National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: <u>Hawk Mountain Sanctuary District</u> Other names/site number: <u>Hawk Mountain</u> Name of related multiple property listing: <u>N/A</u>

2. Location

Street & number: 1700 Hawk Mountain RoadCity or town: Albany; East Brunswick; West BrunswickState: PennsylvaniaCounty: Berks;SchuylkillNot For Publication: NAVicinity: NA

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this \underline{X} nomination _____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property \underline{X} meets <u>does</u> does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X_national __statewide __local Applicable National Register Criteria: X_A X_B __C __D

	2/22/2022
Signature of certifying official Deputy State Historic Preservation Office	er Date
Deputy SHPO/Pennsylvania Historical & Museum Commission	on
Title/State or Federal agency/bureau or Tribal Government	
my opinion, the property meets does not meet the N	ational Register criteria.

4. National Park Service Certification

I hereby certify that this property is:

- \underline{X} entered in the National Register
- ____ determined eligible for the National Register
- ____ determined not eligible for the National Register
- ____ removed from the National Register

other (explain:)

Lisa Deline

Signature of the Keeper

4/8/2022

United States Department of the Interior National Park Service / National Register of Historic Places Registration Form NPS Form 10-900 OMB No. 1024-0018

Hawk Mountain Sanctuary

Name of Property

Berks and Schuylkill Counties, PA County and State

5. Classification

Ownership of Property

Private:	Х
Public – Local	
Public – State	
Public – Federal	
Category of Property	

Building(s)	
District	Х
Site	
Structure	
Object	

Number of Resources within Property

Contributing	Noncontribut	ing
<u>5</u>	<u>1</u>	buildings
<u>9</u>	<u>1</u>	sites
<u>8</u>	<u>7</u>	structures
<u>1</u>	<u>0</u>	objects
<u>23</u>	<u>9</u>	Total

Number of contributing resources previously listed in the National Register: <u>1 (Schaumboch's Tavern,</u> <u>listed 1979; NRIS # 79002166)</u> United States Department of the Interior National Park Service / National Register of Historic Places Registration Form NPS Form 10-900 OMB No. 1024-0018

Hawk Mountain Sanctuary Name of Property Berks and Schuylkill Counties, PA County and State

6. Function or Use

Historic Functions

INDUSTRY/extractive facility RECREATION AND CULTURE/outdoor recreation TRANSPORTATION/road-related (vehicular) LANDSCAPE/natural feature LANDSCAPE/conservation area DOMESTIC/single dwelling DOMESTIC/camp EDUCATION/research facility

Current Functions

RECREATION AND CULTURE/outdoor recreation TRANSPORTATION/road-related (vehicular) LANDSCAPE/natural feature LANDSCAPE/conservation area LANDSCAPE/park LANDSCAPE/garden DOMESTIC/camp EDUCATION/research facility

7. Description

Architectural Classification

EARLY REPUBLIC/Other: Vernacular MODERN MOVEMENT MODERN MOVEMENT/Other: Contemporary

Principal exterior materials of the property: Wood, brick, stone, earth, metal, glass

Berks and Schuylkill Counties, PA County and State

Narrative Description

Summary Paragraph

Hawk Mountain Sanctuary is a 2,600-acre forested conservation area in eastern Pennsylvania run by a private non-profit organization for ornithological education and research (Figure 1). The Sanctuary is situated on the Kittatinny Ridge, a northeast-southwest ridge of the Blue Mountain that runs from the Delaware Water Gap in eastern Pennsylvania and western New Jersey to Franklin County's Maryland border in south-central Pennsylvania and forms the southern edge of the Appalachian Mountains in Pennsylvania. The ridge is on one of the world's largest migratory flyways for raptors and other bird species. The Sanctuary is primarily in eastern Albany Township, Berks County, but contains some land immediately to the north in Schuylkill County. Development of the Sanctuary began in 1934 when Rosalie Barrow Edge (1877–1962) leased approximately 1,400 acres for the purpose of creating a refuge dedicated to the protection of raptors. The Sanctuary now includes five main hiking trails and several secondary trails that cover more than 8 miles and lead to ten scenic overlooks, a visitor center, an education center, two campgrounds available to Sanctuary members and educational groups, an internationally recognized research center, and staff residences. The National Register district boundary corresponds to the Sanctuary boundary as of 1987 (the end of the period of significance defined in this documentation) and encompasses the original 1934 acreage and all subsequent land acquisitions through 1987 for a total of 2,067 acres. The district boundary does not include parcels at the northwest, southwest, and east edges of the Sanctuary that were acquired after 1987. It also excludes the Acopian Center for Conservation Learning, the Sanctuary's biological field station and training facility established in 2002 on a discontiguous 65.8-acre property at the base of the mountain 1.75 miles west of the Hawk Mountain



Figure 1. Location of Hawk Mountain Sanctuary (green star) in Pennsylvania (https://gisgeography.com/pennsylvania-map/).

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Visitor Center.¹ The district contains 23 contributing resources built or repurposed by the Hawk Mountain Sanctuary Association (HMSA) between 1934 and 1987 (5 buildings, 9 sites, 8 structures, and 1 object) and 9 non-contributing resources built after 1987.² Small-scale landscape features, including most trail signage and furniture, are not counted separately, and counted objects are limited to those designed for and associated with a specific location in the Sanctuary. The contributing resources include the late eighteenth-century Schaumboch's Tavern on Hawk Mountain Road; remnants of nineteenth-century industrial activity on the mountain; the earliest routes to the summit and raptor viewing overlooks; and mid-twentieth-century visitor facilities. Schaumboch's Tavern was individually listed in the National Register on November 20, 1979, for its local architectural significance.

Narrative Description

Setting

Hawk Mountain Sanctuary occupies 2,600 acres of primarily forested land within more than 15,000 acres of contiguous forest along the ridge of the Blue Mountain (**Figure 2**). Heavily forested State Game Lands abut the northeast and south edges of the Sanctuary. The forests transition to agriculture and residential development in the valleys and lowlands to the north, east, and west. The Appalachian National Scenic Trail (commonly known as the Appalachian Trail, or A.T.) runs through a 1.5-mile corridor of National Park Service land parallel to the Sanctuary's eastern boundary. Elevations in the Appalachian Mountain region that includes Hawk Mountain vary from 200 feet to 1,800 feet. The higher ridges and steeper slopes in the north part of the Sanctuary drain into the Little Schuylkill River, which runs along segments of the northwestern boundary. Streams on the slopes in the east-central sections of the Sanctuary feed into Pine Creek, which drains into Maiden Creek in Berks County. The mountainous terrain is rocky, with small boulders, large stones, and outcroppings of exposed bedrock and large boulders. The nearest large community is the Borough of Hamburg, along Interstate 78 five miles south of the Sanctuary, which had a population of about 4,300 in 2010. Access to the Sanctuary is via Hawk Mountain Road, which runs east-west through the lower third of the sanctuary between the unincorporated communities of Eckville (Berks County) and Drehersville (Schuylkill County).

Resource Descriptions

The Sanctuary trails and overlooks are north of Hawk Mountain Road in the central-east section of the property, and staff and visitor facilities are along both sides of Hawk Mountain Road near the center of the property. The remainder of the property consists of protected conservation land that is not open to public access except for approved research and monitoring, forest management, or permitted seasonal deer hunting. The property is almost entirely forested, except clearings around the visitor and education centers and some areas of open rock scree terrain on the mountain slopes. The forest cover is dominated by oak species with some maple, hickory, tulip tree (yellow poplar), birch, and pine and some conifer areas. Rough outcrops and angular blocks of hard quartz sandstone dominate the ridgelines and form

¹ Sanctuary resources and land currently excluded from the boundary may be appropriate for inclusion in a boundary increase in the future, if the period of significance were to be expanded.

² Potential eligibility for resources associated with Native American use of the outlooks or other portions of the Sanctuary was not assessed as part of this nomination, as they pre-date the limited period focused on here, and will require separate consideration for independent areas of significance.

Hawk Mountain Sanctuary

Berks and Schuylkill Counties, PA County and State

Name of Property

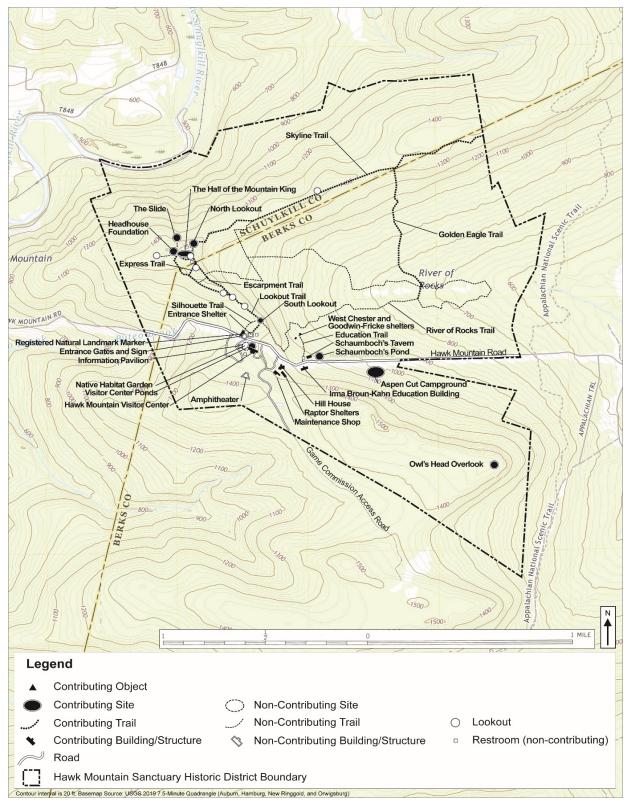


Figure 2. Hawk Mountain Sanctuary Historic District Site Plan.

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natural scenic overlooks. The River of Rocks on the east slope of the mountain in the east-central section of the Sanctuary is a natural geologic formation of concentrated loose rocks that is devoid of vegetation. It consists of three patches of open boulder fields that extend about 1 mile and cover about 300 feet in width.

The average elevation within the Sanctuary is 1,025 feet above sea level, and elevations within the Sanctuary range from approximately 500 feet on Hawk Mountain Road at the west boundary to slightly more than 1,500 feet at Sunset, Owls Head, and North lookouts (**Photograph 1**). The terrain varies from



Photograph 1. Hawk Mountain Sanctuary from Acopian Center.

relatively flat and rolling in the central and east-central sections and along the ridgetops to moderate and very steep in the northern and western sections. Overlooks and lookouts along the Sanctuary trails provide sweeping views of Blue Mountain and Great Valley that are maintained with annual pruning.

Soils within the Sanctuary are stony with moderate slopes and areas of rubble and are not generally suitable for cultivation. The largest stream on the property is Kettle Creek, which drains into the River of Rocks and then flows southeast into Pine Creek. An unnamed intermittent stream originates near the visitor center parking area and parallels the south side of Hawk Mountain Road in the western part of the Sanctuary. The Sanctuary also includes at least eight vernal pools fed by seeps and springs. The Cobble, a natural overlook in the southwest part of the Sanctuary, supports rare moss and lichen species and is open only to researchers.

The primary vehicular circulation route through the Sanctuary is Hawk Mountain Road (**Photograph 2**), which provides access to the visitor and education centers and to the trail system. 1.75 miles of the road are within the National Register district boundary. The two-lane, asphalt-paved road follows a route that existed by the late eighteenth century and was widened and realigned by the Pennsylvania Department of Highways in 1949. Secondary vehicular roads include the Game Commission Access Road, a two-lane

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dirt access road that leads from the south end of the visitor center parking area to the southern ridgetop forest and Owl's Head Overlook, as well as the State Game Lands south of the Sanctuary.



Photograph 2. Hawk Mountain Road and Schaumboch's Tavern.



Photograph 3. Entrance Gate.

The Entrance Gates and Sign (2015, non-contributing structure, Photograph 3) mark the entrances to the trail system and the visitor center from Hawk Mountain Road. The gates are identical, paired wood post-and-beam structures that flank the trail entrance on the north side of the road and a path to the visitor center on the south side of the road. The gates were designed to resemble and stand at the same location as a simple post-and-beam structure built to mark the trail entrance in 1946 (see Figures 11 and 12). Each structure has a higher central opening between lower angled openings. The openings are filled with open-work metal panels with that have vertical bars under a hawk-shaped plaque. The sign (not pictured)

consists of a stepped-height, stone-veneer wall perpendicular to the north side of the road with wood placards attached to the east and west faces. A Pennsylvania State Historical Marker adjacent to the south entrance gate commemorates the Sanctuary's 1934 founding and is an uncounted landscape feature.

The Sanctuary resources are described below, beginning with the trail system on the north side of Hawk Mountain Road (**Figure 3**), followed by the visitor center area south of the road and, lastly, the education center and other facilities along the road east of the visitor center.

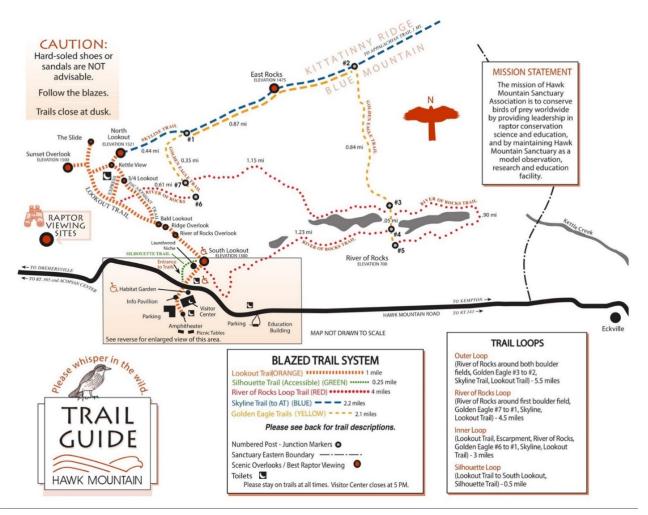


Figure 3. Map of Hawk Mountain Sanctuary trail system (HMSA).

Trails and Lookouts North of Hawk Mountain Road

The trail entrance on the north side of Hawk Mountain Road passes under a heavy timber-frame, gableroof <u>Entrance Shelter (2015, non-contributing structure, Photograph 4)</u>. The shelter has a half wall on the east side and a bench on the west. A <u>Registered Natural Landmark Marker (1965, contributing</u> <u>object</u>) is near the shelter. The marker is a natural boulder with a brass plaque that reads: "Hawk Mountain Sanctuary Has Been Designated a Registered Natural Landmark / Under the Provisions of the Historic Sites Act of August 21, 1935 This Site Possesses Exceptional Value in Illustrating the Natural

Berks and Schuylkill Counties, PA County and State



Photograph 4. Entrance Shelter.

History of the United States. / U.S. Department of the Interior / National Park Service / 1965." A short loop trail leads east from the trail entrance to two wood-frame **<u>Restrooms (late 20th century, non-contributing buildings)**.³</u>

The trail system consists of five hiking trails that branch off the primary Lookout Trail. Most of the trails are unimproved rocky paths that follow the natural topography and are blazed on trees or rocks, with the exception of the ADA-accessible Silhouette Trail (see below). Trail signage generally consists of square wood posts with small hanging wood signs or fixed wood panel signs and posts with directional inscriptions. The signs are carved with the name of the trail, destination, or relevant visitor information. Waysides constructed of acrylic panels on wet-laid, coursed ashlar stones are present at most of the lookouts. These smaller signs and waysides are uncounted landscape features. The Lookout Trail is described first, followed by the named trails that are accessed via the Lookout Trail.

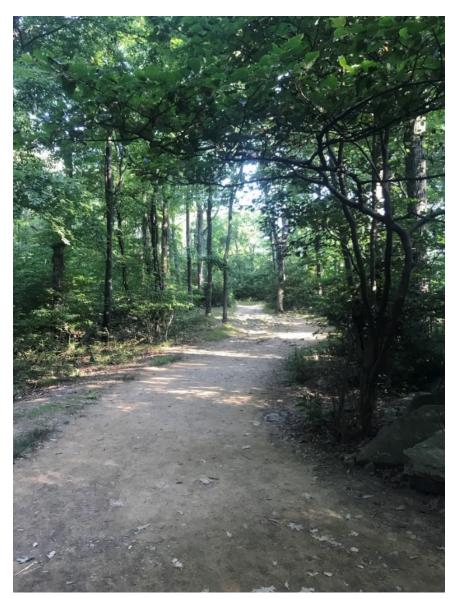
The Lookout Trail (mid–late 19th century, 1967, 1979; contributing structure; Photograph 5), the oldest trail in the Sanctuary maintained for visitors, is a 1-mile trail that ascends 300 feet from the trail entrance to North Lookout. Portions of the trail follow the alignment of a primitive road used in the mid-to late nineteenth century for sand quarry operations near the top of the mountain and pass through areas of naturally occurring sand. Hunters also used the road to access the mountain in the late nineteenth and early twentieth centuries, and visitors to the Sanctuary followed it to the best raptor viewing sites beginning in the 1930s. The Sanctuary established a formal trail along the route in 1967 and improved and regraded the section between the entrance and Bald Lookout in 1979. Constructed stone steps and wood railings are present along the steeper sections of the trail.

³ The restrooms are wood-frame Clivus multrum composting toilets built in the late 20th century and updated as needed.

Hawk Mountain Sanctuary

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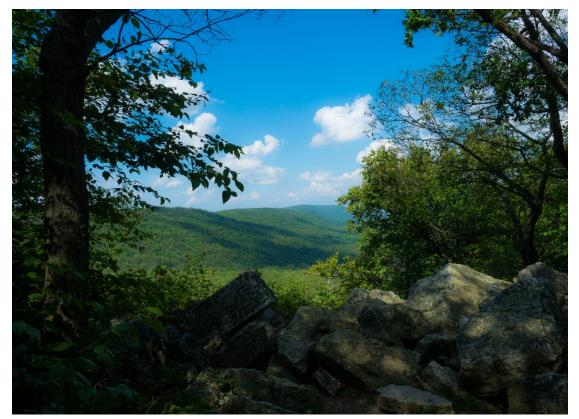


Photograph 5. The Lookout Trail.

The Lookout Trail provides access to two rock-strewn lookouts, from which Sanctuary staff members conduct bird counts, and three natural scenic overlooks, which are considered uncounted landscape features, facing north or east. <u>South Lookout (1968, contributing site, Photograph 6)</u> is approximately 500 feet from the entrance. It consists of an open clearing and overlook with a bench, a migration count board, and two waysides. The overlook is edged with stones and provides views over the River of Rocks to the east-northeast toward Great Valley as far as New Jersey. The Sanctuary opened South Lookout in 1968 as an additional location for raptor counts; daily counts are still conducted at the lookout in the fall as a training exercise but are not included in the Sanctuary's long-term data. A portion of the lookout was upgraded in 2015 to be accessible (ADA compliant) with stabilized path surfacing and stone edging. Heading northwest, the trail comes to two small, natural, wooded overlooks: River of Rocks Overlook has additional views east across the River of Rocks, and Ridge Overlook provides views northward toward Kittatinny Ridge (Photograph 7). A rock scramble leads from the trail to Bald Lookout (also called Bald

Berks and Schuylkill Counties, PA County and State





Photograph 7. View from Ridge Overlook. page 12

Overlook), an open rocky promontory that affords scenic views to the east. The trail continues northwest after Bald Lookout as a rough dirt path through the trees along the mountainside to the former site of a sand quarry that ceased operations in 1896. Near the top of the mountain, a short spur trail with a rock scramble branches off to the west to Sunset Overlook, a natural scenic overlook established between 1975 and 1982 at an elevation of 1,500 feet. Another short spur trail leads north to <u>The Slide (1850–1896, 1934; contributing site, Photograph 8)</u>, the site of the 2,300-foot gravity railroad built for the sand quarry and, in the early 1900s, a popular gathering spot in the fall for locals shooting at migrating raptors.



Photograph 8. The Slide.

The switchback railroad consisted of two rails, a mid-way switchout that allowed ascending and descending carts to pass, and a headhouse that anchored the cable lines. The only remaining evidence of the railroad are stone walls and the <u>Headhouse Foundation (1850–1896, contributing structure,</u> <u>Photograph 9)</u>, which are visible beside the trail near The Slide. The Hawk Mountain Sanctuary Associoation conducted educational programs at The Slide on weekends until the 1990s, when it



Photograph 9. Headhouse Foundations.

relocated these programs to the Laurelwood Niche near the South Lookout as part of a new visitor outreach plan.

At the junction with the Sunset and Slide spur trails, the Lookout Trail veers east along <u>The Hall of the</u> <u>Mountain King (1850–1896, 1934; contributing site; Photograph 10)</u>, a narrow cut shaded by towering hemlocks and abutted by steep cliffs where the gravity railroad carts had been loaded. Impressed by this dramatic landscape, Maurice Broun designated this section of the trail as The Hall of the Mountain King after Edvard Grieg's *Peer Gynt Suite No. 1*. Stone steps installed between 1934 and 1966 during Maurice Broun's tenure as curator and improved in the 1990s with the installation of wood railings in 1998–1999 mark the trail's final climb to <u>North Lookout (ca. 1930, contributing site, Photographs 11</u> <u>and 12)</u>—historically known as Observation Rocks, The Lookout, or Lookout Rocks—at an elevation of 1,521 feet. The Sanctuary's official raptor count has been recorded at North Lookout in the fall since 1934. The lookout consists of large boulders that can be climbed to reach the summit, which is outlined by a log fence. The view from the summit spans almost 80 miles from west-southwest to southeast and encompasses the mountains of the central Appalachians to the Kittatinny Ridge (see Photograph 12). An elevated wood-frame <u>Restroom (1970s – late 20th century, non-contributing building)</u> accessed by wood stairs is near the lookout.

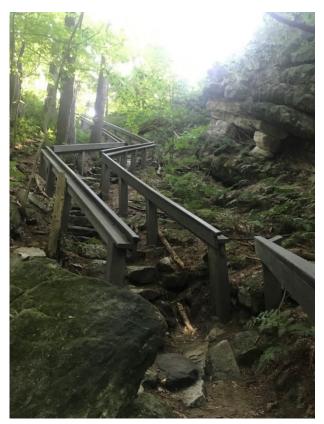


Photograph 10. Hall of the Mountain King.

Hawk Mountain Sanctuary

Name of Property

Berks and Schuylkill Counties, PA County and State



Photograph 11. Steps to North Lookout.



Photograph 12. View from North Lookout.

The <u>Silhouette Trail (2015, non-contributing structure)</u> is a 0.25-mile, ADA accessible trail that provides an alternative route from the trail entrance to South Lookout. The curvilinear trail follows a route based on the natural slope of the land and designed to meet the National Park Service's standards for accessibility in the outdoors. It is constructed of crushed stone with an aggregate stabilizer that acts as

a binding agent and is bordered by a dry-laid stone retaining wall. The trail curves around Laurelwood Niche, a clearing created in the 1990s to host the Sanctuary's education programs that has modern rustic stone slab benches (uncounted landscape features) arranged in rows.

The <u>River of Rocks Trail (1988, altered 2002; non-contributing structure)</u> is a 4-mile, partial loop trail that begins at South Lookout, descends eastward 600 feet along the River of Rocks (**Photograph 13**) toward Kettle Creek, turns westward, and reconnects with the Lookout Trail near the Express Trail.



Photograph 13. River of Rocks.

Before the trail's construction, visitors accessed the River of Rocks via several feeder trails, including the Golden Eagle Trail (see below) and an unnamed trail (non-extant) from a small picnic/camping area in the forest northwest of Schaumboch's Tavern (see below). The River of Rocks Trail is narrow, rough, and rocky and crosses the Golden Eagle and Escarpment trails. Portions of the original trail were realigned in 2002.

The <u>Escarpment Trail (1981, contributing structure)</u> is a rocky trail that follows the ridge edge parallel to the upper section of the Lookout Trail from a point just northwest of Bald Lookout to the east end of The Hall of the Mountain King. The Escarpment Trail has two lookouts: 3/4 Lookout is a rocky crest with limited views due to tree growth; Kettle View, at the north intersection of the Escarpment and Lookout trails, also has a limited viewshed of the surrounding landscape. A <u>Restroom (late 20th century, non-contributing building)</u> is near the intersection. The <u>Express Trail (early 1980s, contributing structure)</u> is a steep shortcut between the Lookout Trail and the Escarpment Trail that runs from a point just past the north intersection of the Lookout.

The <u>Skyline Trail (1971, contributing structure</u>) is a 2.2-mile trail that runs southwest-northeast along the rugged ridgeline of Kittatinny Ridge from North Lookout to the Appalachian Trail, which is completely outside the Sanctuary boundary. It is a rocky boulder trail that is difficult to traverse and is,

Berks and Schuylkill Counties, PA County and State

thus, recommended only for experienced hikers. East Rocks is a natural scenic overlook along the trail at an elevation of 1,475 feet.

The <u>Golden Eagle Trail (1971, contributing structure)</u> is a 2.1-mile, partial loop trail that leads north from the River of Rocks Trail to Kittatinny Ridge, where it joins the Skyline Trail westward for 0.87 miles before branching south and reconnecting with the River of Rocks Trail. It begins at the valley floor and ascends 800 feet of elevation at a steep grade via constructed stone stairs in places. Assistant curator Jim Brett first blazed the trail in 1971.

Visitor Center Area

The <u>Hawk Mountain Visitor Center, 1700 Hawk Mountain Road (1973–1974, altered 1990–1991</u> <u>and 2004; contributing building; Photograph 14)</u> is approximately 325 feet south of Hawk Mountain Road. It is accessed on foot by a brick path directly opposite the trail entrance and by car via an entrance drive west of the trail entrance that leads to a gravel parking area built in 1969. The visitor center is a southwest-facing, one-story, irregularly shaped, Contemporary-style building constructed in three phases.



Photograph 14. Hawk Mountain Visitor Center.

It has shed roofs covered with rolled roofing, horizontal board cladding, and window walls. The primary entrance is in a recessed space on the southwest elevation flanked by stone side walls. Construction of the building began in 1973, and it was dedicated on September 21, 1974 (**Figure 4**). The building was expanded in 1990–1991 and again in 2004.

An **Information Pavilion (Late 20th c., non-contributing structure)** is between the northeast corner of the visitor center parking area and the brick entrance path. The pavilion is a square, open, timber-frame structure with wet-laid stone half-walls (parged inside) and a quarter-hip roof covered in asphalt shingles. The floor is wood decking and brick. It contains wayside panels and signs, and a raptor migration count board is next to it.

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Figure 4. Hawk Mountain Visitor Center, 1974 (HMSA).

The <u>Native Habitat Garden (1988, non-contributing site)</u> is between the brick entrance path and the northwest corner of the visitor center. The garden has two entrances marked by timber-framed pergolas with double-leaf metal gates. The pergolas connect to wood post-and-net fencing that encircles the 2-acre garden. Herringbone-pattern brick walks bordered by wood guiderails provide circulation through the garden. A wood deck platform overlooks two small <u>Visitor Center Ponds (1974, contributing site)</u> that were excavated after the completion of the visitor center. The garden contains more than 250 species of native flowers, trees, shrubs, grasses, and vines.

A short gravel path leads south from the visitor center to a **<u>Restroom</u>** and <u>**Amphitheater (2020, non-**<u>contributing structure, Photograph 15)</u>. The amphitheater is an open structure consisting of a fanshaped wood roof supported by square wood posts on stone-veneer bases. Vertical carved logs depicting forest creatures adorn each of the structural posts. A concrete stage is at the north end of the structure in front of a small, enclosed storage space covered by a shed roof. The storage space is clad in horizontal boards and has two glazed board-and-batten doors. Benches are installed in rows and terraced with boards and gravel.</u>



Photograph 15. Amphitheater.

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Photograph 16. Hill House.

Other Staff and Visitor Facilities

The <u>Hill House (1968, contributing building, Photograph 16)</u> is on the south side of Hawk Mountain Road, approximately 700 feet east of the visitor center, and was built as a residence for Sanctuary employees. It is a north-facing, one-story, rectangular, wood-frame building with a butterfly shed roof and vertical board siding. The foundation is stone veneered. A garage wing extends off the facade (north) elevation; the wing is veneered in stone and has a shed roof. The entrance is within a recessed wall of windows east of the garage. Fenestration consists of fixed and casement windows. A wood deck covers the east elevation. The rear (south) elevation has an integral porch that extends over a wood deck. A small lawn area behind the residence is surrounded by a dry-laid stone retaining wall.

Four **<u>Raptor Shelters (1975, contributing structures)</u>** are in a small clearing south of the Hill House and house birds used by the Sanctuary's educational programs. The structures are square, one-story, wood-frame compartments connected by full-height walls in a grid pattern with bird enclosures along one side. The shelters have low-pitched shed roofs, horizontal board walls, and wood sill foundations. The bird enclosures have chain link and mesh fencing and board-and-batten doors.

A <u>Maintenance Shop (1978, contributing building)</u> is on a slope west of the raptor shelters. It is a onestory, utilitarian shed with standing-seam metal walls and garage bays.

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Photograph 17. Irma Broun-Kahn Education Building.

The Irma Broun-Kahn Education Building (1952–1957, altered 2013; contributing building; Photograph 17) is built into a slope on the south side of Hawk Mountain Road, approximately 0.3 miles east of the visitor center entrance. A short path lined with stacked stone walls connects the building to a gravel parking area on the slope to the south. A wood deck platform with a metal railing and benches is along the path and overlooks the building, which is set at the street edge. The Education Building is a northwest-facing, one-story, T-shaped, wood-frame building with low-pitched cross-gabled roofs. The northeast end of the building was constructed in 1952–1953 as a one-story apartment above a garage for the Sanctuary's Assistant Curator. The cross-gabled center section was added in 1954 as a public meeting place called the Common Room (Figure 5), and a small wing was added to the apartment's southeast elevation in 1957. The southwest end of the building was added in 2013, when the entire building was renovated to serve as the Sanctuary's education center and a residence for visiting educators and lecturers. The roofs are clad in standing-seam metal, and a stone ridgeline chimney extends from the original southwest elevation of the apartment. The walls are clad in horizontal flush boards and board-and-batten



Figure 5. Architectural rendering of Education Building, 1953 (HMSA).

siding, and the foundation is wet-laid stone. The primary entrance to the education center is under an engaged porch on the southwest elevation of the 2013 addition. A wet-laid stone terrace with a metal baluster and stone posts extends along two-thirds of the northwest elevation. The land slopes to the northeast to reveal the foundation and basement level of the original apartment, which has two single-bay garages and an entrance at ground level in the northeast elevation. Fenestration on the residence and the Common Room portions of the building consists of one-over-one sash windows in groupings and arranged with fixed windows; the 2013 addition has fixed and casement-type windows.

Schaumboch's Tavern (by 1793; individually listed in National Register NRIS No. 79002166,

contributing building, Photograph 18) is approximately 100 feet east of the education center on the north side of Hawk Mountain Road. The land around the building slopes steeply north toward a manmade water feature known as Schaumboch's Pond (1963, contributing site, Photograph 19). The late eighteenth-century building is a south-facing, one-and-one-half-story, four-bay-by-two-bay, masonry house. It has a side-gable roof covered with slate shingles and trimmed with a molded cornice. Two brick integral, end-wall chimneys pierce the roof, and a concrete-block exterior chimney is visible on the east elevation. A shed-roof dormer is centered on the north-facing roof slope. The walls and foundation are constructed of Tuscarora sandstone blocks that are covered in stucco. The roof extends over the facade (south) elevation and a stone patio in front of it. The facade has a single entrance in each of the center bays and single windows in the flanking bays. The entrances are recessed, surrounded by wood framing, and contain wood-panel doors. The west door is a six-panel door, and the east is a four-panel door with two lower horizontal panels. The side elevations each have two first-story windows under a single window in the gable. An extension of the roof covers a partial-width porch on the rear (north) elevation that was added in 1947. Fenestration consists of six-over-six, double-hung sash and casement windows in narrow wood surrounds. The windows in the south elevation have solid wood shutters. The Sanctuary used the building to house staff from 1938, when Maurice and Irma Broun moved into it, to 1968; as headquarters and office space from 1968 to 1978; and again as a staff residence from 1978 to the present.



Photograph 18. Schaumboch's Tavern.

Hawk Mountain Sanctuary

Name of Property



Photograph 19. Schaumboch's Pond.

The <u>Education Trail (ca. 2015, non-contributing structure)</u>, a short trail opposite the education center, leads from the north side of Hawk Mountain Road to a small picnic/camping area in the forest northwest of Schaumboch's Tavern. The area contains two Adirondack-style shelters across a clearing and two wetlaid stone outdoor camp stoves, all built by Maurice Broun in the 1940s. The <u>West Chester Shelter</u> (1940, contributing structure, Photograph 20) is a south-facing, rectangular, two-bay, one-story log structure with an open south elevation. Originally known as the Isaac Roberts Memorial Shelter, it was donated by the West Chester Bird Club in 1940. It has a corrugated-metal sheet shed roof with a pent roof over the open elevation. The structure sits on wood posts on concrete footings. The two open bays are unfinished. Named in honor of Ben Goodwin and Bill Fricke, volunteers who rigged a telephone to the top of Kittatinny Ridge before World War II, the <u>Goodwin-Fricke Shelter (ca. 1946, contributing structure with an open east elevation</u>. It has a shed roof with a pent overhang, horizontal board walls, and a poured concrete foundation.

The <u>Aspen Cut Campground (1964–1971, contributing site)</u> is on the south side of the road about 0.3 miles east of the education center. The Sanctuary created the campground between 1964 and 1971 in a clearing on the former site of a shale quarry used by the Pennsylvania Department of Highways in 1949 for improvements to Hawk Mountain Road. The campground has six platform tent sites, a fire ring, and a picnic pavilion and can only be used by members of the HMSA and educational groups.

Hawk Mountain Sanctuary

Name of Property

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Photograph 20. West Chester Shelter.



The <u>Owls Head Lookout (ca. 1970, contributing site)</u> is an open summit about 1,500 feet above sea level in the southeastern part of the district. The Sanctuary opened Owls Head Lookout for its staff and researchers ca. 1970 as an additional location for raptor counts. The site is accessible only via the Game Commission Access Road and has always been closed to the public, with the exception of hunters, due to significant populations of snakes and other animals in the area. Counts conducted at the lookout are not included in the Sanctuary's long-term data.

Statement of Integrity

The collection of contributing resources within the Hawk Mountain Sanctuary Historic District has integrity of location, setting, design, materials, workmanship, feeling, and association for the period from 1934 to 1987. The district's location and setting on a forested mountain ridge that is a primary migratory flyway for raptors remains unchanged. Vehicular access to the Sanctuary continues to be limited to Hawk Mountain Road, which retains its alignment as of 1949. The Lookout Trail continues to provide access to the best raptor viewing sites on the mountain, and the trail and its lookouts and overlooks are maintained to convey the feeling and association of the historical visitor experience. Scenic vistas of the surrounding mountains and distinctive natural geologic features such as the River of Rocks are intact. Buildings and structures constructed or repurposed by the Sanctuary during the period of significance retain integrity of design, materials, and workmanship. Alterations to the buildings and structures have generally been limited to in-kind replacements, except the 2013 Education Building addition, which is compatible with the building's original design, materials, and workmanship. Development within the district after 1987 is limited to Sanctuary administrative and visitor facilities that are designed to have minimal impact on the natural landscape and, thus, do not detract from the district's overall integrity. The Sanctuary uses local materials, trail alignments that follow the natural topography, and naturalistic features like stone steps and wood railings to harmonize with the surrounding landscape.

Archaeological Resources

This documentation does not identify or address all archaeological resources within the district boundary. Archaeological investigation of the property by qualified archaeologists and pre-history specialists would be necessary to inform further evaluation of the district's significance related to uses prior to the Sanctuary's creation, including by Native Americans. Unidentified and documented pre-contact archaeological sites, and standing ruins and associated historical archeeological sites associated with nineteenth-century industrial activities on Hawk Mountain, such as The Slide, may have the potential to yield important information about the property's history. Future nominations or an amendment to this nomination might be pursued following additional investigation and research.

Hawk Mountain Sanctuary

Name of Property

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DISTRICT DATA SHEET

Contributing Resources

Resource Name	Date	Photo No.
Buildings = 5	•	
Hawk Mountain Visitor Center	1973–1974, altered 1990–1991	14
	and 2004	
Hill House	1968	16
Maintenance Shop	1978	None
Irma Broun-Kahn Education Building	1952–1957, altered 2013	17
(Residence/Common Room)		
Schaumboch's Tavern (previously listed)	By 1793	18
Structures = 8		
Lookout Trail (includes South Lookout, River of Rocks	Mid–late 19 th c., 1967, 1979	5-7, 11
Overlook, Ridge Overlook, Bald Lookout, and Sunset		
Overlook)		
Escarpment Trail (includes 3/4 Lookout and Kettle	1981	None
View)		
Express Trail	Early 1980s	None
Skyline Trail (includes East Rocks)	1971	None
Golden Eagle Trail	1971	None
Raptor Shelters	1971	None
West Chester Shelter	1940	20
Goodwin-Fricke Shelter	Ca. 1946	21
Sites = 9		
South Lookout	1968	6
The Slide	1850–1896, 1934	8
Headhouse Foundation	1850–1896	9
The Hall of the Mountain King	1850–1896, 1934	10
North Lookout (Observation Rocks or The Lookout or	Ca. 1930	11, 12
Lookout Rocks)		ŕ
Visitor Center Ponds	1974	None
Schaumboch's Pond	1963	19
Aspen Cut Campground	1964–1971	None
Owl's Head Overlook	1968	None
Objects = 1		
Registered Natural Landmark Marker	1965	None
TOTAL CONTRIBUTING RESOURCES = 23	•	

Non-Contributing Resources

Resource Name	Date	Photo No.
Buildings = 1		
Restrooms (4)	Late 20 th century	None
Structures = 7		
Amphitheater	2020	15
Information Pavilion	Late 20 th century	None

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Entrance Gates and Sign	2015	3	
Entrance Shelter	2015	4	
Silhouette Trail (includes Laurelwood Niche)	2015	None	
River of Rocks Trail	1988, altered 2002	13	
Education Trail	ca. 2015	None	
Sites = 1			
Native Habitat Garden	1988	None	
Objects = 0			
TOTAL NON-CONTRIBUTING RESOURCES = 9			

Х

Х

8. Statement of Significance

Applicable National Register Criteria

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

- A. Owned by a religious institution or used for religious purposes
 - B. Removed from its original location

- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
 - F. A commemorative property
 - G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance

CONSERVATION; WOMEN'S HISTORY

Period of Significance 1934–1987

Berks and Schuylkill Counties, PA County and State

Significant Dates

<u>1934: Rosalie Edge leased Hawk Mountain and founded Hawk Mountain Sanctuary</u>
<u>1937: Rosalie Edge purchased the core 1,373-acre parcel of Hawk Mountain Sanctuary</u>
<u>1938: Hawk Mountain Sanctuary Association established</u>
<u>1987: Hawk Mountain Sanctuary Association launched international raptor migration</u>
<u>registry</u>

Significant Persons Edge, Rosalie Barrow Broun, Maurice Kahn, Irma Penniman Broun

Cultural Affiliations N/A

Architects/Builders <u>N/A</u>

Statement of Significance Summary Paragraph

Hawk Mountain Sanctuary is eligible for listing in the National Register of Historic Places (National Register) at the national level under Criteria A and B in the areas of Conservation and Women's History. The property is significant as the first raptor sanctuary in the world and as a leader in the American conservation movement of the early twentieth century, when the sanctuary played an integral role in changing public attitudes toward raptors and securing their permanent legal protection. By the 1980s, Hawk Mountain Sanctuary had become a pioneer and leader in the conservation of migratory raptors around the world, a position which it solidified and formalized with the creation of Hawks Aloft Worldwide, a global conservation initiative to amass, analyze, and distribute information on migratory raptors through the creation of an international network of independent local organizations, in 1987. The sanctuary is also significant for inspiring, fostering, and shaping the American environmental movement of the late twentieth century, which reached its peak after the publication of Rachel Carson's *Silent Spring* in 1962. Carson notably relied on data from Hawk Mountain Sanctuary about raptor populations to reach her conclusions about the disastrous environmental effects of the pesticide DDT. Hawk Mountain Sanctuary is closely associated with the pioneering conservation work of the sanctuary's founder, Rosalie Barrow Edge (1877–1962), and its first wards, Maurice Broun (1906–1977) and Irma Penniman Broun Kahn (1908–1997). Described by Broun as "the foremost woman conservationist of the twentieth century," Edge led a crusade to reform the National Association of Audubon Societies and ushered in a new era of environmental activism. Maurice Broun was one of the leading ornithologists and conservationists of the twentieth century whose publication of bird counts at Hawk Mountain Sanctuary formed the basis for the scientific study and conservation of raptors in the United States. His wife Irma was the sanctuary's first unofficial "gatekeeper" and played a central role in protecting it from sport shooters and developing its reputation as a leader in conservation education. The period of significance for Hawk Mountain Sanctuary begins in 1934, when Edge leased the 1,398-acre tract of land that forms the sanctuary's historic core and established it as a sanctuary, and ends in 1987, when the Hawk Mountain Sanctuary Association (HMSA) launched its international registry of raptor migration sightings now known as Hawks Aloft Worldwide.

Narrative Statement of Significance

Hawk Mountain Sanctuary sits on the border of Berks and Schuylkill counties at the crest of the Kittatinny Ridge in the Appalachian Mountains of eastern Pennsylvania. Known as "Keekachtatenin," or the "endless mountain," by the Lenni Lenape who inhabited the area before the arrival of European settlers and regarded it as their most sacred mountain. The Kittatinny Ridge runs 185 miles from the Delaware River to the Mason-Dixon Line, rising to an elevation of 1,521 feet at Hawk Mountain, and is on one of the most significant migratory flyways in the world (Bainbridge 2002:216; Brett and Bildstein 2014:5; National Audubon Society 2021). Twice each year, thousands of raptors and other bird species fly past Hawk Mountain as part of their migratory journey between North America and Central and South America. They head south in the fall between mid-August and mid-December to escape the rigors of winter and return north to their breeding grounds in the spring in April and May (Brett and Bildstein 2014:51).

It is unknown when Euro-American hunters first began visiting Hawk Mountain to hunt raptors during their annual fall migration. The first European settlers arrived in the vicinity of Hawk Mountain, originally known as North Mountain due to its proximity to South Mountain on the south side of the Lehigh Valley, in the early eighteenth century, but documented evidence of European habitation on the

mountain did not occur until the latter half of the eighteenth century (Lillard 2002:53). Sometime during the late eighteenth or early nineteenth century, present-day Hawk Mountain Road, which originated as a Native American trail, was converted to a stagecoach road that connected Pennsylvania's Great Valley to the sparsely settled areas west of the Appalachian Mountains (Broun 2000:85). A modest one-story, two-room, stone house, currently known as <u>Schaumboch's Tavern (contributing building)</u>, was built on the north side of the road ca. 1793 (Brett and O'Malley 1979). It is difficult to trace the early ownership history of the building, but it was likely constructed by Jacob Gerhardt, who survived the massacre of his family in 1755 by a group of Lenni Lenape at Eckville (two miles east of Hawk Mountain). Gerhardt evidently occupied the house for only a short period of time, as local history reports that he died of tuberculosis at a young age (Brett and Bildstein 2014:3–6).

Between the Revolutionary War and the Civil War, several iron furnaces operated on Hawk Mountain and manufactured steel shot for firearms. Large amounts of charcoal were produced in the surrounding forest to provide fuel for the furnaces. Extant physical signs of the charcoal industry include former logging roads on both sides of the mountain and former charcoal flats, which are easily identifiable because the only vegetation they can support is grass due to the sterilization of the ground (Brett 2014:6).

With the discovery of anthracite coal north of the Kittatinny Ridge in the early nineteenth century, the charcoal industry near Hawk Mountain Sanctuary disappeared. The anthracite coal mines led to a population boom in the area, and the road that ran over the mountain from Eckville to Drehersville on the Little Schuylkill River to the north became a main thoroughfare connecting the agricultural areas to the east and the coal mining towns to the north. The Gerhardt house was likely transformed into a tavern to serve as a rest stop for travelers on the Mountain Road, as it was called. Matthias Schambacher acquired the cottage, which had become known as the Mountain Hotel, about 1850 and established himself as the tavern keeper. Local legend/history states that Schambacher was a serial killer who murdered more than two dozen men.⁴ Schambacher died on March 10, 1879, and William Turner acquired and operated what was known as "Schaumboch's Tavern⁵" for approximately 20 years. The tavern served increasing traffic on the Mountain Road as farm markets developed in Orwigsburg, Schuylkill Haven, and Pottsville (Brett and Bildstein 2014:8–9).

Circa 1850, Drehersville resident William Kershner opened a small sand quarry at the summit of Hawk Mountain, where he owned 1,310 acres of land. Kershner also owned and operated a sawmill, which produced shingles and lumber that were shipped to Reading, Pennsylvania. Kershner declared bankruptcy in 1876, and a firm known as Weldy, Frye, and Ludwig purchased his property on Hawk Mountain at public auction (Wise Preservation Planning and Hunter Research, Inc. n.d.; Brett and Bildstein 2014:8–9). Weldy, Frye, and Ludwig made significant upgrades to the quarrying operations that included the construction of a gravity railroad and the installation of a crushing operation at the bottom of the mountain. The gravity railroad, known as <u>The Slide (contributing site)</u>, transported stone from the quarry at the summit to the bottom of the mountain, where the stone was crushed into gravel for glass manufacturing plants to the south. The business became known as the Drehersville Sand Company and

⁴ Secondary histories of Hawk Mountain Sanctuary (for example, Broun 2000 and Brett and Bildstein 2014) report that stories about strange occurrences, disappearances, and murders at the tavern began to circulate throughout Eckville and the surrounding communities after Matthias Schambacher and his wife moved into the building in the mid-nineteenth century. To date, no conclusive proof has been found to corroborate the stories, and no human remains have been found at the building.

⁵ The name "Schaumboch" is a misspelling of the historical "Schambacher" that appears on late nineteenth-century primary source documents but was commonly used by residents of Albany Township in 1934, when Hawk Mountain Sanctuary was established (Broun 2000:84).

reportedly operated into the early twentieth century, but the quarry closed ca. 1900 when purer deposits of sandstone were found farther west. Remnants of the stone quarry and The Slide still survive on Hawk Mountain (Brett 2014:8–9). These include the <u>Lookout Trail (contributing structure)</u> and its spur trail to Sunset Overlook, which follow the route of the former railway, and the area later known as <u>The Hall</u> <u>of the Mountain King (contributing site)</u>, where the sand was loaded into the railway cars. The <u>Headhouse Foundation (contributing site)</u> is immediately west of The Slide. The Drehersville Sand Company declared bankruptcy after its offices in Drehersville burned in 1896, and the quarry property was sold to settle claims from an investor in 1910. During the early twentieth century, residents of the area cut the chestnut and oak trees on Hawk Mountain to help blueberry plants flourish (Brett 2014:9). Keystone Lumber and Supply Company purchased the property in 1930 (Wise Preservation Planning and Hunter Research, Inc. n.d.).

Schaumboch's Tavern also changed hands during the early twentieth century. In 1922, John E. Wenz purchased the cottage from William Turner. Wenz spent weekends at the property during the summer and the hunting season (September through November) drinking with his friends. During Prohibition (1920–1933), he reportedly leased the building to a group of bootleggers, who lived in a former chicken coop behind the house and produced gin in the basement (Broun 2000:91–92; Brett and Bildstein 2014:9). Federal Prohibition agents raided Schaumboch's Tavern in 1930, after which Wenz leased the cottage to tenants (Broun 2000:92–93).

The tavern residents found a market for moonshine in the groups of recreational hunters that arrived at Hawk Mountain each fall. By the 1920s, raptor hunting was so popular that enterprising locals sold shotgun shells along the Mountain Road, and local scrap dealers came to Hawk Mountain to collect the spent brass cartridges after a weekend of hunting (Brett and Bildstein 2014:10). The hunters targeted hawks for a variety of reasons, including the common stereotype that raptors were "wanton killers" and their deaths would protect other wildlife. Hawk hunting also served as target practice for small-game hunting season in the late fall. Beginning in 1929, the Pennsylvania Game Commission encouraged the killing of hawks by offering a \$5.00 bounty for each goshawk shot between October 1 and May 1. Few hunters could tell the difference between goshawks and other species and simply killed any raptors they saw, and local game wardens often ignored the indiscriminate killing (Brett and Bildstein 2014:10).

Richard Pough, an amateur ornithologist from Philadelphia, heard about the hunting on Hawk Mountain and visited the area on a fall weekend in 1932 with his brother Harold Pough and Henry Collins. The men "stumbled upon one of the most grisly hawk-shooting sites in the east" (Brett and Bildstein 2014:11) and organized the bodies in rows to photograph them (**Figure 6**).



Figure 6. Photograph of slaughtered hawks at Hawk Mountain taken by Harold Pough in 1932 (Nijhuis 2021).

Pough shared the photographs; published a detailed letter in the National Association of Audubon Societies's (NAAS) *Bird-Lore* journal; and gave lectures to members of the Hawk and Owl Society, the Linnaean Society, and the NAAS on the unwarranted slaughter of the birds. However, he was unable to convince the leaders of the NAAS to take action to protect hawks (Furmansky 2009:158–159; Brett and Bildstein 2014:11).

Founded in 1905, the NAAS (now the National Audubon Society) represented a coalition of 37 independent Audubon Societies from multiple states that merged to form a single dues-paying organization focused on the protection of American wildlife. The Audubon Society concept had appeared in 1886 with efforts by George Bird Grinnell, a paleontologist at Yale University, and Frank Chapman, an ornithologist at the American Natural History Museum, to protect birds by ending the widespread use of their feathers and body parts in women's fashion, but the first Audubon Society was not founded until 1896 in Massachusetts. The concept became increasingly popular, and, by 1903, Audubon Societies had been formed in 34 states. Each organization operated independently, publishing pamphlets about bird species headed for extinction and advocating for laws to grant them legal protection in their respective state legislatures. The establishment of the NAAS brought together these disparate organizations and gave the bird conservation movement a national voice, which effectively ended the American plume trade through the passage of the Migratory Bird Treaty Act by the U.S. Congress in 1918 (Furmansky 2009:90– 95; Nijhuis 2021). By the 1930s, songbird populations had largely recovered, and the NAAS and its leaders had become "more complacent and less ambitious" (Nijhuis 2021). Like many Progressive-era conservation organizations, the NAAS focused exclusively on the preservation of animal species deemed to be desirable, whether for their aesthetic value or for their utility to humans, and allowed, even championed, the killing of species such as raptors that were deemed to be undesirable and destructive. Many of these conservation organizations, including the NAAS, were led by "those who killed them most" (Furmansky 2009:94). Whereas the songbirds and game birds, such as ducks and geese, favored and protected by the NAAS were, somewhat ironically, "loved to death, ... others, such as birds of prey were hated to death" (Furmansky 2009:94).

Creation and Development of Hawk Mountain Sanctuary, 1934-present

Hawk Mountain Sanctuary owes its existence to Rosalie Edge, a wealthy woman from New York City, an avid bird lover, and the head of a radical conservation organization known as the Emergency Conservation Commission (ECC; see Criterion B discussion below). In 1933, Edge attended one of Richard Pough's talks at a meeting of the Hawk and Owl Society in New York City. Pough's lecture represented the genesis of Hawk Mountain Sanctuary and Edge's campaign to secure legal protection for raptors in the United States. Edge was horrified by Pough's description of the wholesale slaughter he and his companions had witnessed on the Kittatinny Ridge and his accompanying photograph showing the carcasses of 200 hawks lined up on the ground. She learned from Pough that the mountain and the surrounding land were for sale and resolved to purchase the property and transform it into a sanctuary for raptors. Dr. Willard Gibbs Van Name, an invertebrate zoologist at the American Museum of Natural History who also served as the primary financial supporter of the ECC, loaned Edge \$500.00 to secure a lease on the property, which she signed on August 18, 1934, reserving an option to purchase the property for an additional \$2,982.59 (Berks County Registry of Deeds 1934; Nijhuis 2021). Although conflicts between Edge and Van Name ended their friendship in 1935, he continued to support the ECC and Hawk Mountain Sanctuary financially (Furmansky 2009:208). Edge began to raise additional funds for the purchase through the ECC and renewed the \$500.00 lease in 1935 (Berks County Registry of Deeds 1934; Emergency Conservation Committee 1937:2). Donations from her supporters enabled Edge to acquire a 1,373-acre tract of land from Keystone Lumber and Supply Company, Inc. for \$700.00 on September 8, 1937 (Berks County Registry of Deeds 1937; Bainbridge 2002:217). In doing so, Edge created the world's first raptor sanctuary, which played an integral role in changing public attitudes toward birds of prey and ensuring their permanent legal protection (Brett and Bildstein 2014:11).

After Rosalie Edge secured the lease to Hawk Mountain in 1934, she turned to a young, self-taught ornithologist named Maurice Broun and his wife, Irma, to lay the physical, scientific, and educational foundations for the groundbreaking sanctuary (see **Criterion B** discussion on the Brouns below). Edge met Broun during his tenure as a research assistant at the Austin Ornithological Research Station on Cape Cod, Massachusetts, when Broun had also first learned about the slaughter of hawks along the Kittatinny Ridge from an article that Richard Pough published in *Bird-Lore* in 1932. In his article, Pough wrote:

On top of Blue Mountain above Drehersville, Schuylkill County, an appalling slaughter is going on ... Blue Mountain is a long, continuous ridge along which thousands of hawks pass in migration. First the board-wings in September, and out of this flight I would say 60 were shot. Then came the sharp-shinned and Cooper's hawks – thousands of these were killed. The enclosed photographs show 218 birds picked up in about an hour last Sunday morning at one stand. Among others I have found 5 ospreys, a protected bird, of course, but one that will be shot every time, along with eagles, sparrow hawks, flickers, blue jays, so long as hawk-shooting of this sort is permitted. When 100 or 150 men, armed with pump guns, automatics, and double-barreled shotguns are sitting on top of a mountain looking for a target, no bird is safe. The birds are seldom retrieved, and I have found many wounded birds, some alive after several days (as cited in Broun 2000:5).

At the time, Pennsylvania law protected only ospreys, bald eagles, and sparrow hawks, and this protection was nominal at best (Broun 2000:5). Edge hired Maurice to act as a warden at Hawk Mountain and turn away hunters. She and Broun knew that the job came with inherent safety risks: wardens tasked with protecting Audubon refuges from plume hunters regularly faced harassment and threats, and poachers had

even murdered wardens in 1905 (Nijhuis 2021). Nonetheless, the Brouns, who had recently married, readily agreed to the job and arrived in September 1934 for the first of 32 migration seasons that they would spend at Hawk Mountain Sanctuary (Nijhuis 2021).

The Brouns initially worked seasonally at Hawk Mountain Sanctuary in exchange for a very low salary and a place to live. They originally resided with Walter Koch and his family in Drehersville two miles west of the mountain (Brett and Bildstein 2014:14). Shortly after his arrival, Maurice Broun completed "the first systematic count of the passing raptors" at <u>North Lookout (contributing site)</u> (Edge et al. 2014:xi). In doing so, he started a monitoring program that "today represents the longest continuing record of migrating raptor populations in the world" (Edge et al. 2014:xi). It also represented the beginning of the scientific study of raptor migration, which "has since, literally, spread throughout the world" (Brett and Bildstein 2014:53). The Brouns lived and worked at Hawk Mountain Sanctuary, apart from Maurice's brief stint in the Navy from 1943 to 1945, until their retirement in 1966. During the couple's tenure, "Their influence and the influence of the Sanctuary helped enact laws, state by state, to protect raptors," including a law protecting all species of diurnal raptors in Pennsylvania in 1937, a law protecting all raptors in Pennsylvania in 1951, and a 1972 amendment of the 1918 Migratory Bird Treaty Act to include all raptors (see below; Bildstein 2001; Brett and Bildstein 2014:14).

Through the advocacy efforts of Edge and the Brouns, Hawk Mountain Sanctuary helped to change the Pennsylvania Game Commission's attitudes toward raptors. In the November 1936 issue of its *Game News* magazine, the Pennsylvania Game Commission noted: "Much good has been accomplished through the establishment of Hawk Mountain Sanctuary ... The editor surveyed the area and found that hunters who formerly slaughtered hundreds of these birds, many of them beneficial ... are now using the sanctuary as an observation post to study their characteristics. Sportsmen and others are urged to visit this excellent bird observation point" (Pennsylvania Game Commission 1936:36). In 1937, the Pennsylvania Game Commission legally protected all hawk species, albeit with three notable exceptions: the goshawk, the sharp-shinned hawk, and the Cooper's hawk (*The Morning Call* 1947b:7; Salter 1994:42; Broun 2000:57).

Hawk Mountain Sanctuary is part of an extensive tract of protected land along the Kittatinny Ridge that also includes Pennsylvania State Game Lands No. 106 and the Appalachian Trail. The Pennsylvania Game Commission established the state game land system in 1919 expressly to ensure the expansion of the "then existing refuge system and the safeguarding of open hunting privileges," the latter purpose being completely antithetical to the sanctuary's mission and to Edge's and Broun's ecological approaches to conservation (Conklin 1935:4). The Commission officially created State Game Lands No. 106, which originally contained 1,706 acres north of Hawk Mountain Sanctuary, in 1935 and expanded the preserve south of the sanctuary in 1941 (*The Morning Call* 1941:12). However, its plans to open a preserve in the area preceded the creation of the sanctuary, as it signed a contract with the option to acquire the land in January 1932 (Berks County Registry of Deeds 1932, 1935a; *The Morning Call* 1935:20; *Wilkes-Barre Times Leader* 1935:3).

Likewise, histories of the Appalachian Trail have not identified an official or formal relationship or partnership between the Appalachian Trail Conference (the present-day Appalachian Trail Conservancy) and the ECC or Hawk Mountain Sanctuary (Pineo et al. 2021). While Edge knew Benton MacKaye, who conceived the idea of the Appalachian Trail in 1921 and who may have been a supporter of the ECC, none of the literature published by the ECC addressed efforts to construct the Appalachian Trail in the 1930s (Furmansky 2009:209). The Appalachian Trail Conference and its partners completed construction of the Pennsylvania segment of the trail, including the section that passes by Hawk Mountain Sanctuary,

between 1926 and 1931, three years before Edge established the sanctuary (Lien 1991:418–422; Pineo et al. 2021). Although the creation of Hawk Mountain Sanctuary "saved a critical fragment of Appalachian highland along the [Appalachian] Trail," Edge established the sanctuary "not for human needs, but for birds" (Frome 1996:63).

Despite the lack of an official or formal relationship or partnership between the Appalachian Trail and Hawk Mountain Sanctuary, they quickly became complementary natural resources, and day and section hikers began to use them together within a few years of Hawk Mountain Sanctuary opening in 1934. A side trail connecting the Appalachian Trail to the North Lookout at Hawk Mountain Sanctuary, possibly a predecessor to the present-day Skyline Trail, opened by 1936, and numerous hikers accessed the Appalachian Trail from the North Lookout by 1939 (Shoemaker 1936:6; The Morning Call 1939:1; Pottsville Republican 1939:5). The number of hikers traversing both the Lookout Trail at Hawk Mountain Sanctuary and the Eckville section of the Appalachian Trail, including Boy Scout and Girl Scout troops and private hiking clubs, grew during the 1940s and 1950s, and some hikers used the Sanctuary's camping facilities near Schaumboch's Tavern (HMSA 1945, 1947; The Morning Call 1947a:11; Walker 1954:10; The Daily Item 1955:26; Wilkes-Barre Times Leader 1957:3; Furmansky 2009:241). By the 1950s, these camping facilities encompassed two Adirondack shelters currently known as the West Chester Shelter (contributing structure), donated in 1940 by the West Chester Bird Club as the Isaac G. Roberts Shelter, and the Goodwin-Fricke Shelter (contributing structure), erected by Maurice Broun ca. 1946 and named in memory of Sanctuary volunteers Ben Goodwin and Bill Fricke (HMSA 1947; Broun 2000:121).

Rosalie Edge incorporated the HMSA as an educational non-profit organization in Pennsylvania on February 7, 1938, and transferred title to the sanctuary to the organization on May 23, 1938 (Berks County Registry of Deeds 1938b). The organization's mission was "to create a sympathetic understanding for birds and wildlife, to provide a means of educating the public relative thereto and to establish and maintain parks, preserves and other places where birds and wild life may be protected, encouraged and permitted to live without molestation" (Berks County Registry of Deeds 1938d). Edge served as the president of the HMSA until her death in 1962. Also in 1938, Marion Crary Ingersoll, a former suffragist and NAAS member, donated money that enabled the HMSA to purchase Schaumboch's Tavern and the surrounding land from John Wenz (Berks County Registry of Deeds 1938a, 1938c; Broun 2000:93). As a result, Hawk Mountain Sanctuary grew to include "two square miles of meadow and regrown woodland" (Furmansky 2009:219).

The sanctuary began to charge an entrance fee of \$0.15 to visitors who were not members of the HMSA in 1938 (**Figure 7**). It later increased the entrance fee to \$0.25 (Broun 2000:43). Visitors arrived during the spring and summer to listen to Maurice Broun's informal nature tours and talks, which were designated the "school in the clouds" by naturalist Vernon Bailey (Broun 2000:59). Many also pitched their tents in the woods and camped out on the property (Broun 2000:63). In 1938, Hawk Mountain

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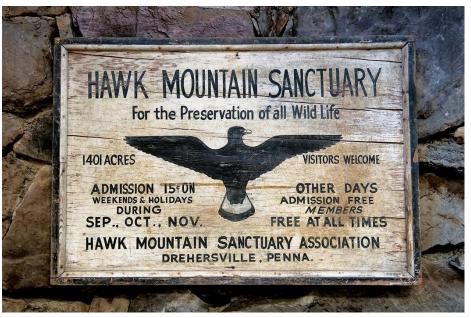


Figure 7. Hawk Mountain Sanctuary membership sign from the 1930s (Nijhuis 2021).

Sanctuary welcomed 4,200 visitors at North Lookout, where Broun counted more than 17,000 birds of prey and 14 different species (Furmansky 2009:218).

The HMSA operated the sanctuary on a seasonal basis between 1934 and 1946, by which time it had enough resources to keep it open year-round with the Brouns in residence at Schaumboch's Tavern (Broun 2000:56). While Maurice Broun was enlisted in the Navy during World War II, Edge hired a local man, Fran Trembly, to check on Hawk Mountain and to continue the bird count (Furmansky 2009:237). The Brouns returned to Hawk Mountain in 1946 and undertook extensive repairs to the tavern. They also expanded the sanctuary's camping facilities to include a second Adirondack shelter (the Goodwin-Fricke Shelter), stone fireplaces, picnic tables and benches, sanitary facilities, and potable water behind the tavern (Shoemaker 1946:10; HMSA 1947). The sanctuary continued to receive thousands of visitors each year, with as many as 5,000 people visiting on beautiful fall weekends. Between 1946 and 1950, Broun counted 28,500 visitors (Libby 1966:23). Visitors generally learned about Hawk Mountain Sanctuary from newspaper and magazine articles and via word of mouth (HMSA 1946; Broun 2000:56).

The HMSA, like many non-profit organizations, relied heavily on volunteer labor, especially during its first decades of existence. In 1947, a group of volunteers and student workers undertook an extensive series of improvements on the property. These included encasing the spring across the street from Schaumboch's Tavern the cottage with stone, repointing a wall behind the building, building stone steps, landscaping the sanctuary entrance, and constructing fences (Brett and Bildstein 2014:66). The student volunteers also enjoyed birdwatching and studying Hawk Mountain's natural environment with Maurice Broun. In 1948, Broun invited two young men to work and study at the sanctuary, unofficially starting the precedent for the HMSA's current international Conservation Science Training Program. The men built a new latrine for the sanctuary's campground, constructed a stone terrace behind Schaumboch's Tavern, and built several nestboxes (Brett and Bildstein 2014:67). In 1949, visitors to the sanctuary were allowed in only two areas: the Lookout Trail (contributing structure), which led from Hawk Mountain Road to North Lookout, and the small camping and picnic area where the West Chester and Goodwin-Fricke shelters stand near Schaumboch's Tavern, which served as the sanctuary's headquarters. A man-made

water feature known as <u>Schaumboch's Pond (contributing site)</u> was installed in this area on the site of a former apple orchard in 1963. Originally known as the "Monta Tarn," Schaumboch's Pond measured 100 feet by 50 feet and was constructed using money from an anonymous donor from Virginia to increase bird populations, to provide fire protection, and to beautify Hawk Mountain Sanctuary (Sheafer 1963:11).



Figure 8. Rosalie Edge (middle) with Maurice Broun (right), Irma Penniman Broun Kahn (left), and local conservationist Clayton Hoff at the Hawk Mountain Sanctuary gate, ca. 1940 (HMSA).

Visitors entered the sanctuary through a rustic entry, which was constructed in 1946 and represented its own version of a torii gate⁶ (Furmansky 2009:241) (**Figure 8**). It is unknown from the available documentation who designed the gate, which the HMSA described as "a new, rustic log entrance" in its 1946 member newsletter, though its resemblance to a torii gate was likely intentional and influenced or dictated by Edge (HMSA 1946). Having spent the first four years of her marriage (1909–1913) in southeast Asia and honeymooned near Mount Fuji in Japan, where she undoubtedly saw numerous Shinto shrines, Edge presumably possessed some knowledge of Japanese architecture and may have known that "torii" was the Japanese word for "bird perch" and of the traditional belief that viewed birds as "messengers sent from spirits of the netherworld" (Furmansky 2009:35).

In 1949, Pennsylvania's Department of Highways granted Edge's request to widen Hawk Mountain Road, which had been notoriously steep and treacherous for automobiles (Commonwealth of Pennsylvania, Department of Highways 1949, 1952, 1952b; Broun 2000). It also realigned and regraded the section of road between Eckville and Schaumboch's Tavern to eliminate some switchbacks as the road climbed the mountain (Commonwealth of Pennsylvania, Department of Highways 1949, 1952, 1952b). To obtain stone for these improvements, the highway department opened a shale quarry on the south side of the road

⁶ A torii is a symbolic gateway that marks the entrance to the sacred spaces of a Shinto shrine in Japan. Though it has many variations, it typically consists of two cylindrical vertical posts surmounted by a crosswise rectangular beam that extends beyond both sides of the posts. Torii can also identify other sacred spots, including mountains and rocks (The Editors of Encyclopedia Britannica n.d.). The original wood entrance gate at Hawk Mountain Sanctuary was replaced several times, most recently in 2015.

southeast of Schaumboch's Tavern, which HMSA acquired and transformed into the <u>Aspen Cut</u> <u>Campground (contributing site)</u> between 1964 and 1971 (HMSA 2021).

The HMSA expanded the sanctuary in the decades following World War II through the acquisition of neighboring tracts of land. The organization purchased two acres of woodland bordering Hawk Mountain Road on the west side of Hawk Mountain Sanctuary from Gurney L. and Sadie Bendigo in 1949 and a parcel containing 15 acres and 125 perches from Northeast Builders Supply Company in 1952 (Berks County Registry of Deeds 1949, 1952). In 1965, the HMSA acquired three parcels of land encompassing more than 693 acres in Albany Township, including the majority of the River of Rocks and the Aspen Cut Campground, from Naomi Powell (Berks County Registry of Deeds 1965; HMSA 1965, 1966; Bildstein 2001). This transaction represented the largest single boundary increase to Hawk Mountain Sanctuary since its initial establishment in 1934 (Berks County Registry of Deeds 1934, 1935). The HMSA continued to expand the sanctuary through land acquisitions in the late twentieth and early twenty-first centuries.

By the early 1950s, approximately 10,000 people visited Hawk Mountain Sanctuary each year, and the sanctuary essentially functioned "as the cross-roads of naturalists" (Brett and Bildstein 2014:97; Furmansky 2009:241). Roger Tory Peterson, a successful bird-guide author and HMSA board member, credits the sanctuary with "shaping 'the ecological thinking of our time" (Peterson as cited in Furmansky 2009:241). Visitors included prominent nature writers William Vogt, Edwin Way Teale, Sigurd Olson, O.S. Pettingill, Joseph Wood Krutch, Florence Page Jaques, and Rachel Carson. Carson (1907–1964), who visited Hawk Mountain in 1945, notably inspired the modern environmental movement with the publication of her seminal book *Silent Spring* in 1962 (see below) (**Figure 9**).



Figure 9. Rachel Carson at the North Lookout at Hawk Mountain Sanctuary, 1945 (ExplorePAHistory.com).

The U.S. Department of the Interior and the National Park Service (NPS) designated Hawk Mountain Sanctuary as a National Natural Landmark in 1963, and the HMSA intalled the <u>Registered National</u> <u>Landmark Marker (contributing object)</u> in 1965 (Salter 1994:39). The National Natural Landmarks Program, established by the NPS under Secretary of the Interior Stewart Udall in 1962, is the only national program that recognizes and encourages the preservation of natural landscapes and sites under public and private ownership (Cohen 1982:121).⁷ It was designed to "identify and encourage the preservation of representative examples of all the major ecosystem types and geological features of the United States" (Cohen 1982:121). According to the NPS, National Natural Landmarks "are selected for their outstanding condition, illustrative value, rarity, diversity, and value to science and education" (National Park Service, U.S. Department of the Interior 2021).

The increasing number of visitors in the 1950s and 1960s and other duties, including speaking engagements, managerial responsibilities, correspondence, and efforts to protect raptors from hunting at other sites along the Kittatinny Ridge, placed increasing pressures on Broun's time, slowed his pace of scientific publication, and increasingly forced him to rely on volunteers and assistants to conduct the annual fall raptor population count. The youth training program continued to grow slowly during the 1950s and 1960s. To assist Broun, the HMSA hired Alexander C. Nagy in 1953 and constructed what is now known as the **Irma Broun-Kahn Education Building (contributing building)** as a residence for Nagy and a public meeting room, which appears in HMSA newsletters as the "common room" (**Figure 10**) (HMSA 1953; Brett and Bildstein 2014:97). Nagy was born in Allentown, Pennsylvania, in 1924 and

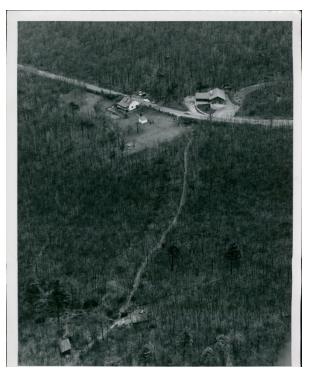


Figure 10. Aerial view of the Irma Broun-Kahn Education Building (top right), Schaumboch's Tavern (top left), and West Chester and Goodwin-Fricke shelters (bottom left), ca. 1953 (HMSA).

⁷ The program was originally called the National Registry of Natural History Landmarks but was renamed in 1965 to avoid confusion with the National Register of Historic Places created by the NPS in 1966.

moved to a farm in Eckville at the base of Hawk Mountain with his father after World War II (Brett and Bildstein 2014:98).

By 1966, the five-year visitor tally at Hawk Mountain Sanctuary had risen to 111,400 people (Libby 1966:23). Hikers on the the 2,175-mile-long Appalachian Trail often paused on their journey to visit Hawk Mountain and to attend Maurice Broun's "School in the Clouds" (Furmansky 2009:241). Broun retired as the curator of the Hawk Mountain Sanctuary on May 1, 1966, after 32 years on the mountain (Libby 1966:23; Brett and Bildstein 2014:97). Nagy became the sanctuary's curator after Broun's retirement and served in this position until his own retirement in 1981 (Brett and Bildstein 2014:98–99). Under Nagy's leadership, Hawk Mountain Sanctuary grew its kestrel conservation efforts and expanded its raptor population count to include counts taken at South Lookout (contributing resource) and Owl's Head Overlook (contributing site), in addition to those at North Lookout (Brett and Bildstein 2014:98-99). The HMSA also undertook a number of physical improvements to the sanctuary to accommodate the changing needs of its staff and the growing number of visitors. Hill House (contributing building) was built in 1968 to serve as the curator's residence. The Hawk Mountain Visitor Center (contributing building) opened with the Visitor Center Ponds (contributing site) in 1973–1974 (HMSA 1973, 1974). The HMSA also erected Raptor Shelters (contributing structures), built a Maintenance Shop (contributing building), expanded the sanctuary's network of trails, and established the Aspen Cut Campground (HMSA 2021). By 1971, the trail network included the Skyline Trail (contributing structure) and the Copperhead Trail, which is now the southern terminus of the Golden Eagle Trail (contributing structure) (HMSA 1971). In 1968, the Pennsylvania Game Commission obtained an easement from the HMSA to construct the Game Commission Access Road from the sanctuary's parking lot to Pennsylvania State Game Lands No. 106 (Berks County Registry of Deeds 1968). A section of this road branches off to Owl's Head Overlook (HMSA 1971).

After Nagy's retirement in 1981, James J. Brett became Hawk Mountain Sanctuary's curator. A native of Shillington, Pennsylvania, 25 miles south of Hawk Mountain, Brett graduated with a bachelor's degree in biology of Kutztown University (then Kutztown State Teachers College), approximately 13.5 miles southeast of Hawk Mountain, in 1971 and joined sanctuary staff as assistant curator (Brett and Bildstein 2014:181). He was responsible for transforming the informal work-study program started by Maurice Broun into a formal, internationally recognized internship program. The first college interns arrived at Hawk Mountain Sanctuary in the mid-1970s. As part of their internships, students from East Stroudsburg State College and Cedar Crest College received college credit in exchange for studying darkroom techniques, biostatistics, and other aspects of informal education and the operation of the sanctuary. The first international intern, a student from Acadia University in Wolfville, Canada, arrived at Hawk Mountain Sanctuary in 1982, and word about the sanctuary's conservation work-study program quickly began to spread internationally. By 1990, Hawk Mountain Sanctuary had trained "ten international interns from nine countries on four continents" (Brett and Bildstein 2014:68).

In the 1990s, the sanctuary's international training and internship program was transformed from a "somewhat modest international training program populated largely by North Americans in the 1980s" to one that was "truly global in scope, as well as more rigorous in training" (Brett and Bildstein 2014:70). During the 1990s, the sanctuary hosted 37 international interns from 25 different countries on five continents (Brett and Bildstein 2014:70). The U.S. Department of State approved the HMSA's application to become a sponsor of an Exchange Visitor Program, which enabled the organization to apply for training visas on behalf of the internship/training program instead of each individual applicant. This coincided with and formalized the program's shift from an "earn-and-learn, work-study program to a college-level, student-exchange program in which participants receive professional training in natural

Berks and Schuylkill Counties, PA County and State

resource conservation" (Brett and Bildstein 2014:71). As a result, participants in the four-month Conservation Science Training Program became known as trainees. Hawk Mountain Sanctuary continues to offer two-month Summer Field Experience Internships and four-month Academic Internships for students from North America. The Acopian Center for Conservation Learning (outside the National Register district) opened in 2002 and provides research space and housing in two off-site residence buildings for trainees, interns, and visiting scientists (Brett and Bildstein 2014:71). As of 2014, the training program had hosted more than 380 conservationists representing over 70 counties on six continents and resulted in nearly 300 scholarly publications (Regan 2014:xxii; Brett and Bildstein 2014:74).

In addition to the formal internship program established in 1974, the HMSA instituted a number of research and conservation programs under Brett's leadership in the 1970s and 1980s that transformed Hawk Mountain Sanctuary "from [an] informal mountaintop retreat for birdwatchers and raptor enthusiasts, regional center for hawk protection, and informal mentor to raptor conservationists elsewhere, into a world-class center of raptor-migration science, conservation, and education" (Brett and Bildstein 2014:101). In 1974, HMSA president Joseph Taylor and board member Michael Harwood helped plan the first North American Hawk Migration Conference in Syracuse, New York (Brett and Bildstein 2014:181). The conference served as the foundational meeting of the Hawk Migration Association of North America (HMANA), a national organization designed to "advance the knowledge of raptor migration across the continent and to monitor raptor populations as an indicator of a sound environment" (Smith 1999:8) (see below). Harwood, a noted author and naturalist, served as president of HMANA (Hartford Courant 1989:189). In 1987, Brett and Stanley Senner, who became Hawk Mountain Sanctuary's first executive director in 1982, created an international registry of raptor migration watchsites (Brett and Bildstein 2014:102, 182). Designated Hawks Aloft Worldwide in 1993, this registry solidified Hawk Mountain Sanctuary's position as a pioneer and leader in the conservation of migratory raptors around the world (see below).

Brett also oversaw additional physical improvements to Hawk Mountain Sanctuary during the 1980s, including another expansion of the sanctuary's trail system. The <u>Escarpment Trail (contributing</u> <u>structure)</u> and the <u>Express Trail (contributing structure)</u> were built in the early 1980s, and the <u>River</u> <u>of Rocks Trail (non-contributing structure)</u> and <u>Native Habitat Garden (non-contributing site)</u> were added in 1988. During the ensuing decades, the HMSA added the <u>Silhouette Trail (non-contributing</u> <u>structure)</u> and the <u>Education Trail (non-contributing structure)</u> to the sanctuary's trail system; erected new <u>Entrance Gates and Sign (non-contributing structure)</u>, an <u>Entrance Shelter (non-contributing</u> <u>structure)</u>, and an <u>Information Pavilion (non-contributing structure)</u> at the sanctuary's entrance; and built four <u>Restrooms (non-contributing buildings)</u> for visitors. The most recent addition to the sanctuary is the <u>Amphitheater (non-contributing structure)</u> west of the Visitor's Center, which opened in 2020.

Hawk Mountain Sanctuary and the Conservation and Environmental Movements

The history of Hawk Mountain Sanctuary encompasses two social and scientific movements that radically altered the ways in which the American public viewed and related to the natural environment. Pete Dunne of the Audubon Society observes in the "Foreword" to *Hawk Mountain: A Conservation Success Story*,

The history of bird conservation in the United States and this history of Hawk Mountain walk in lock step. There were two epic movements that changed the way our species relates to our environment. The first philosophical revolution was the Conservation Movement of the early

20th century but whose roots stretch back to the unbridled exploitations of the Victorian Age. The second, the Environmental Movement of the 1960s and '70s, was a reaction to the destructive and unforeseen impact of the man-made biocide, DDT.⁸ Hawk Mountain played a key role in both of these philosophical realignments (Dunne 2014:xiv).

The American conservation movement was ushered in by the extinction of the passenger pigeon, the near extinction of the bison, and the depletion of shore- and plume-bearing birds for food and clothing in the late nineteenth and early twentieth centuries. Most bird species received some measure of protection during the early twentieth century with the signing of migratory bird treaties between the United States, Canada, and Mexico and efforts by state and federal governments to more strictly regulate the hunting and/or harvesting of game birds. However, these protective measures largely ignored nocturnal and diurnal raptors, which were incorrectly viewed by government organizations, conservationists, bird protection organizations, and the American public through an anthropomorphic lens as villainous and widely treated as vermin to be eliminated. The importance of raptors did not gain widespread attention among scientists and conservationists until the 1920s, and they generally did not begin to receive legal protection until two decades later, largely due to the efforts of Hawk Mountain Sanctuary (Bainbridge 2002:9–10). Hawk Mountain Sanctuary functioned as "a leader in this protectionist campaign and a totem to its success" (Dunne 2014:xv). In Hawk Mountain Sanctuary, Edge also pioneered "America's first citizen-acquired property intended exclusively for conservation purposes" (Johnson 2021:141).

With its mission to protect all species, regardless of their perceived economic and aesthetic value to humans, and the natural environment from human interference, Hawk Mountain Sanctuary reflected an ecological approach to conservation that presaged the environmental movement of the 1960s and 1970s. In his study "The Origins of Rosalie Edge's Emergency Conservation Committee, 1930–1962: A Historical Analysis," Clark N. Bainbridge succinctly summarizes the unique position of Rosalie Edge, the ECC, and Hawk Mountain Sanctuary within American environmental history:

From a broader vantage point of history, ECC campaigns reflected a transitional phase in the conservation movement toward an ecological point of view, a perspective environmental activists adopted after Edge's death. Hence, the ECC represented a protoenvironmentalist group not only because of the militancy of its voice but also because of the positions it took in conservation campaigns (Bainbridge 2002:7).

The ecological perspective represented a desire to preserve natural areas and all the native life within them in the tradition of such luminaries as Henry David Thoreau and John Muir, who saw an intrinsic value in nature and wildnerness. As such, it stood in sharp contrast to the approach of late nineteenth- and early twentieth-century conservationists and conservation organizations such as the NAAS, which favored the scientific management of natural resources to sustain those that were economically useful (Bainbridge 2002:8).

The ecological perspective toward conservation espoused by Edge and epitomized by Hawk Mountain Sanctuary grew out of the science of ecology, which emerged and officially joined the ranks of scientific disciplines during the 1910s. Organizations such as the Ecological Society of America, founded in 1915,

⁸ Dichloro-diphenyl-trichloroethane, commonly known as DDT, was developed as the first modern synthetic insecticide in the 1940s and was widely used to combat malaria, typhus, and other insect-borne diseases and for insect control in agriculture, institutions, homes, and gardens. It was banned in the United States in 1972 (U.S. Environmental Protection Agency 2021).

began to voice an ecological approach toward conservation and to advocate for the maintenance of all native plants, fish, and animals within natural areas in the 1920s, although such organizations had little to no impact on the management of natural landscapes in the early years of their existence (Bainbridge 2002:9). As Bainbridge (2002:10) notes, "Though widespread support of predator protection remained in the distant future, some historians have considered the emergence of an appreciation of predacious birds and mammals as the turning point towards an ecological point of view." Within the broader context of federal conservation policy, this shift impacted the creation of national parks in the 1930s and 1940s, as demonstrated by Everglades National Park in Florida. Authorized in 1934 but not officially established until 1947, Everglades National Park represented a significant change in the traditional national park idea because it lacked the scenic qualities of earlier parks but instead offered an expansive area for recreation and wildlife habitat (Bainbridge 2002:10).

Since its founding in 1934, Hawk Mountain Sanctuary has been at the center of and influenced the American conservation and environmental movements because, as its membership was national, so Edge wrote in 1950 "must its interests be national" (as cited in Senner 1989:282). Edge and Broun advocated for laws to end the shooting of hawks across Pennsylvania and in other states. Through its educational programs begun and fostered by Maurice Broun and Irma Penniman Broun Kahn and continued after their retirement, Hawk Mountain Sanctuary has also inspired local and national legislation to protect birds of prey through the visitors who absorbed its message about the importance of these birds. Hawk Mountain Sanctuary and Maurice Broun have had a "major influence on knowledge about North American raptors" (Taylor 1984). Prior to the establishment of the Hawk Mountain Sanctuary, few people (apart from hunters) knew where raptors concentrated during their migrations. Observations of the species and numbers of raptors passing above Hawk Mountain Sanctuary have taught ornithologists important things about the ranges and migratory behavior of birds of prey in North America (Taylor 1984). In 1951, the Pennsylvania Game Commission finally ended its bounty on goshawks that had been place since 1929, due in large part to the research and advocacy of the HMSA (*The Morning Call* 1950:25; *The Bangor Daily News* 1968:4; Irma Penniman Broun Kahn as cited in Salter 1994:42; Brett and Bildstein 2014:97).

As one of the first conservation organizations to advocate an ecological perspective on predators, which viewed predation as a natural process necessary for keeping animal populations under control, Hawk Mountain Sanctuary has shaped the narrative of natural lands wildlife preservation. This ecological perspective gained traction with scientists, conservationists, and the American public during the enivironmental movement. As Dr. Francis J. Tremblev noted in *The Morning Call* in 1970, "This idea has spread around and Hawk Mountain has played no little part in its spread" (Trembley 1970:100). In 1971, Chandler S. Robbins and James L. Ruos used data collected at Hawk Mountain Sanctuary to advocate for the protection of all raptor species under the federal Migratory Bird Treaty Act, which prohibits the killing, capturing, selling, trading, and transport of protected migratory bird species without the prior authorization of the U.S. Fish and Wildlife Service (Senner 1989:252; U.S. Fish & Wildlife Service 2020). Hawk Mountain Sanctuary also helped to sound the alarm about and end the indiscriminate shooting of golden eagles by ranchers, who believed they regularly killed sheep, in the American West through the amendment of the Bald Eagle Protection Act to include golden eagles in 1962 and through their protection under the Migratory Bird Treaty Act in 1972 (Senner 1989:252; Brett and Bildstein 2014:133; HMSA 2021). Originally enacted by Congress in 1940 and amended several times, the Bald Eagle Protection Act forbids the shooting, killing, wounding, capturing, collecting, and general disturbing of bald eagles and golden eagles and their nests and eggs (Brett and Bildstein 2014:133; U.S. Fish & Wildlife Service 2018).

As noted above, Hawk Mountain Sanctuary became a pioneer of and leader in national and international raptor studies and established raptor biologists as "an important wing of the wildlife conservation community" during latter decades of the twentieth century (Smith 1999:8). As Robert J. Smith observed in a study of the HMSA prepared for the Competitive Enterprise Institute in 1999, "Prior to the accomplishments and proselytizing of the Hawk Mountain Sanctuary Association, there had been very little scientific or popular interest in raptors or knowledge about their ecology, population sizes, and migrations" (Smith 1999:8). The number of private conservation organization in the United States dedicated to the study and protection of raptors rose quickly in the late twentieth century as the devastating effects of DDT on raptor populations became increasingly clear to scientists in the 1960s and 1970s (Fuller 1986:1; Smith 1999:8). Hawk Mountain Sanctuary, "the largest and oldest membersupported raptor conservation organization in the world," either played a direct role in the creation of or became a crucial partner to many of these organizations (Keeler 2004). Among the earliest of these raptor conservation organizations was the Raptor Research Foundation, Inc. (RRF). Officially incorporated in 1966, the RRF identified its mission as the "dissemination of information concerning raptorial birds among interested persons worldwide" and the promotion of "a better public understanding and appreciation of the value of birds of prey" (Raptor Research Foundation 2017). The RRF initially focused on investigating the status of the peregrine falcon and learning how to breed the species in captivity, but it also established The Journal in Raptor Research, which published some of the first scientific articles on raptor research and biology and became the premier periodical on raptor biology (Raptor Research Foundation 2017). Hawk Mountain Sanctuary became a crucial partner of the RRF, and in 1984 the two organizations organized a conference entitled "Raptor Conservation in the Next 50 Years" (Senner et al. 1986; Smith 1999:8).

Hawk Mountain Sanctuary also played a direct role in the creation of the Hawk Migration Association of North America (HMANA). Founded in 1974 after a group of over 300 hawk watchers and enthusiasists from across North America, including ornithologists, conservationists, and amateur researchers, gathered at a conference in Syracuse, New York, HMANA sought to collect and analyze data collected from hawkwatching stations located across the continent (Brett and Bildstein 2014:54). Among the conference attendees and founding members of the HMANA were many researchers and scientists who had been taught by Maurice Broun or were associated with Hawk Mountain Sanctuary, which, as the oldest hawk watching facility in North America, represented a crucial partner in HMANA's creation (Harwood 1980; Hawk Migration Association of North America 2021b). In fact, as previously noted, two members of the HMSA, Joseph Taylor and Michael Harwood, helped plan the conference, and Harwood served as HMANA's president (Hartford Courant 1989:189; Brett and Bildstein 2014:181). Since its establishment as a volunteer, non-profit group in 1974, HMANA has successfully created a formal network of observers throughout the United States; standardized the recording of empirical data; provided a clearinghouse for that data; encouraged the exchange of valuable information; made its data available to professional and amateur ornithologists and the public; educated the public about raptors and their role in the environment; and helped to develop improved methods for estimating raptor populations and identifying and evaluating population fluctuation (Hawk Migration Association of North America 2021b). Although Hawk Mountain Sanctuary was the first and oldest raptor migration watchsite in North America, and the world, the number of watchsites gradually expanded after World War II. By 1999, HMANA included a network of over "1,800 watchsites, 60 of which had been active for a decade or more" (Bildstein 2009:44; Hawk Migration Association of North America 2021a).

The creation of Hawks Aloft Worldwide, however, solidified Hawk Mountain Sanctuary's position as an international leader in the fields of raptor biology and conservation. Begun in 1987 by Jim Brett, the sanctuary's curator, and Stanley Senner, its executive director, as a project to identify and compile the

"first global atlas and directory of internationally important raptor migration watch sites," it was an ambitious two-phase initiative, officially designated Hawks Aloft Worldwide in 1993, inspired and necessitated by the observed inadequacies of local conservation efforts that protected migratory raptors from acute threats at individual sites. The founding of Hawk Mountain Sanctuary in 1934 typified this local approach to raptor conservation (Goodrich et al. 1994:7). Phase I of Hawks Aloft Worldwide consisted of the creation of an international atlas and directory of raptor migration watch sites containing entries on each country that documented the legal status of raptors and major threats to their wellbeing and provided an inventory and a map of all known migration watch sites. Phase II of the project involved "training local conservation organizations and activitists (1) to affect action at critical sites through education and advocacy, and (2) to help develop such sites as economically sustainable centers of ecotourism" (Goodrich et al. 1994:9). In short, Hawks Aloft Worldwide represented a natural expansion of the grass-roots conservation activism created and personified by Rosalie Edge and the ECC and formalized Hawk Mountain Sanctuary's "long-standing role as mentor to raptor conservation organizations and grass-roots activists throughout the world" (Goodrich et al. 1994:7). By 1998, Hawks Aloft Worldwide had identified 384 raptor migration watchsites in 87 counties on six continents, including the "River of Raptors" in Veracruz, Mexico (Goodrich et al. 1994:9; Bildstein et al. 2000:573). The global influence of Hawks Aloft Worldwide and Hawk Mountain Sanctuary has continued to expand into the twenty-first century. In their 2005 book Raptors of the Word: A Field Guide, James Ferguson-Lees and David Christie reported that Thailand and Malaysia had recently established annual "Raptor Watches" that attract "large numbers of non-ornithologists who are simply fascinated by the spectacle of huge flocks of migrating raptors" (Ferguson-Lees and Christie 2020:57).

Hawk Mountain Sanctuary also established a precedent for the preservation of natural lands and wildlife that became a model for environmentalists and conservation organizations during the latter half of the twentieth century. The conservation strategy used by Edge and the HMSA for the preservation of Hawk Mountain, in which they obtained title to the property for "its use for the sake of wildlife" (Rowlett 2000), served as the model for the Nature Conservancy (Furmansky 2009:247). Co-founded by Edge's former friend and protégé Richard Pough⁹ in 1951, the Nature Conservancy is currently one of the largest and most influential environmental organizations in the world (Furmansky 2009:247; The Nature Conservancy 2021). After Edge's death in 1962, Pough explicitly credited Edge and Hawk Mountain Sanctuary with inspiring the Nature Conservancy's approach to the preservation of natural landscapes, saying"When I began the Nature Conservancy, it was, I think because of what she did, because she had shown better than anybody how you could buy land to save it and the wildlife from harm" (Furmansky 2009:252). Hawk Mountain Sanctuary also led in large part to the creation of the Environmental Defense Fund by Roland C. Clement (1912-2015) in 1967 (Clement 2009:254). Clement, who "became hooked on birds as a boy after seeing a warbler eye-to-eye," worked with Maurice Broun at the Austin Ornithological Research Station as a Boy Scout, met Edge as a Boy Scout, and heard her speak at Hawk Mountain Sanctuary (The New Haven Register 2015). As an adult, Clement worked as a biologist at the National Audubon Society and became a founding member of the Environmental Defense Fund when his campains against the use of the pesticide DDT failed to yield the actions he thought necessary (Furmansky 2009:171, 247; The New Haven Register 2015). The Environmental Defense Fund is currently one of the world's most influential environmental organizations (Environmental Defense Fund 2021).

⁹ Edge ended her friendship with Pough in 1934 when he sided with the NAAS in its efforts to purchase the Hawk Mountain Sanctuary property (Furmansky 2009:179–181).

The most significant and influential of the second generation of ecologically minded scientists and environmental activists whose careers were shaped by Hawk Mountain Sanctuary was Rachel Carson. Carson's research on DDT led her back to Hawk Mountain Sanctuary, which she had visited in 1946 and designated one of the most "famous vantage points" for watching birds of prey (Carson as cited in Furmansky 2009:247). Broun was able to provide Carson with decades of data on hawk and eagle migration that helped her prove the catastrophic effects of DDT on raptor populations in *Silent Spring*; Broun had made these counts at Edge's insistence (Furmansky 2009:247). Historians credit Silent Spring with changing the way Americans think about the natural environment and with ushering in the modern environmental movement (Miller et al. 2001:8-1).¹⁰ Carson described the data from Hawk Mountain Sanctuary, one of the few data sets available to her at the time, as "especially significant" to her study (Carson as cited in Furmansky 2009:247); Keith Bildstein as cited in Salter 1994:43). Armed with Silent Spring and other findings from scientific studies completed in the late 1960s and early 1970s, scientists and conservationists conclusively proved the causal relationship between the widespread use of DDT and the thinning of raptor eggshells and rapidly declining raptor populations. By the early 1970s, the use of DDT and other organochlorine pesticides had been banned across much of North America and western Europe (Brett and Bildstein 2014:137). Hawk Mountain Sanctuary's annual raptor counts represented "a key data set that documented the decline, and then the marked population recovery, of DDT-suppressed species like the osprey, bald eagle, and peregrine falcon once the chemical agent was banned" (Dunne 2014: xv).

From its humble beginnings as a "seat-of-the-pants operation" (Brett and Bildstein 2014:14) under the stewardship of Rosalie Edge, Maurice Broun, and Irma Penniman Broun Khan, Hawk Mountain Sanctuary "has emerged as the world's leader in raptor conservation science, promoting leading research and organizing scientists in the understanding of raptors, their habitats, and their value and impact on the world" (Edge et al. 2014:xi). During its approximately 90-year history, this "mecca of raptor study" effectively changed the way the public in the United States and around the world view raptors and secured their full legal protection (Dunne 2014:xv). As a reporter adroitly noted in 1949, "The epic of Hawk Mountain has done more than anything else to publicize the cause of hawk preservation" (Peterson 1949).

Rosalie Barrow Edge (1877–1962)

Rosalie Barrow Edge (**Figure 11**) was born Mabel Rosalie Barrow on November 3, 1877, in New York City. She was the youngest child of John Wylie and Harriet Bowen Woodward Barrow. Her father was a wealthy accountant, a respected Orientalist and foreign language scholar, and a first cousin of Charles Dickens. Her mother was the daughter of a wealthy New York City businessman. The couple had eight children, but only five survived infancy. John Wylie Barrow's position as a partner in the accounting firm of Barrow, Wade & Guthrie, which "represented the first step in the beginning of the great profession of public accounting in the United States of America," enabled Rosalie to enjoy a privileged childhood that included a mansion at 3 West 46th Street in New York City, carriage rides in Central Park, and fine clothes, including a bonnet ringed with stuffed ruby-throated hummingbirds (Furmansky 2009:9–19; Nijuis 2021).

¹⁰ The Rachel Carson House (NRIS 91002058) in Silver Spring, Maryland, where Carson lived when she wrote *Silent Spring*, and the Rachel Carson Homestead (NRIS 76001601), her childhood home in Springdale, Pennsylvania, are listed in the National Register of Historic Places (Unterman 1976; Miller et al. 1991).

Hawk Mountain Sanctuary

Name of Property

Berks and Schuylkill Counties, PA County and State



Figure 11. Rosalie Edge at the Hawk Mountain Sanctuary gate, no date (Nijhuis 2021).

John Wylie Barrow's untimely death at the age of 57 on April 25, 1885, significantly reduced his family's financial situation and forced his widow to sell the family mansion and his valuable book collection at auction. However, the family still belonged to the upper echelons of New York City society. Rosalie spent the final years of her childhood in a substantial brownstone off Park Avenue at 113 East 72nd Street and attended the opera at the invitation, albeit charitably given, of Cornelius and Alice Vanderbilt II. Louise Whitfield Carnegie, the wife of millionaire industrialist Andrew Carnegie and a Barrow family friend, hired Rosalie's older brother, Archibald Barrow, as her personal secretary. Archibald remained in Louise Carnegie's employ until her death in 1946. He traveled everywhere with the Carnegies and assisted Louise with philanthropic donations after Andrew's death in 1919 (Furmansky 2009:20).

Like many wealthy upper-class women, Rosalie Barrow was well educated. She attended an exclusive girls' school, Miss Doremus's in New York City, and took piano and voice lessons. After her friend Louise Johnson married Charles Marston, a wealthy English industrialist and the owner of the Sunbeam company, in 1895, Rosalie regularly visited the couple at their country estate, Aftcot, outside Birmingham, England. During one of these visits, she met her future husband, Charles Noel Edge (1881–1944), who was one of Charles Marston's cousins and a civil engineer educated at Cambridge University. The couple became engaged in June 1908, but Charles's new position with Metropolitan Vickers, a British industrial firm, in China forced the couple to wait a year to marry. During the interlude, Rosalie worked as a spokeswoman for Countess Gladys Laszlo Szechenyi of Hungary, formerly Gladys Vanderbilt and the youngest daughter of Cornelius and Alice Vanderbilt II (Furmansky 2009:23–29).

Mabel Rosalie Barrow and Charles Noel Edge finally married on May 28, 1909, in Yokohama, Japan, where Charles had been stationed by his company (Furmansky 2009:32). During the ensuing four years, the couple traveled extensively in southeast Asia, visiting China, Malaysia, Thailand, and Japan, for Charles's job. Rosalie finally prevailed upon Charles to move to the United States, and, in 1913, the couple returned to New York City, where their son, Peter Edge, was born on March 25. Their second child, a daughter named Margaret, was born 17 months later on May 14, 1915 (Furmansky 2009:59–62). In the months preceding Margaret Edge's birth, Rosalie donated to numerous charitable organizations, including the Equal Franchise Society and the National Association of Audubon Societies (NAAS). Her involvement with the NAAS led her to discover her passion for conservation and brought her national attention as "the most vivid of the breed of radical amateurs" (Fox 1985:335) and "the foremost woman conservationist of the twentieth century" (Broun as cited in Furmansky 2009:251).

Rosalie Edge and the Women's Suffrage Movement, 1915–1920

After her daughter's birth in 1915, Rosalie Edge became intimately involved with the women's suffrage movement in New York. Despite a prior association with two of the movement's leading figures, Edge was a relative latecomer to the fight for women's voting rights. Edge had met Sybil Haig Thomas, Lady Rhondda, a prominent supporter of the British suffrage movement and mother to one of its most radical activists, Margaret Thomas Mackworth, aboard the *Mauritania* en route to New York City in 1913, but she neither donated to nor became personally involved in the suffrage movement until 1915. As Dyana Furmansky notes in her biography of Rosalie Edge, "By this time the American suffrage tide was so strong that it seems Rosalie Edge could not have avoided being swept up by it even without her previous association with Lady Rhondda and Margaret Mackworth. The campaign engulfed her, as it did thousands of women" (Furmansky 2009:66).

Through her donation to the Equal Franchise Society in May 1915, Edge became a member of the New York State Woman Suffrage Party (NYWSP). The Equal Franchise Society was one of several women's suffrage organizations absorbed by the NYWSP, which formed after a ballot initiative to win women the right to vote in New York failed in November 1915 in part due to the plethora of opinions and separate organizations involved in the campaign. As a member of the NYWSP, Edge marched in parades and knocked on doors to share the organization's message (Furmansky 2009:67). She also gave speeches and wrote pamphlets. Edge's dedication and intelligence led to her election as corresponding secretary and treasurerer of the NYWSP, which brought her into direct contact with the organization's leaders: Carrie Chapman Catt, who had previously succeeded Susan B. Anthony as the head of the National American Woman Suffrage Foundation, and Mary Garrett Hay (Furmansky 2009:66–68).

Edge's time as a women's rights activist proved to be relatively short-lived. New York State granted women the right to vote in 1917, and the ratification of the 19th Amendment, which declared that "the right of citizens of the United States to vote shall not be denied or abridged ... on account of sex," in 1920 extended this right to women throughout the United States (as cited in Furmansky 2009:69). Although she joined the New York State League of Women Voters, as the NYWSP became known after 1920, and its national counterpart, the League of Women Voters, Edge largely withdrew from the women's movement by 1920 (Furmansky 2009:70). Her experience with the NYWSP, however, provided Edge with a crash course in organization, publicity, politics, and policy that she eventually drew upon as a conservation activist (Furmansky 2009:67).

Berks and Schuylkill Counties, PA County and State

Rosalie Edge and Birds, 1915–1929

Edge's first demonstrated interest in birds and the natural environment occurred in the years following the birth of her daughter. In 1915, Charles purchased a 4-acre tract of land on Long Island Sound in Rye, New York, to serve as the family's refuge from the city. After the NYWSP won women in New York State the right to vote in November 1917, Rosalie turned her attention to establishing a home on the property, which became known as Parsonage Point, and taming the land. She planted gardens with her children and rapidly became acquainted with the species of birds, including kingfishers, quails, kestrels, bluebirds, and herons, that occupied the property and the surrounding area. (Furmansky 2009:70–73; Nijhuis 2021). She decorated the trees with suet and scattered birdseed to draw them to the property. She also convinced Charles to construct bird feeders, bird baths, and bird boxes on the property (Furmansky 2009:72).

Rosalie and Charles evidently drifted apart in the wake of her involvement with the suffrage movement. The tension reached a breaking point in the spring of 1921, when Rosalie fled with her two children to the brownstone at 113 East 72nd Street that she had inherited from her mother. She and Charles never lived together again, and the couple eventually secured a judicial separation in 1924. This arrangement avoided the scandal of a public divorce and ensured that Charles continued to financially support Rosalie with a generous monthly allowance. The pain of the loss of her marriage and Parsonage Point briefly ended the enjoyment that she had begun to discover in birds. In 1925, however, the cry of a nighthawk helped Rosalie to rediscover the joy that birds brought her and unleashed the passion that eventually led her to found Hawk Mountain Sanctuary (Furmansky 2009:74–82; Nijhuis 2021). Toward the end of her life, she wondered if a love of birds came "as solace in sorrow and loneliness" and if it "gave peace to some soul wracked with pain" (Edge as cited in Furmansky 2009:82).

After her avian reawakening in 1925, Rosalie Edge quickly became an avid birdwatcher. She studied bird guides at night and began to visit Central Park with her children and dog to view birds. She soon discovered that over 200 species of birds visited the park every year and began to form relationships with the other birders who visited the park on a regular basis. Among them was Ludlow Griscom, one of the preeminent birders in the United States and associate curator of birds at the American Museum of Natural History, who became Edge's first mentor (Furmansky 2009:82–87; Nijhuis 2021). Well known among Central Park birders for his ability to accurately identify birds using visual and auditory clues, Griscom produced a guide entitled *Birds of the New York City Region* that taught these skills. Griscom's emphasis on visual and auditory identification represented a radical departure from the traditional approach to bird identification used by most ornithologists at the time, which involved killing a bird and stuffing it. It also notably influenced Edge's attitude toward traditional ornithologists and conservationists, for whom she scoffed "birds were their job, not their hobby" (Edge as cited in Furmansky 2009:87). Edge's son Peter shared his mother's passion for birds and birdwatching, and Edge became infamous at his school for calling to leave him tips about which birds to look for while he walked home through Central Park (Furmansky 2009:84; Nijhuis 2021).

Rosalie Edge and the Emergency Conservation Committee (ECC), 1929–1962

In 1929, the arrival of a pamphlet at the Paris hotel where she was staying with her children during their annual summer trip to Europe changed Edge's attitude toward bird conservation and permanently altered the course of her life. Authored by three employees of the American Museum of Natural History—Dr. Waldron DeWitt Miller, Dr. Willard Gibbs Van Name, and Davis Quinn—and entitled *A Crisis in Conservation*, the pamphlet asserted that existing American bird conservation organizations had fallen

under the control of gun and ammunition manufacturers and lambasted the groups for consequently failing to protect bald eagles and other species favored by hunters. The pamphlet warned that the whooping crane, trumpeter swan, ivory-billed woodpecker, California condor, bald eagle, and white pelican were on the verge of extinction (Furmansky 2009:88–90; Nijhuis 2021). Although the pamphlet did not explicitly name any of the organizations it criticized, its references to deficiencies in *Bird-Lore*, the publication of the NAAS, clearly indicated its primary target (Furmansky 2009:89). Greatly disturbed by the pamphlet's allegations against the NAAS and with her mind "filled with the tragedy of beautiful birds disappearing through the neglect and indifference of those who had at their disposal wealth beyond avarice with which these creatures might be saved," Edge resolved to get to the bottom of the situation (Edge as cited in Furmansky 2009:90). In short, *A Crisis in Conservation* catapulted Rosalie Edge into conservation activism and inspired her mission to reform the NAAS, to which she had belonged since 1915.

When Edge returned to New York City at the end of the summer of 1929, she sought out Dr. Van Name at the suggestion of her birding friends from Central Park. During a walk in Central Park, Van Name, an associate curator of invertebrate zoology at the American Museum of Natural History, confirmed for Edge the accusations that he had made against the NAAS in *A Crisis in Conservation*. Impressed by his knowledge of birds, particularly his ability to identify them without binoculars, Edge resolved to act. She attended the NAAS's 25th annual meeting at the American Museum of Natural History on October 29, 1929, and repeatedly attempted to elicit answers from the NAAS's board of directors to the questions raised by *A Crisis in Conservation*. She was first ignored and then berated by members of the NAAS's board of directors and their supporters, but the simply but elegantly dressed, 52-year-old woman with "a plummy, cultivated accent" remained implacable in the face of the crowd's hostility (Nijhuis 2021). Recognizing that the NAAS and its president T. Gilbert Pearson would continue to ignore all criticisms, Edge joined forces with Van Name to reform the NAAS from the outside (Furmansky 2009:109–113; Nijhuis 2021).

In the fall of 1929, Van Name began to regularly spend his evenings at Edge's brownstone, where the two strategized and finalized the details of a partnership that Edge eventually christened the Emergency Conservation Committee (ECC) (Furmansky 2009:114–116; Nijhuis 2021). At its core, the ECC was founded to provide Van Name an outlet to express his opinions about conservation without losing his job. After the publication of *A Crisis of Conservation*, the American Museum of Natural History, which was tied to the NAAS through interconnecting directorships, had placed a clause in Van Name's contract that allowed him to publish only materials related to his research on invertebrates (Bainbridge 2002:1). The ECC produced "colorfully written pamphlets" that "placed blame and named names," published them under Edge's name, and "mailed them out by the hundreds" (Nijhuis 2021). By conveying the appearance of a panel of experts, the ECC provided Van Name with plausible deniability and lent legitimacy to the pamphlet contents (Furmansky 2009:115).

The publications quickly drew the attention of Irving Brant and William T. Hornaday, prominent figures in the conservation movement who became members of the ECC and Edge's advisers. Brant was a wellknown journalist, scholar, writer, and, eventually, a trusted adviser of President Franklin Delano Roosevelt (Bainbridge 2002:1–2). Hornaday was a wildlife conservationist who reintroduced bison to Yellowstone National Park in the early twentieth century and helped to save other species, including Pribilof Island's fur-bearing seals (Furmansky 2009:99). Edge and Brant were the ECC's only lifelong members (Bainbridge 2002:1–2). Despite the presence and monetary and intellectual contributions of these committee members, the ECC was essentially a one-woman organization that Edge operated first out of the servants' sitting room in her brownstone on East 72nd Street and then, beginning in 1933, out

of a rented office on Lexington Avenue (Furmansky 2009:149). As Peter Edge observed in his biographical profile of his mother, "Although there were occasionally one or two other members (never including Van Name), the Committee was in fact the alter ego of my mother. No wonder its opponents sometimes referred to the 'so-called' Emergency Conservation Committee" (Edge 1999).

Edge, Van Name, and the ECC failed in their first efforts to change the NAAS in 1929 and 1930, but they gradually chipped away at the influence and power of the traditional conservationists who led the organization. The first victory for Edge and the ECC came in 1931, when Edge sued the NAAS for its membership list and won. Edge used the list to wage a fierce campaign against Pearson's leadership, and, facing increasingly vocal opposition and declining membership, he was forced to resign in 1934. By 1940, the NAAS had rechristened itself the National Audubon Society, distanced itself from its previous support for predator control, and, taking a page from the ECC's ecological handbook, embraced protection for all bird species, including raptors (Stinson 1994:7; Nijuis 2021). Brant observed in his 1988 memoir, *Adventures in Conservation with Franklin D. Roosevelt*, that "The National Audubon Society recovered its virginity" (Brant as cited in Nijhuis 2021).

The ECC took on a variety of other organizations, including the Bureau of Biological Survey (the predecessor of the U.S. Fish and Wildlife Service), the U.S. Forest Service, and the National Park Service (Furmansky 2009). Edge and the ECC also supported and campaigned for the protection of virgin forests through the creation of national parks. The ECC was instrumental in the establishment of Olympic National Park in Washington State in 1938, having assembled a broad grassroots coalition in the Pacific Northwest, and Kings Canyon National Park in California in 1940 (Furmansky 2009:209-217, 226-234). The ECC also played a central role in the expansion of Yosemite National Park to to include acres of threatened old-growth sugar pines in 1937 and initiated a letter-writing campaign against plans to construct the Echo Park Dam in Dinosaur National Monument in the 1950s (Kaufman 2006:42-43). Edge's efforts as part of the ECC on behalf of the sugar pines and Yosemite National Park, during which she formed an alliance with the park's superintendent Charles G. Thomson, drove a wedge between her and Van Name in 1935, and the pair had ceased to speak by 1936 (Furmanksy 2009:202-208). Van Name had clashed with Thomson during an earlier fact-finding trip to Yosemite on the sugar pines without informing Thomson about the reason for his visit. Thomson also knew of Van Name's disdain for the National Park Service and its employees (Furmansky 2009:208). Despite the breakdown of his relationship with Edge, Van Name continued to financially support the ECC and Hawk Mountain Sanctuary (Furmansky 2009:208).

In large part, the ECC and Edge owed their national park successes to Irving Brant's membership. As special adviser to President Roosevelt and a friend of Roosevelt's Secretary of the Interior Harold Ickes, Brant placed Edge and the ECC in a position to influence the Department of the Interior and the National Park Service and to function as their grassroots partner. As Brant later explained, "Again and again, when Secretary Ickes was faced with some acute issue requiring public support in advance of action, he would say to me: 'Won't you ask Mrs. Edge to put out something on this?' And she always did, for in forest and wildlife conservation an Ickes objective was practically certain to be a natural objective of the committee" (as cited in Bainbridge 2002:208). The ECC's work in support of a variety of causes coupled with its influence within the Department of the Interior endowed Edge with "a position of unprecedented visibility for a woman in the conservation movement. Indeed, the old wildlife crusader William Temple Hornaday proclaimed her 'the only woman in conservation'" (Furmansky 2009:218).

Edge's influence over the National Park Service, the Department of the Interior, and the creation of national parks largely faded after Harold Ickes resigned as Secretary of the Interior in 1946, but the ECC continued to support and advance the objectives of the American conservation movement through its publications (Furmansky 2009:24). The ECC's primary purpose was to publish and distribute "pamphlets, leaflets, annual reports, news releases, circular letters, open letters to government officials," and other documents generated by Edge and the organization's other members (Bainbridge 2002:3). Its teaching units had the broadest societal impacts. Between 1934 and 1940, the ECC published twelve teaching units covering conservation topics and distributed them to individuals, schools, and the federal government for use in Civilian Conservation Corps camps. Aldo Leopold, one of the most influential conservationists of the twentieth century, called the pamphlets "a step in advance of most conservation literature for schools in that they deal with a series of specific problems on which the student is encouraged to gather specific evidence, and presumably to make his own interpretation of that evidence" (as cited in Bainbridge 2002:4). Echoing Leopold, Roland C. Clement described the ECC's teaching units and its general publications as "required reading" for conservationists in the early twentieth century and noted that they provided a valuable education to early conservationists (Furmansky 2009:253).

Historians generally portray Rachel Carson and *Silent Spring*, published in 1962, as the starting point for the American environmental movement, "But people brought up on the battles defined by Rosalie Edge's ECC might beg to differ; like Edge they thought the movement had begun twenty-five years earlier and that they had been part of it" (Furmansky 2009:247). The ECC's efforts to save wildlife and wildlands represented an early expression of an ecological point of view, which was rare when it was active but became widespread during the environmental movement that began in the 1950s and 1960s. The group's militant tactics, developed under Edge's leadership, anticipated the methods employed by the environmental activists of the late twentieth century (Polly Welts Kaufman as cited in Bainbridge 2002:3). In other words, "the ECC," and by extension Edge, "may be regarded as a proto-environmental group whose ideas exemplified a transitional phase in the conservation movement" (Bainbridge 2002:viii), and the creation of Hawk Mountain Sanctuary represented one of their greatest achievements (Bainbridge 2002:3). Edge shut down the Emergency Conservation Committee in 1962 shortly before her death. In the end, Edge's "career with the ECC made her the first woman to have a considerable impact on the conservation movement" (Stephen Fox as cited in Bainbridge 2002:13).

Rosalie Edge and Hawk Mountain Sanctuary, 1934–1962

As discussed above, the genesis of Hawk Mountain Sanctuary and Edge's foray into raptor conservation began in 1933 after she attended a talk that Richard Pough gave at a meeting of the Hawk and Owl Society in New York City. With a \$500.00 loan from Van Name and donations from the ECC's supporters, Edge acquired land on the Kittatinny Ridge and founded Hawk Mountain Sanctuary in 1934. Recognizing that signs and fences would be inadequate defenses against hunters, Edge turned to Maurice Broun and his wife, Irma, to serve as Hawk Mountain Sanctuary's first wardens and environmental educators. Edge's decision to purchase and establish Hawk Mountain Sanctuary renewed her long-standing conflict with the NAAS, which had also expressed an interest in acquiring the land for a bird sanctuary (Nijhuis 2021). The NAAS initially pledged to contribute \$1,000.00 toward operating expenses at Hawk Mountain Sanctuary in 1934, but the organization felt it was better positioned to administer the sanctuary and instead attempted to secure donations to purchase the property behind Edge's back (Furmansky 2009:178–182). As a result, when Edge established the HMSA in 1938 she ensured that its charter was complicated to prevent the NAAS or its successor, the National Audubon Society, from ever becoming involved in the management of Hawk Mountain Sanctuary (Edge 1999). Edge eventually reconciled with the National Audubon Society shortly before her death in 1962.

Despite the NAAS's initial attempts to undermine her work with Hawk Mountain Sanctuary, Edge, with the invaluable assistance of the Brouns, brought the decades-long practice of hunting hawks to an end in Pennsylvania with the passage of state laws protecting them in 1937 and 1951 and successfully altered the public perception of hawks through scientific observation and education. As she did with the ECC, Edge employed a grass-roots strategy in her campaign for the protection of hawks, relying heavily on the newsletters that she produced and distributed through the HMSA, Broun's "classroom in the sky," and the conservation literature that Irma Broun distributed to visitors, and these tactics proved to be highly successful (see above) (Furmansky 2009:182–183, 218–220). Even Edge's former nemesis T. Gilbert Pearson, president emeritus of the NAAS, found the sanctuary's success impressive. After visiting Hawk Mountain Sanctuary in 1940, Pearson wrote a letter to congratulate Edge. Enclosing \$2.00 for an annual membership in the HMSA, he wrote, "I was impressed with the usefulness of your undertaking. You certainly are to be commended for carrying through to success this laudable dream of yours" (as cited in Nijhuis 2021).

Many historians have identified Hawk Mountain Sanctuary as one of the ECC's projects and successes. In fact, Bainbridge (2002:3) asserts in "The Origins of Rosalie Edge's Emergency Conservation Committee, 1930-1962," "Hawk Mountain Sanctuary and Olympic National Park marked two of the greatest successes of Edge and her committee." Although Hawk Mountain Sanctuary was an outgrowth of the ECC that exemplified the ecological approach to conservation Edge learned from Van Name, Edge largely kept her work with the two organizations and their operations separate. Laura Kathleen Sumner clearly distinguishes the establishment of Hawk Mountain Sanctuary from Edge's work with the ECC in her thesis entitled "Rosalie Edge and the Conservation Movement." Sumner (1993:47) writes of Edge in a chapter entitled "Personal Crusades" that "none of her work in the conservation movement was as important to her as her work in establishing a permanent sanctuary [Hawk Mountain Sanctuary] that would be able to be appreciated by future generations." The arrangement of Edge's desk at her rented office on Lexington Avenue in Manhattan serves as a fitting metaphor for the relationship between the ECC and Hawk Mountain Sanctuary. Edge kept the files for the ECC and the HMSA on her desk but on opposite sides. From her office, Edge composed newsletters for the sanctuary, sent letters to supporters requesting donations for it, and appealed to Pennsylvania legislators to change state laws regarding raptors (Furmansky 2009:218–219). Although Edge separated the two organizations, the sanctuary officially operated under the aegis of and appeared on the financial records of the ECC until the establishment of the HMSA in 1938 (Emergency Conservation Committee 1937; Edge 1999).

Given her first-hand experience with the NAAS and the ways in which a few rich donors could manipulate any non-profit organization, Edge sought to establish a wide base of support for Hawk Mountain Sanctuary. The cost of an annual membership to Hawk Mountain Sanctuary amounted to \$2.00, which was affordable for many people even during the Great Depression (Furmansky 2009:219). Edge's efforts to stimulate a strong membership base for Hawk Mountain Sanctuary represented a major shift from her approach to the ECC.

Edge frequently visited Hawk Mountain Sanctuary, but she entrusted the protection of the mountain and the actual enactment of its mission to Maurice and Irma Broun (see below) (Furmansky 2009:219). Whereas Maurice Broun "ran the physical sanctuary ... pontificated on hawks atop the Mountain ... wrote the scientific papers" and was popular with the visitors, "the money, the life-blood of the organization," depended on Edge and "her membership lists, her persuasive appeals, her loyal contributors" (Edge 1999). Edge maintained a close working relationship with the Brouns throughout her life. However, a rift between the two parties appeared in the late 1940s due to Edge's imperious behavior

and deepened with Broun's dedication of his 1949 book *Hawks Aloft* to Edith McLellan Hale, who had inspired his love for birding, rather than to Edge (Furmansky 2009:245). Despite their disagreements, Edge and the Brouns worked together to ensure the success of Hawk Mountain Sanctuary and to protect raptors into the 1960s. Edge remained the president of the HMSA until her death in 1962. By this time, the majority of the raptors that migrated through the flyway located above Hawk Mountain Sanctuary were protected by state laws, which had been enacted "due mostly to the work of Edge and those who worked" for the sanctuary (Sumner 1993:50).

Rosalie Edge's Conservation Legacy

In her work with the ECC and Hawk Mountain Sanctuary, Edge unleashed a militant form of conservation activism that became the model for the environmental movement of the mid- to late twentieth and early twenty-first centuries. The Wilderness Society, founded in 1935, was one of the first "descendants" of the ECC. All eight founders of the Wilderness Society-Robert Marshall, Andy Anderson, Harvey Broome, Bernard Frank, Aldo Leopold, Benton MacKaye, Ernest Oberholzer, and Robert Yard-knew Edge, and many had been supporters of the ECC. Echoing the ECC, the Wildnerness Society's mission statement asserted that it was "born of an emergency in conservation which admits of no delay" (as cited in Furmansky 2009:209). Throughout the subsequent decades, "The ECC's spawn would rapidly multiply and take various approaches to the challenge of bringing humanity and nature into sustainable balance. One way or another, in their professions or their personal lives or both, these conservationists had been touched by Rosalie Edge's spirit of informed activism" (Furmansky 2009:247). The Sierra Club, founded in 1892 by John Muir, the father of the American conservation movement, became radicalized in the tradition of the ECC in the 1950s under David Brower, who "more than any other conservationist of his generation had assumed Edge's combative mantle" (Furmansky 2009:246). During the 1950s, Edge worked with the Sierra Club and the Wilderness Society to prevent the construction of a dam in Dinosaur National Monument in Colorado. She produced circulars and sent letters to high-ranking government officials under the auspices of the ECC. Other protégés of Edge included Roger Tory Peterson, a celebrated author of bird guides, and Richard Pough, co-founder of the Nature Conservancy (Furmansky 2009).

Edge's influence and significance within the American conservation and environmental movements extends well beyond the organizations inspired by her militant form of activism. One of her earliest and most notable contributions, of course, was the reformation and transformation of the NAAS. According to sociologist Robert Brulle, Edge transformed the Audubon Society "from a gun-company-controlled hunting organization to an advocate for the protection of wildlife as beings with their own purposes and ends other than to serve human needs" (as cited in Spears 2020). In 1948, 14 years before the publication of Rachel Carson's *Silent Spring*, Edge noted the negative effects of the pesticide DDT on bird populations as a citizen-scientist, when she sent proof to the federal government that high concentrations of the insecticide were killing songbirds at a golf course in Westchester (Furmansky 2009:250). Edge's contemporaries and colleagues recognized her significance within the American conservation movement. In a profile of Edge published in the *New Yorker* in 1948, Dr. Willard Van Name, the one-time mentor and supporter with whom Edge had a falling out in 1935, observed, "She's unique in the field. She's the only honest, unselfish, indomitable hellcat in the history of conservation" (Furmansky 2009: 245). Similarly, Maurice Broun described her as, "without question the foremost woman conservationist of the twentieth century" (as cited in Furmansky 2009:251).

When she died at the age of 85, on November 30, 1962, Edge left behind a multi-faceted conservation legacy. She changed the landscape of the American conservation movement, instilling it with a militant grassroots activism rooted in an ecological perspective toward the preservation of natural lands and wildlife. In doing so, she inspired, shaped, and fostered the modern environmental movement. While many of Edge's campaigns took place behind her desk through pamphlets and letters, "Hawk Mountain is the best-known monument to Rosalie Edge" and represents her greatest achiement (Furmansky 2009:252). As Bainbridge (2002:218) observes in his study of Edge and the American conservation movement, "The HMSA rather than the ECC was Edge's organizational legacy" because "Hawk Mountain Sanctuary, under the guidance of the HMSA, remained devoted to Edge's purposes for establishing the sanctuary." Roland C. Clement, the founder of the Environmental Defense Fund and a protégé of Edge and Broun, best summarizes Edge's conservation legacy. He writes:

The conservation movement of the 1960s is attributed to Rachel Carson's prophetic warnings But Rosalie Edge had been sounding educated warnings for years about how we were harming the natural world, and until the end of her life she dedicated herself to saving that world. Many of us paid heed to her warnings. Many of us built our environmental careers with her work at Hawk Mountain Sanctuary and the national parks as models (as cited in Furmansky 2009:254).

Maurice Broun (1906–1979)

Born in Romania in 1906 to poor Jewish parents, Maurice Broun (**Figure 12**) immigrated to the United States with his mother around the age of four. His mother died of tuberculosis before he turned ten, and Broun spent the early part of his childhood with relatives, in an orphanage, and in foster homes. A Jewish couple with the last name of Brownstein eventually adopted Morris, as he was known during his childhood. By the time Broun was 13, the Brownsteins had moved the family to Boston (Harwood 1980; Furmansky 2009:169). Broun traced his passion for birds back to an incident that occurred to him at the age of 13, when a group of birdwatchers in the Boston Public Garden showed him a magnolia warbler. Broun described this transformational moment in lyrical prose in his celebrated book *Hawks Aloft*, published in 1949:

My interest in birds was awakened one glorious morning in May when I was 13 years of age. I had wandered into the Boston Public Garden and had come upon a group of serious-looking grownups scanning the treetops with field glasses. I looked on with openeyed wonder, when a tall, gracious lady left the group and offered me her glasses; and presently I too was straining my neck upwards, looking at a dainty bird flitting nervously through the upper reaches of a willow tree. The bird, I was told, was a magnolia warbler. So graceful, so vivacious, so trim in its brilliant spring plumage of bright yellow, black and white, it was truly the most beautiful thing my eyes at ever beheld ... Birds suddenly became a daily excitement to me, a passion, and contact with birds in one way or another became as necessary to me as food (Broun 2000:1).

Edith McLellan Hale was one of the birders who introduced Broun to the magnolia warbler, and he credited this "tall, gracious lady" with fostering his love for birds (Broun 2000:3).

Berks and Schuylkill Counties, PA County and State



Figure 12. Irma Penniman Broun Kahn (left) and Maurice Broun (right) with children at Hawk Mountain Sanctuary gate, no date (HMSA).

Broun's refusal to continue attending high school after ninth grade made life with the Brownsteins untenable, and he ran away at the age of 15. He worked as a busboy, a delivery boy, a janitor, and an attendant in a hospital laundry to support himself (Harwood 1980; Furmansky 2009:170). He also gained a reputation in Boston as a "bright, enthusiastic young birder" and led guided walks through the Boston Public Garden, which was near his rented room (Harwood 1980). Broun published a pamphlet on the birds found in the garden at the age of 19 (Harwood 1980; Furmansky 2009:170).

Broun's friend Edith McLellan Hale gave a copy of his pamphlet to John B. May, who was working on a book entitled *The Birds of Massachusetts and Other New England States* with Massachusetts state ornithologist Edwin Howe Forbush. May recommended Broun to Forbush as a field assistant, and Forbush hired Broun to help him complete the third and final volume of the book. Broun wrote several of the entries on bird species that appeared in the volume published in 1929, including those for the black-capped chickadee and the hybrid Lawrence's warbler (Brett and Bildstein 2014). Forbush and May served as mentors to Broun and helped to propel him "into a life of conservation work" (Harwood 1980).

In 1929, Broun became the first curator of the Pleasant Valley Wildlife Sanctuary, a private nature preserve in the Berkshire Mountains in Lenox, Massachusetts. He helped to cut miles of trails with the help of an assistant and a volunteer, built exhibits, and transformed a barn on the property into a museum (Hendricks 1979:19; Bergman 2004:62). Within a few years, Broun found himself at odds with his employers over their decision to operate a tea house on the preserve. As a naturalist in the tradition of Henry David Thoreau, Broun disapproved of "distracting visitors with such amenities as tea houses, common enough in the cities they had left behind for the day" (Furmansky 2009:170). He was forced to

leave his job at the wildlife sanctuary in 1932, after he spoke to guests about the work of Rosalie Edge and the ECC and defended their criticisms of the NAAS and the American conservation movement (Furmansky 2009:171).

The Austin Ornithological Research Station on Cape Cod hired Broun as a research associate in 1932, and he banded and released wild birds at the station with the assistance of Boy Scout Roland C. Clement, the future founder of the Environmental Defense Fund. Broun met his future wife, Irma Knowles Penniman, when she visited her cousin Emma Knowles, the secretary to Massachusetts's state ornithologist John B. May, and the couple married in New York City on January 19, 1934 (Salter 1994:42; Furmansky 2009:171–172). After he left the Austin Ornithological Research Station in 1934, Broun initially worked as a staff naturalist for the Treadway Inns and built trails and a nature center in the Adirondacks and the Berkshires. In the summer of 1934, he took a position as the resident naturalist at the Long Trail Lodge operated by the Green Mountain Club in Rutland, Vermont (*Standard-Speaker* 1963:12; Harwood 1980, 1989). Several months later, Rosalie Edge, who had met Broun at the Austin Ornithological Research Station, offered him the position of "ornithologist-in-charge" at Hawk Mountain Sanctuary (Brett 1991). For nine years, Broun worked at the Long Trail Lodge, where he established the Trail Side Museum, in the summer and at Hawk Mountain Sanctuary in the fall (*The Morning Call* 1961:13).

The Brouns arrived at Hawk Mountain Sanctuary in September 1934, and Maurice spent most of the month posting signs along the sanctuary's boundaries and turning away hunters. At Broun's suggestion, Edge hired a local sheriff's deputy, Bob Kramer, to help him patrol the boundaries and turn away hunters every day. Kramer, unlike Broun, had the power to arrest people if they trespassed on Hawk Mountain or killed a protected osprey, eagle, or sparrow hawk. Richard Pough also sent two friends from Philadelphia. Charles French and Dudley Wagar, to help Broun and Kramer in October 1934 (Broun 2000:28-35). Broun took the first official bird count of migrating raptors on September 30, 1934. He quickly recognized that annual bird counts would enable Hawk Mountain Sanctuary to monitor regional bird populations, and taking the counts quickly became a fixed part of fieldwork (Brett and Bildstein 2014). In 1886, C. C. Trowbridge had begun monitoring the movements of birds of prey in southern Connecticut and maintaining daily records documenting the number of individuals of each species seen and aspects of their flight behavior (Bildstein et al. 2009:44). Trowbridge's efforts established the mid-Atlantic region as an important flyway for migratory raptors and "standardized visual counts along major corridors as an effective technique in the study of raptor migration," but daily and annual raptor counts were not regularly used as a scientific tool until raptor conservationists sought to combat raptor persecution beginning in the 1920s and 1930s (Bildstein et al. 2009:44).

Annual hawk counts occurred at Hawk Mountain Sanctuary and Cape May Point in New Jersey, both of which were "premiere [raptor] 'shooting galleries'" (Bildstein et al. 2009:44), before World War II (Hawk Migration Association of North America 2021b). The pre-World War II annual hawk counts conducted at Cape May Point, however, were largely conducted by two men, Al Nicholson and Ernie Choate, who did not share the interest of Broun and Edge in drawing new converts to the cause of raptor conservation (Connor 1991:33–62). As such, HMANA regards Hawk Mountain Sanctuary as the "first raptor migration watchsite in the world" (Hawk Mountain Association of North America 2021b). Broun's constant presence on Hawk Mountain and his scientific observations and data collection revealed the importance of the flyway located along the Kittatinny Ridge for North American raptors (Potts 1984:1). Broun also discovered that the Appalachian Mountains represented a significant migration corridor for golden eagles in 1934, when he counted 39 individuals from the species on a single day in the fall. Ornithologists, however, did not believe the accuracy of Broun's count and did not accept the presence of a significant migration corridor for golden eagles along the Appalachian Mountains until several years

later (Brett and Bildstein 2014:94–95). In the 1930s, incomplete data led ornithologists to view the the species as an "extremely rare straggler in eastern north America in autumn" (Bildstein and Compton 2000:162).

During their first years as wardens of Hawk Mountain Sanctuary between 1934 and 1938, the Brouns stayed with Walter and Mamie Koch in Drehersville, approximately 1.5 miles northwest of Hawk Mountain Sanctuary (U.S. Census Bureau 1940; Broun 2000:25–26). The Kochs earned a living primarily through agriculture and supplemented their income with boarders (U.S. Census Bureau 1940; Broun 2000:25–26). Edge and the HMSA hired Maurice Broun as a full-time, live-in, year-round employee after he left the Navy in 1946. He and Irma moved into Schaumboch's Tavern that same year (Broun 2000:97). Walter and Mamie Koch subsequently rented accommodations in their farmhouse in Drehersville to tourists visiting Hawk Mountain Sanctuary (*The Call* 1946:7).

Broun made significant contributions to ornithology and conservation by producing numerous articles based on his observations at Hawk Mountain Sanctuary. He published his first scholarly work about raptors, an article about the relationship between weather patterns and raptor flight, in *The Auk* in 1935. The first five years of bird counts at Hawk Mountain Sanctuary appeared in The Auk four years later in 1939. He subsequently published articles on the annual bird counts at Hawk Mountain Sanctuary, studies of migrating bluejays and other non-raptors at the sanctuary, and the results of a study on the flight speeds of raptors in The Auk from 1941 to 1943. Broun was also interested in botany and authored a book entitled Index to North American Ferns in 1938. He published his most well-known work, an account of the early history of Hawk Mountain Sanctuary entitled Hawks Aloft: The Story of Hawk Mountain, in 1949. The book "has since become a conservation classic" and "set the stage for the Sanctuary's entry into international raptor conservation" (Brett and Bildstein 2014:96). Broun recognized the potential dangers of climate change in 1949, well before it was established as a scientific fact in the late twentieth century. In Hawks Aloft, he wrote: "It is interesting to speculate what might happen to man if the average temperature of the earth were to rise only 10 degrees and remain so indefinitely. Such a change would automatically unlock the frozen wastes of the polar regions; the resulting expansions of the oceans would inundate the seaboard cities of the world and obliterate many of its fertile valleys" (Broun 2000:74).

In 1952, Muhlenberg College, approximately 25 miles from Hawk Mountain Sanctuary in Allentown, Pennsylvania, awarded Broun an honorary doctorate in recognition of his contributions to conservation (Libby 1966:23). As noted above, Broun's growing number of responsibilities as curator in the 1950s and 1960s significantly slowed the pace at which he published scientific literature. His last significant technical publication, a summary of the effects of cold fronts on raptor migration, appeared in the *Atlantic* Naturalist in 1951 and was reprinted by the HMSA as a pamphlet in 1963 (Brett and Bildstein 2014). In total, Broun published more than 75 articles on natural history. He also presented lectures on natural history throughout the United States, including at Longwood Gardens in Kennett Square, Pennsylvania, during the latter decades of his life (Standard-Speaker 1963:12; The Bangor Daily News 1968:4; Beach 1979:34). In 1965, Broun received the American Motors Conservation Award, which was presented each year to ten professional and ten amateur conservationists. Recipients were selected based on "dedicated efforts in the field of renewable natural resources which would not otherwise gain widespread public attention" (The Pittsburgh Press 1965:74). Broun retired as curator of Hawk Mountain Sanctuary in 1966, in part to escape the growing numbers of visitors who came to the sanctuary each year (Harwood 1980). After his retirement, Maurice and Irma moved to Strawberry Hill, a farm in New Ringgold, Pennsylvania, approximately five miles north of Hawk Mountain Sanctuary (Salter 1997).

Berks and Schuylkill Counties, PA County and State

In the 1970s, the generation of ornithologists, conservationists, and students that Broun had taught and mentored throughout his career "astonished him by developing a continental network of hawkwatches for migration study and then acknowledging him as the father of it all" (Harwood 1980). Known as the Hawk Migration Association of North America (see above), this network continues to collect "hundreds of thousands of bits of information each season" and to "make a significant contribution to the study of bird migration" (Brett and Bildstein 2014:54). In other words, Broun was not only the father of Hawk Mountain Sanctuary but also of the conservation and scientific study of raptors in the United States (Harwood 1980). In recognition of Broun's "contribution and commitment to the preservation of our natural heritage" and as "an outstanding ornithologist, a botanist of distinction and a life-long naturalist ... instrumental in the establishment of wildlife sanctuaries in five states," Albright College in Reading, Berks County's county seat, granted him an honorary doctorate in 1976 (*Pottsville Republican* 1976:16). Broun died of cancer at the age of 73 on October 2, 1979 (Salter 1997; Brett and Bildstein 2014:97).

Maurice Broun, a self-taught immigrant from an impoverished working-class background, established himself as "one of the major figures of his generation in the field of conservation" and as one of the foremost American ornithologists, thereby effectively creating the field of raptor study as a scientific discipline (Harwood 1980). His greatest achievement, however, "spanned 32 years, 1934 to 1966, when he served as curator of Hawk Mountain Sanctuary" (Harwood 1980). In short, Broun's "name is synonymous with Hawk Mountain" (Matthew J. Spence cited in Turano 2006:4).



Figure 13. Irma Penniman Broun Kahn with red-tailed hawk, no date (HMSA).

Irma Penniman Broun Kahn (1908–1997)

Irma Penniman Broun Kahn (**Figure 13**), the wife of Hawk Mountain Sanctuary's first curator and noted ornithologist Maurice Broun, was also "a pioneer conservationist" in her own right, "known for turning away armed hunters from the sanctuary's gate" (Salter 1997). Her childhood represented a stark contrast to the tragedy and poverty experienced by her husband (Furmansky 2009). Born on January 24, 1908, in Boston, Massachusetts, Irma Knowles Penniman was the daughter of Edward D. and Martha I.C.

Chittenden Penniman and the granddaughter of a wealthy whaling captain (Gilmore 1985:14; Find A Grave 2016b, 2016c). Her father, Edward D. Penniman (1870–1945), was the youngest child of Captain Edward Penniman (1831–1913), one of the most successful whaling captains in New England and a descendant of James Penniman, who arrived in Massachusetts in 1631, and Betsy Augusta Knowles Penniman (1937–1921), a descendant of one of the earliest settlers in Eastham, Massachusetts, on Cape Cod (Gilmore 1985:12; Kneedler-Schad et al. 1995:14; Find A Grave 2016a; National Park Service, n.d.). Through a career that included seven trips around the globe and three voyages with his wife and one or more of their children, Captain Edward Penniman amassed a fortune that enabled him to build an elaborate Second Empire-style dwelling on Fort Hill in Eastham in 1868 (Gilmore 1985:12–14; Furmansky 2009).¹¹ Edward D. Penniman grew up in the house, and Irma Penniman spent much of her childhood there, where she was raised by her aunt Betsey A. Penniman (1868–1957) (Kneedler-Schad et al. 1995:37). As noted in the previous section, Irma met Maurice Broun when she visited the Austin Ornithological Research Center with her cousin, Emma Knowles, in 1933, and "the penniless Jewish immigrant married the Puritan heiress in a New York City clerk's office" on January 19, 1934 (Furmansky 2009).

During her first season at Hawk Mountain Sanctuary with Maurice in the fall of 1934, Irma played a relatively minor role in the sanctuary's affairs, spending most of her time with the Koch family in Drehersville. Her connection with Broun and Hawk Mountain Sanctuary ensured, however, that she became well-known in the town and the surrounding area as the "hawk woman," an identity that she retained for the rest of her life (Broun 2000:29). Irma Broun became a significant figure within the history of Hawk Mountain Sanctuary and the American conservation movement in September 1935, when she returned to the sanctuary with her husband. Whereas Edge had had sufficient funds the preceding year to hire a local sheriff's deputy to support Broun's efforts to protect Hawk Mountain Sanctuary, she lacked the necessary money to do so in 1935. Irma Broun happily volunteered to be "the keeper of the gate" to Hawk Mountain Sanctuary, which left Maurice free to serve as guide and watcher at North Lookout (Broun 2000:37–38). By September 1935, Hawk Mountain Sanctuary had begun to generate positive press from the local newspapers, and visitors began to flock to the sanctuary in appreciable numbers, which necessitated the presence of a gate keeper. On a day late in the month, Irma Broun greeted over 200 visitors and "found herself directing traffic and advising people where and how to park" on Hawk Mountain Road, which was narrow and in extremely poor condition at the time (Broun 2000:39). Greeting visitors, passing out and selling conservation literature, and telling visitors where to park became part of Irma's role every year thereafter (Broun 2000:39).

As Hawk Mountain's gatekeeper, Irma Broun occasionally faced down angry hunters with guns, though these incidents were most frequent during the fall of 1935. She successfully persuaded some hunters to walk to North Lookout without their guns, and many became supporters of raptor preservation after their visits (Broun 2000:40). In the fall of 1935, Irma Broun admitted more than 1,250 visitors to Hawk Mountain Sanctuary. Between 1935 and 1966, she served as the "keeper of the gate" on weekends, often welcoming more than 850 visitors on Sundays (Broun 2000:41).

Irma Broun effectively served as the HMSA's first visitor services' and public relations employee, greeting visitors, answering their questions about the sanctuary and hawks, handing out conservation literature, and directing people to North Lookout. Like Maurice Broun and Rosalie Edge, she represented

¹¹ The Captain Edward Penniman House (NRIS 76000155) was listed in the National Register of Historic Places in 1976 and is within the boundary of the Cape Cod National Seashore. Irma Penniman Broun Kahn inherited the house after Betsey A. Penniman's death in 1957, and she and Maurice Broun sold it to the National Park Service in 1963.

the public face of Hawk Mountain Sanctuary and the HMSA. As a reporter from the Rochester-based *Democrat and Chronicle* noted in 1952, "Irma serves variously as receptionist, diplomat, office manager and gatekeeper" (Barry 1952:19). A reporter from *The Morning Call* noted in 1947: "With the admission goes any and all information the visitor may want. Irma Broun knows all the answers. She gives them in the manner which indicates that she regards it as a privilege to do so. Like all naturalists she is wholly devoted to the project in hand and is therefore a gracious host" (*The Morning Call* 1947b:7). After she returned to Hawk Mountain Sanctuary with her husband in 1946 and became a full-time resident of Scahumboch's Tavern, Irma Broun also welcomed visitors to the tavern (Barry 1952:19). Three years later, a reporter observed in an article on *Hawks Aloft*, "Since the establishment of Hawk Mountain Sanctuary, Maurice and Irma Broun have succeeded in turning local hostility into state-wide pride and apathy into international recognition (*Tampa Bay Times* 1949:102). Irma Broun was "pivotal in the development" of Hawk Mountain Sanctuary and played an equally important role in ensuring the sanctuary's success and in changing public perceptions of raptors as Maurice Broun and Edge (Pennsylvania Heritage Staff 2005).

After Maurice's death in 1979, Irma Penniman Broun married Richard Kahn, who had served as the best man at her and Broun's wedding. The couple moved to California, where she died at the age of 89 in Modesto on March 25, 1997 (Salter 1997).

Potential for Criterion D—Information Potential

This documentation does not identify or address all archaeological resources within the district boundary and does not consider the potential for significance under Criterion D. Archaeological investigation of the property by qualified archaeologists and Tribal input would be necessary to inform further evaluation of the district's significance related to uses prior to the Sanctuary's creation, including by Native Americans. Unidentified and documented pre-contact archaeological sites, and standing ruins and associated historical archeological sites associated with nineteenth-century industrial activities on Hawk Mountain, such as The Slide, may have the potential to yield important information about the property's history. Future nominations or an amendment to this nomination might be pursued following additional investigation and research. Hawk Mountain Sanctuary

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Hawk Mountain Sanctuary	Berks and Schuylkill Counties, PA
Name of Property	County and State

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Previous documentation on file (NPS):

_preliminary determination of individual listing (36 CFR 67) has been requested

X previously listed in the National Register: (Schaumboch's Tavern, NRIS ID# 79002166)

previously determined eligible by the National Register

_____designated a National Historic Landmark

- ____recorded by Historic American Buildings Survey #
- ____recorded by Historic American Engineering Record #

____recorded by Historic American Landscape Survey #

Berks and Schuylkill Counties, PA County and State

Primary location of additional data:

- State Historic Preservation Office
- ___Other State agency
- Federal agency
- Local government
- University
- X Other

Name of repository: Hawk Mountain Sanctuary Archives

Historic Resources Survey Number (if assigned): NA

10. Geographical Data

Acreage of Property: 2,067

Latitude/Longitude Coordinates

Datum if other than WGS84:______(enter coordinates to 6 decimal places)

Latitude	Longitude
A. 40.64728	-75.99963
B. 40.65418	-75.96607
C. 40.63379	-75.96195
D. 40.63282	-75.97370
E. 40.63106	-75.96220
F. 40.61809	-75.96186
G. 40.62963	-75.99284

Verbal Boundary Description

The Hawk Mountain Sanctuary National Register Historic District, as shown on the accompanying district maps (**Figures 14 and 15**), is a 1,720-acre district within the larger boundary of Hawk Mountain Sanctuary. The district boundary follows the legal parcel lines for property owned by the Hawk Mountain Sanctuary Association in 1987, as recorded by the Assessment Departments for Berks and Schuylkill counties. The district is bounded by the Little Schuylkill River and private agricultural and residential properties on the north; Pennsylvania State Game Lands No. 106, the Appalachian National Scenic Trail, and private residential properties on the east; Pennsylvania State Game Lands No. 106 on the south; and Hawk Mountain Sanctuary land on the west. Parcels of primarily vacant wooded land at the east and west edges of the Sanctuary that were acquired after 1987 are excluded from the National Register district. The district also excludes the Sanctuary's Acopian Center for Conservation Learning, a biological field station and training facility established in 2002 on a discontiguous 65.8-acre property along State Route 895 in Drehersville at the base of the mountain 1.75 miles west of the Hawk Mountain Visitor Center.

Boundary Justification

The National Register district boundary encompasses the original 1934 acreage set aside for conservation purposes and all subsequent land acquisitions by Hawk Mountain Sanctuary through 1987, the end of the period of significance defined in this documentation. Land acquired by the Hawk Mountain Sanctuary Association after 1987, including the Acopian Center property, does not contain resources associated with the district's significance in the area of Conservation. No known resources directly associated with the operation of the Sanctuary during its period of significance have been excluded unless they have lost integrity of design, materials, and workmanship through multiple additions.

11. Form Prepared By

name/title: Laura Kline, Sr. Architectural Historian; Eryn Boyce, Architectural Historian; Jillian <u>Miller, Architectural Historian</u> organization: <u>PAL</u> street & number: <u>26 Main Street</u> city or town: <u>Pawtucket</u> state: <u>RI</u> zip code: <u>02860</u> e-mail: <u>lkline@palinc.com</u> telephone: <u>(401) 728-8780</u> date: <u>October, 2021</u>

Additional Documentation

Photo Log

Name of Property:Hawk Mountain SanctuaryCity or Vicinity:Albany, East Brunswick, West BrunswickCounty:Berks; SchuylkillState:PAPhotographer:Laura Kline, PAL and Hawk Mountain Sanctuary AssociationDate Photographed:July 13, 2021 and 2010–2021

Photo #	Description	Photographer
1	Hawk Mountain from Acopian Center	Laura Kline, PAL
2	Hawk Mountain Road and Schaumboch's	Hawk Mountain Sanctuary Association
	Tavern	
3	Entrance Gate	Hawk Mountain Sanctuary Association
4	Entrance Shelter	Hawk Mountain Sanctuary Association
5	Lookout Trail	Hawk Mountain Sanctuary Association
6	View from South Lookout	Hawk Mountain Sanctuary Association
7	View from Ridge Overlook	Hawk Mountain Sanctuary Association
8	The Slide	Hawk Mountain Sanctuary Association
9	Headhouse Foundation	Hawk Mountain Sanctuary Association
10	The Hall of the Mountain King	Hawk Mountain Sanctuary Association
11	Steps to North Lookout	Hawk Mountain Sanctuary Association

Hawk Mountain Sanctuary

Name of Property

Berks and Schuylkill Counties, PA County and State

12	View from North Lookout	Hawk Mountain Sanctuary Association
13	River of Rocks	Hawk Mountain Sanctuary Association
14	Hawk Mountain Visitor Center	Laura Kline, PAL
15	Amphitheater	Hawk Mountain Sanctuary Association
16	Hill House	Hawk Mountain Sanctuary Association
17	Irma Broun-Kahn Education Building	Hawk Mountain Sanctuary Association
18	Schaumboch's Tavern	Laura Kline, PAL
19	Schaumboch's Pond	Laura Kline, PAL
20	West Chester Shelter	Hawk Mountain Sanctuary Association
21	Goodwin-Fricke Shelter	Hawk Mountain Sanctuary Association

List of Figures.

Figure 1. Location of Hawk Mountain Sanctuary (green star) in Pennsylvania

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Figure 3. Map of Hawk Mountain Sanctuary trail system (HMSA).

Figure 4. Hawk Mountain Visitor Center, 1974 (HMSA).

Figure 5. Architectural rendering of Education Building, 1953 (HMSA).

Figure 6. Photograph of slaughtered hawks at Hawk Mountain taken by Harold Pough in 1932 (Nijhuis 2021).

Figure 7. Hawk Mountain Sanctuary membership sign from the 1930s (Nijhuis 2021).

Figure 8. Rosalie Edge (middle) with Maurice Broun (right), Irma Penniman Broun Kahn (left), and local conservationist Clayton Hoff at the Hawk Mountain Sanctuary gate, ca. 1940 (HMSA).

Figure 9. Rachel Carson at the North Lookout at Hawk Mountain Sanctuary, 1945

(ExplorePAHistory.com).

Figure 10. Aerial view of the Irma Broun-Kahn Education Building (top right), Schaumboch's Tavern (top left), and West Chester and Goodwin-Fricke shelters (bottom left), ca. 1953 (HMSA).

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Figure 13. Irma Penniman Broun Kahn with red-tailed hawk, no date (HMSA).

Figure 14. Hawk Mountain Sanctuary USGS Coordinate Map.

Figure 15. Hawk Mountain Sanctuary District Map.

Figure 16. 1938 aerial photograph of Hawk Mountain Sanctuary.

Figure 17. 2018 aerial photograph of Hawk Mountain Sanctuary.

Hawk Mountain Sanctuary Name of Property

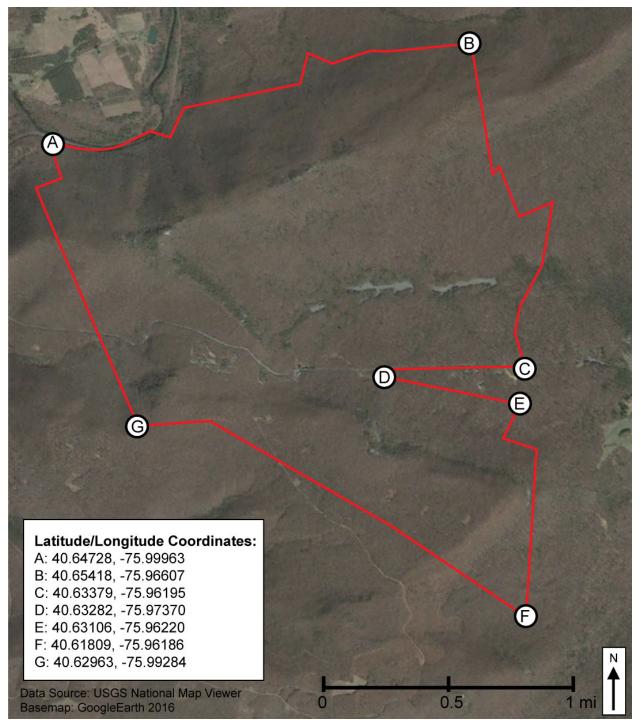


Figure 14. Hawk Mountain Sanctuary USGS Coordinate Map.

Hawk Mountain Sanctuary

Name of Property

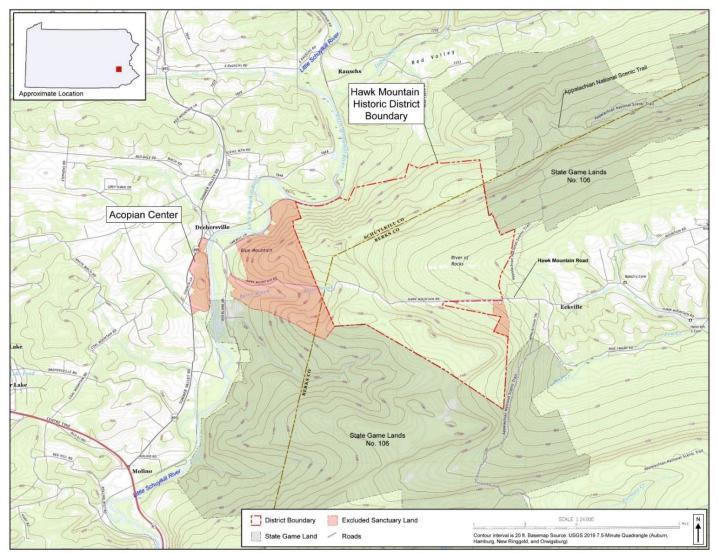


Figure 15. Hawk Mountain Sanctuary District Map.

Hawk Mountain Sanctuary

Name of Property

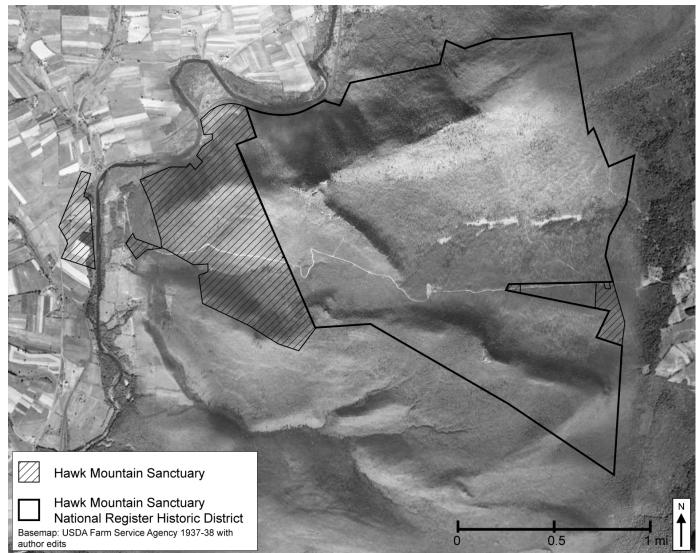


Figure 16. 1938 aerial photograph of Hawk Mountain Sanctuary.

Hawk Mountain Sanctuary Name of Property

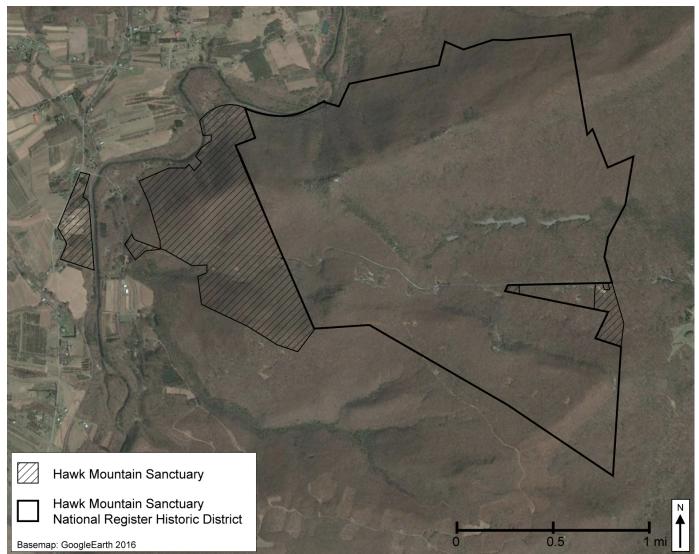


Figure 17. 2018 aerial photograph of Hawk Mountain Sanctuary.

Hawk Mountain Sanctuary

Name of Property

Berks and Schuylkill Counties, PA County and State

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management. U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION/RETURN SHEET

Requested Action:	Nomination			
Property Name:	Hawk Mountain Sanctuary District			
Multiple Name:				
State & County:	PENNSYLVANIA, I	Berks		
Date Recei 2/22/202		Pending List: Date of 16th Day: [/2022 3/23/2022	Date of 45th Day: Date of Weekly List: 4/8/2022	
Reference number:	SG100007555			
Nominator:	SHPO			
Reason For Review:	h	· ·		
Appeal		PDIL	X Text/Data Issue	
SHPO	Request	Landscape	Photo	
Waiver		X National	Map/Boundary	
Resubi	mission	Mobile Resource	Period	
Other		TCP	X Less than 50 years	
		CLG		
XAccept	Return	Reject 4/8/2	022 Date	
Abstract/Summary Comments:				
Recommendation/ Criteria				
Reviewer Lisa De	eline	Discipline	Historian	
Telephone (202)354-2239		. Date		
DOCUMENTATION	: see attached c	comments : No see attached SL	.R : No	

Pennsylvania State Historic Preservation Office PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

February 22, 2022

Joy Beasley, Keeper National Register of Historic Places National Park Service, US Department of Interior 1849 C Street, NW, Mail Stop 7228 Washington DC 20240

Re: Hawk Mountain Sanctuary District, Berks and Schuylkill Counties, Pennsylvania

Dear Ms. Beasley:

Enclosed please find a pdf version of the true and correct National Register of Historic Places nomination for the above property, including signed first page. Letters of support and tif images will follow in the future. There were no objections received for this property.

The proposed action for this property is listing in the National Register. Our Historic Preservation Board supports the nomination.

If you have any questions regarding the nominations or our request for action, please contact Elizabeth Rairigh via erairigh@pa.gov. Thank you for your consideration of these submissions.

Sincerely,

LacDonald Chokea XT

Andrea L. MacDonald Director, PA SHPO

enc.

ALM/ebr