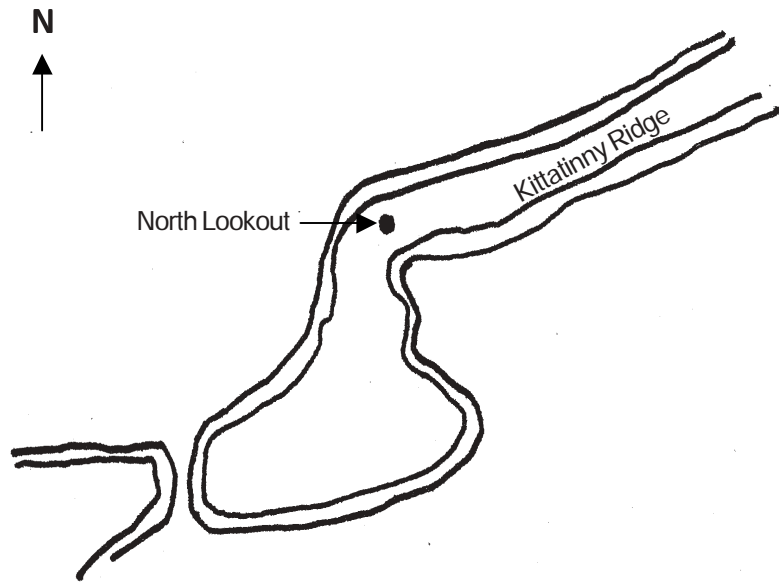
Where does Hawk Mountain Sanctuary get its funds (money) to operate?

On the map below, do the following:

Draw arrows  to indicate north-westerly winds.

Draw swirls  to indicate where most thermals form at Hawk Mountain.

Draw a dotted line - - - - - to indicate the usual flight path of hawks on days with northwesterly winds.



Signs of Spring

Spring is a wonderful time of the year to be out-of-doors and on a field trip to Hawk Mountain Sanctuary. Stop and take a good, long look around you. Be quiet and listen. Take a deep breath and smell — if you weren't able look at a calendar, how would you know that it was spring? What are some of the signs of spring?

Use your senses to see, hear, and smell the signs of spring. In the space below, describe what each of your senses is telling you.

Sight:

Hearing:

Smell:

Tree Check List

During your field trip, we will try to find about 10 species of trees discussed in the pre-visit packet. The 10 species are listed below. Check off each of the species that we find, and in the space beside it, write one special thing that you learned or observed about the tree.

Tree Species	Notes
___ Northern Red Oak	_____
___ White Oak	_____
___ Chestnut Oak	_____
___ American Chestnut	_____
___ Red Maple	_____
___ Tuliptree	_____
___ Sassafras	_____
___ Eastern Hemlock	_____
___ Pitch Pine	_____
___ White Pine	_____

Were there any other tree species (besides the above 10) that were pointed out to you or that you recognized? List them here.

List several characteristics of each type of bird of prey below:

Type of raptor

Characteristics:

Accipiter

Falcon

Buteo

Record the total number of raptors that have been counted at Hawk Mountain so far this fall: _____

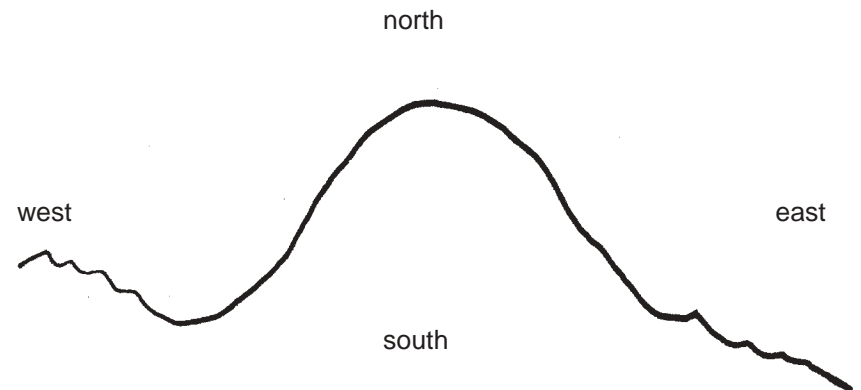
Name the species of raptor that is the most common migrant during the month of....

September: _____

October: _____

November: _____

On the diagram below, draw an arrow depicting an updraft created by wind coming from the west. How does the hawk stay aloft?



Fall

Checklist:

- ___ red-tailed hawk
- ___ broad-winged hawk
- ___ red-shouldered hawk
- ___ rough-legged hawk
- ___ golden eagle
- ___ bald eagle
- ___ osprey
- ___ northern harrier
- ___ sharp-shinned hawk
- ___ Cooper's hawk
- ___ goshawk
- ___ American kestrel
- ___ merlin
- ___ peregrine falcon
- ___ turkey vulture
- ___ black vulture

Name the kind of raptor represented by each silhouette below. Using your field guide and what you learned at Hawk Mountain, place the raptors you observe into one of these groups. If you see raptors that don't fit into these groups, list them below.



Field Sketches of Trees

Choose from our list of 10 trees, one broadleaf tree and one conifer to identify and sketch. Draw in the appropriate spaces below: 1) a sketch of the overall tree shape, and 2) a close-up sketch of the leaves or needles. Briefly describe what type of habitat each tree was found in.

Name of broadleaf tree:

Habitat:

Sketch of tree:

Sketch of leaves:

Name of conifer:

Habitat:

Sketch of tree:

Sketch of needles:

