MURIE RANCH HISTORIC DISTRICT United States Department of the Interior, National Park Service

1. NAME OF PROPERTY

Historic Name: Murie Ranch Historic District

Other Name/Site Number: STS Dude Ranch; Stella Woodbury Summer Home / Smithsonian #48TE1143

2. LOCATION

NPS Form 10-900

Street & Number: One-half mile southwest of GRTE headquarters at Moose, WY Not for publication: N/A

City/Town: Moose

Vicinity: X

Zip Code: 83012

State: WY County: Teton Code: 039

3. CLASSIFICATION

| Ownership of Property | Category of Property | |
|--------------------------|----------------------|--|
| Private: | Building(s): | |
| Public-Local: | District: <u>X</u> | |
| Public-State: | Site: | |
| Public-Federal: <u>X</u> | Structure: | |
| | Object: | |

| Number of Resources within Property | |
|-------------------------------------|----------------------|
| Contributing | Noncontributing |
| _25_ | <u>2</u> buildings |
| 1 | sites structures |
| | objects _2_ Total |

Number of Contributing Resources Previously Listed in the National Register: 20

Name of Related Multiple Property Listing: Grand Teton National Park Multiple Property Listing

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this \underline{X} nomination \underline{X} 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 \underline{M} does not meet the National Register Criteria.

Signature of Certifying Official

State or Federal Agency and Bureau

In my opinion, the property _____ meets _____ does not meet the National Register criteria.

Signature of Commenting or Other Official

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

- ____ 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):

Signature of Keeper

Date of Action

Date

Date

6. FUNCTION OR USE

| Historic: | Domestic | Sub: | multiple dwelling |
|-----------|-----------------------|------|-------------------------------------|
| Current: | Education Domestic | | research facility multiple dwelling |

7. DESCRIPTION

Architectural Classification: Other

MATERIALS:

Foundation: concrete/rock Walls: log Roof: metal/asphalt Other: stone

Describe Present and Historic Physical Appearance.

The Murie Ranch Historic District is historically significant for its association with the Murie family and that family's contribution to natural resource management and biological science, and conservation in the period 1945 to 1980. The property retains the integrity to convey this association. Two sets of alterations have taken place in the years since the end of the period of historic significance. One is a process of deterioration, both natural and purposeful; the process of natural decay, however, has been largely reversed by a rehabilitation project in the last three years and the intentional removal of several buildings has been limited and does not adversely impact the integrity of the remaining structures. Because of the meticulous attention to detail in the second set of alterations—the rehabilitation project—the historic district retains a remarkable integrity of structure, materials, workmanship, location, appearance, feeling, and association.

Located in a wooded area on the west side of the Snake River, and looking up at the mountains in the Teton Range, the Murie Ranch consists of a combination of residential buildings which served as the homes of the Murie families, guest cabins dating from the ranch's earlier days as a dude ranch, utility structures for power, maintenance, and livestock, and the ubiquitous outhouses strategically placed near the larger buildings.

Natural Setting

Mardy Murie once recalled that "we first loved Jackson Hole, the matchless valley at the foot of the Teton Mountains in Wyoming, because it was like Alaska; then we grew to love it for itself and its people."¹ In fact, the Muries came to know the entirety of the valley known as Jackson Hole and the mountains surrounding it on intimate terms, and were familiar with each drainage, ridge and mountain in the landscape, its varied wildlife, its seasonal vegetation, and the ecologic relationships of them all. For almost two decades they lived in the town of Jackson, but Olaus's work and much of the family's life took them constantly into the woods and plains of the valley. When they finally moved to the STS Ranch below the village of Moose, they went to a place they knew and loved from long experience. "This piece of river bottom was my favorite spot years before we ever dreamed of owning it," Mardy Murie wrote. Everything about it fit their needs, as the seventy-seven acres of the Murie Ranch came to provide a nexus of nature and efforts to understand and preserve nature.

The ranch itself is located at the end of a half-mile unpaved drive that reaches southwest from Moose, gently meandering through pine and sage west of the Snake River. The timbered path to the ranch opens up with a series of three clearings, one just north of the ranch buildings, the second providing a common area for the ranch with buildings roughly around the perimeter, and the third located beyond the main cluster of buildings, beyond the Homestead Cabin and the cabin known as Wild Lone. At the opposite end of this opening the old barn and oil house were located, and trails would lead to the Beaver Ponds to the west and north or to the swimming hole near the river to the east. The forest is a thick combination of cottonwoods and spruce in the lowest elevations and stands of blue spruce, Douglas fir, aspen, cottonwoods, and lodgepole pine throughout. The clearings contain vigorous clumps of sage and rabbitbrush, the gray-green color providing a distinct backdrop to the array of different wildflowers, with their patchwork of bright colors that appear in their annual cycles from the time that the snows melt, through the summer, to the time they are buried once again in deep carpets of snow. As Mardy Murie once expressed the beauty of these flowers, the Muries walked or drove through "a sea of wildflowers" every time they ventured to the post office, and the wildflowers also spread out in front of the house and cabins at the ranch.² Each cluster, each plant, each feature brings its own qualities to

¹ Margaret E. Murie, Two in the Far North (1962; repr., Anchorage: Alaska Northwest Books, 1990), 259.

² Margaret E. Murie, "Thus At Moose," unfinished and unpublished manuscript, p. 4, in Murie Collections at the Murie Center, Moose, Wyoming. References are to the typescript version. I am grateful to Nancy Shea for bringing this important document to my

the area, appropriately enough for this family of ecologists. For example, cognizant of the foot-and-a-half thick strip of topsoil left by the flooding Snake River during the long natural history of the valley, Mardy Murie noted that "whenever the topsoil streak runs is the black hawthorn. In June its white blooms are a joy; in late summer its black berries bring flocks of robins, grosbeaks, waxwings[;] in late September, its leaves turn crimson and accent the glow of the aspens' gold against the spruce green-picture of this against a Wyoming blue sky and where else is paradise?"³

When the ranch was a dude ranch operated by Frances and Buster Estes before 1945, a variety of stone paths and fences marked off the spaces for the cabins and homes. When the Muries purchased the ranch, however, the fences came down immediately. In her history of the ranch, Maggie Meehan writes that "Olaus was never fond of fences, and they were the first things to go. The Muries wanted to open their home to all kinds of visitors, not just people."⁴ They did the same with the fence at the big house when they bought it from its separate owner after they returned from a major research venture in New Zealand in 1950. As soon as they purchased the house, which would be their home, Mardy Murie recalled that Olaus, son Donald, and friend Mildred Capron "gathered tools, walked through the wildflowers the ... yards to our new home and started tearing down the neat rustic picket fence, which enclosed the neat lawn and flowerbeds in front of the big log house."⁵ So too with the trails in and around the property. As Meehan further notes, "Olaus wished no invasion upon the animals' home, so no trails were marked around the property. ... The only footpaths were those created by wildlife."⁶ In all, the objective of the Muries, appropriately enough given their passionate commitment to preserving the environment and intruding as little as possible in the natural ecology, was to leave as light a footprint as they could. Olaus summarized it best when he wrote, "All this living, vital part of the forest—and I can only hope that here in our little circle in the middle we have not interfered with the symphony."⁷

The trails remained natural and unimproved although the Muries and their guests shared them with the wildlife. One trail led from the compound of cabins to the river. There, a few hundred yards away, the family built a dam on a stream from the braided river that created a swimming hole; appropriately enough, beavers finished the dam. Mardy referred to the swimming hole as a magical place, noting that "There are special places; the swimming hole is such in my life." Even sharing it with moose and other fauna, there was "never an afternoon when some of us were not down there."⁸ On the trail above the swimming hole, moreover, Donald and Martin Murie constructed a small footbridge to cross on the way to the river. On a different trail, that which goes to the beaver ponds north and west of the ranch and then loops back around to the river, Olaus had selected a tree to use for observing wildlife in the adjacent wetland and devised a ladder of slats nailed to it. From this vantage point he spent considerable time watching the wildlife below and sketching and making notes. That tree has since fallen (2001), but the remains are still visible, and the trail is still used by wildlife and humans alike.

The wildlife proved central to the Muries' life at the ranch. Always present, always interesting, the birds and animals formed an active part of the ranch environment. Mardy Murie noted about the elk on the ranch that "we are always glad to see them here on our acres, for they are after all the reason for our being here living this happy life."⁹ And when The Wilderness Society met at the ranch in 1955, the local newspaper reported that

attention.

³ Murie, "Thus At Moose," 5.

⁴ Maggie Meehan, *The Murie Ranch* (Moose, WY: The Murie Center, 2001), 11.

⁵ Murie, "Thus At Moose," 1.

⁶ Meehan, Murie Ranch, 12-13.

⁷ Olaus Murie quoted in Meehan, *The Murie Ranch*, 12.

⁸ Meehan, *Murie Ranch*, 16-17.

⁹ Margaret and Olaus Murie, *Wapiti Wilderness* (New York: Alfred A. Knopf, Inc., 1966), 280.

"during their outdoor meetings at the Murie ranch, sessions were enlivened by moose strolling by, by geese flying over, and by a marten fearlessly searching for scraps at the kitchen door—all of these adding to the wilderness atmosphere in which discussion of how best to safeguard and preserve the remaining areas of our country was being carried on."¹⁰

Any effort to inventory the birds and mammals that came through the ranch, that made it their home along with the Muries, would be futile and the reader can perhaps best be referred to the discussion of the varieties of wildlife in Olaus Murie's Jackson Hole with a Naturalist. In that small book, Murie takes the interested visitor on a number of walks through the valley and mountains, discussing the species common to different locations and the ecological basis for their distribution. Moose, deer, elk, bears, coyotes, martens, weasels, beaver, ground squirrels, and many others could be found on the ranch in his time there and they still populate the area, but there are two exceptions that are worthy of note. Murie noted that "we used to have the mountain lion or cougar in Jackson Hole, but it is practically never seen in this region any more." That observation can be revised not only for the valley but for the ranch itself. It is not uncommon in recent years for lion tracks to appear. In the winter of 2002-2003 a pair of lions left their tracks, in the words of Murie Center Executive Director Nancy Shea, "all over the ranch." Plus, while Olaus noted that "wolves used to be in Jackson Hole, but have been eliminated from the landscape long since," and while Adolph resigned himself to believing that it would be impossible to restore the wolf to the Yellowstone and Jackson Hole areas, the wolf has made a spectacular recovery after being reintroduced in 1995 and wolf tracks have been verified at the Murie Ranch in the last two years. The return of the lion and the wolf thereby marks an appropriate convergence of the environment the Muries inhabited with the policies they espoused, so that the natural setting of the Murie Ranch, far from deteriorating in its integrity, has actually been enhanced precisely because of the influence of the Muries' ideas.

Thus it is that a visitor to the area still can find on the ranch a natural setting with the same sage and forest that the Muries knew so well, the abundant predators and prey, with mammals from moose to deermice, with birds both spectacular and subtle, and can encounter them and their signs not in an artificial enclosure but in the wild. Consider the casual observation of Professor Mary Hindelang, an ecologist who conducted a seminar in animal tracking at the Murie Center in May of 2003. In addition to observing a young black bear in the deep woods at the ranch and watching a cow moose feeding near Olaus's observation tree, Dr. Hindelang captured the essence of the natural setting of the Murie Ranch in a short statement: "While there, right out in the meadow behind the cabins, I saw two Sandhill Cranes dancing their mating ritual, saw puma tracks down by the river, saw a coyote slithering across the lawn in front of Mardy's cabin, and saw four trumpeter swans and twelve white pelicans fly over."¹¹ The natural setting that attracted the Muries and that they sought to nurture remains, and in the case of some species, is even more robust than in the years when the Muries lived here.

Probably more than for many other cultural resources, the natural setting is a critical aspect of the Murie Ranch and its integrity remains intact as an evolving, dynamic entity. It is also, if we follow the Muries at all, a delicate and complex environment vulnerable to disruption and stress from even the most subtle and benign of sources. The impacts to that natural setting appear to be air traffic to and from the Jackson Hole airport located to the south, a development that has grown in both traffic volume and engine sound and which the Muries consistently and vigorously resisted over the years, and the facilities development and infrastructure enhancement at the ranch to facilitate its use. The infrastructure work, however, has been remarkably successful and sensitive with minimal intrusion, following carefully the spirit and letter of restrictions necessary to preserve the historic and natural character of the property. Declining to yield to temptation to pave drives

¹⁰ Jackson Hole *Guide*, September 8, 1955.

¹¹ Correspondence from Dr. Mary Hindelang, May 30, 2003.

and parking areas, burying cables and plumbing underground, and honoring the historic integrity of buildings and other features, the natural setting has been preserved despite major rehabilitation in its midst. Plus, the ranch has avoided the kinds of "routine" nature intervention such as forest thinning and trail construction that the Muries consistently opposed. That leaves the air traffic as the primary threat to the natural setting in the future.

Olaus Murie Studio (Building #972), constructed 1947-1953, Contributing Building.

The studio, where Olaus Murie painted, is a one-story log building with a rectangular footprint constructed on a concrete foundation. The building faces the southwest with the entrance centered on that elevation that also includes a porch that runs the full length of the elevation; the porch is covered by the eave of the metal gable roof which is supported by four log piers rising from the corners and the middle of the porch. The door in the center is flanked by a pair of one-over-one-light double-hung windows on each side. The only other fenestration in the building is a single sliding-sash window (one-light by one-light) in the northwest elevation. Originally, a skylight in the roof provided the important north light for Murie's painting and drawing, but that has been removed when the roof was replaced. Originally the roof was rolled asphalt, as on the other buildings, but that has been replaced with the more durable metal. Purlins are exposed in the gables.

The interior of the studio is a single cell arrangement with walls made of softwood oiled planks vertically placed. The ceiling is open, following the unusual gable-with-shed roofline created by the extension of the southwest gable slope over the front porch.

Murie Residence (Building #973), constructed 1942, Contributing Building.

The Murie Residence, previously the Woodbury House, is a one-story log building visually divided into three bays by the log ends of the interior bearing walls and by symmetrical window placement. Walls are dressed and oiled logs joined with ventral saddle notches and chinked with split and full poles. The flush-cut log ends are painted green. Only a recessed entry porch, a small open side porch, and a substantial log addition to the south end of the rear (southeast) elevation disrupt the simple square footprint. The gable roof is corrugated metal.

The northwest elevation is divided into three sections under the gable: the center recessed porch and entrance and the two projecting bays on either side. On each side of that door, large fixed windows provide views of the Grand Teton and neighboring mountains from the interior. Another entrance in the recessed porch leads into the south bay that encloses one side of the porch. The end bays each contain one pair of one-over-one double-hung windows, centered within the bay. The crowns of the logs that form the interior walls project beyond the elevation and are sawed straight to form vertical lines adding symmetry and vertical strength to the horizontal elevation.

The northeast elevation includes three pairs of double-hung windows. The southwest elevation is a complex elevation that includes an original portion with three bays and a projecting gable roof covering an entrance and finally, on the east extreme, a rectangular addition to the house. With a separate, lower, gabled roof, the addition is clearly distinct, and the small addition thus dominates the southeast elevation of the building but only extends from the south portion of that elevation. The precise date of the addition is not clear, but photographs indicate that it was in place by 1954 at the latest.

Interior

The interior of this building contains eight rooms; the addition on the rear represents a ninth room. A large living room with hardwood floors occupies the center of the building, with banks of smaller rooms to either side. Three

rooms connect with the living area on the northeast side of the building, and four rooms connect with the living area on the southwest side of the building. Dominant finishes include wood floors, varnished and chinked exterior and interior bearing walls, and dropped ceilings, faced with varnished log.

Outhouse #973A, construction date unknown, Contributing Building.

Outhouse #973A is a one-story wood-frame outhouse with a gable roof and no discernible foundation. Vertical planks clad the exterior walls and deteriorated planks cover the roof. Features are limited to a board-and-batten door centered within the front (north) elevation.

The outhouse is unfinished save for the wood-plank flooring. Walls and ceilings are unfinished, exposing the milled-lumber framing system, exterior siding, and roof planks.

Woodshed (Building #973B), construction date unknown, Contributing Building.

The woodshed is a one-story rectangular building with a vertical-pole framing system, clad with horizontal planks (south, west, and east elevations) and full poles (north elevation). The gable ends are constructed of logs. Rolled roofing covers the shallow front-gable roof, which features exposed log purlins. Features are limited to a doorless opening offset to the north in the east elevation.

The woodshed features a dirt floor, and unfinished walls and ceiling, exposing the vertical-pole framing system, exterior siding, and roof planks.

Chena Cabin (Building #974), constructed ca. 19251, Contributing Building.

Cabin #974 -- "Chena" - is a one-story log building constructed on a concrete-wall foundation. The simple square footprint is broken only by a wood-framed bathroom addition to the southwest elevation. Walls are saddle-notched log, chinked with mortar and lath. Board-and-batten (12" boards, 4" battens) clad the addition. Standing-seam metal panels cover the front-gable roof of the original component and the shod-roof of the addition. Roof features include exposed purlins and an interior brick chimney centered in the southwest gable slope.

All doors and windows described below are wood frame, trimmed with 4" log slabs (original component) or 2" milled lumber (addition).

The front (northwest) elevation contains a pair of one-over-one wood-frame windows flanked to the west by a modern solid-core door. The door is paired with a wood-frame screen and accessed by a ground-level wood stoop. The rear (southeast) elevation contains a pair of one-over-one double hung windows, centered under the gable end. There are no features in the northeast (side) elevation. The southwest (side) elevation contains a one-light by one-light sliding-sash window, immediately flanked to the south by the frame addition. The northeast elevation includes a one-light by one-light sliding-sash window.

Features within the addition are limited to a vertical-plank/cross-brace door slightly offset within the northwest elevation and a one-light hopper window centered within the southwest elevation.

"Chena" contains a large common room, housing the living, dining, and kitchen areas; a bedroom; and the bath addition. The interior walls are wood frame, faced with varnished plywood panels. Six-inch fir planks, varnished, cover the floors - with the exception of rolled linoleum placed under the free-standing

stove/sink/refrigerator unit and under the South Bend wood cook stove. The ceilings are open, exposing log purlins and 12"-16" rough-cut roof planks. Windows and doors are trimmed with 5" varnished trim. A varnished two-panel fir door leads from the central room to the bedroom. All bathroom finishes are modern.

Outhouse #974A, construction date unknown, Noncontributing Building.

Outhouse #974A, now collapsed, was a simple wood-frame outhouse with a square footprint constructed on a log-slab foundation. Asphalt shingles covered the shallow front-gable roof. Board-and-batten siding (8" boards and mill-waste battens) can be discerned in the rubble.

Estes Cabin (Building #975), construction date unknown. Moved to Murie Ranch ca. 1925, Contributing Building.

The Estes Cabin was moved from an unknown location elsewhere in Jackson Hole to the STS where it served as Buster and Frances Estes' primary residence following conversion of The Homestead to the STS Lodge. It is a one-story log building constructed on a concrete-wall foundation. Rolled roofing covers the shallow front-gable roof. Roof features include exposed log purlins, an exterior stone chimney within the northeast elevation, and an interior brick chimney that straddles the ridgeline. Only an open front porch centered within the front elevation and an enclosed screen porch running three-fourths the length of the rear elevation disrupt the simple rectangular footprint. The log walls and primary gable ends are saddle-notched with split-pole chinking. Horizontal log slabs cover the gable end of the front porch. All windows within the primary structure are trimmed with 6" butt joint milled-lumber and an 8" sill plate. Windows and doors in the screened porch are untrimmed.

The open front (northwest elevation) porch features a dropped front gable roof, supported by two log columns buttressed with 10"-wide planks. The porch ceiling is open, exposing the 2" x 4" truss system and 10" roof planks. A two-step wood stoop provides access. Three-inch tongue-and-groove planks cover the porch floor. The porch historically protected the primary entry; this door has been removed and the opening infilled with a plywood panel and a long one-light fixed-sash "picture" window. A pair of two-over-two-light double-hung windows flank the porch to either side.

The vertical row of protruding log ends from an interior wall divide the northeast and southwest (side) elevations into two bays. An exterior chimney, constructed of cut and crudely coursed stone, dominates the north end of the northeast elevation. Small four-light fixed-sash windows flank the chimney to either side. Additional northeast-elevation features are limited to a two-light by two-light sliding-sash window, centered within the south half of the wall, end two one-light fixed-sash windows associated with the screened porch (described below).

The southwest elevation features include a two-light by two-light sliding-sash window at the north end of the elevation, flanked to the southeast by a six-light hopper window, a two-by-two sliding-sash window, and a ribbon of three one-light fixed-sash windows, set within the screened porch.

The southeast (rear) elevation features within the primary structure are limited to a two-over-two double-hung window located at the extreme west end of the elevation. The screened porch, constructed of saddle-notched logs and covered with a dropped front-gable roof, runs most of the length of the south elevation. Window openings in the southwest and northeast elevations are glazed, while those in the southeast elevation are screened. An entry with a wood-framed screen door, offset to the southwest provides access. This door is flanked to the southwest by a three-light fixed-sash window and to the northeast by a ribbon of three-light

screened windows. A ground-level deck composed of 10" unfinished planks extends southeast beyond the screened porch.

Although the log shell was moved from Jackson and thus predates the STS, the floor plan and many of the interior finishes date to the Estes' tenure. The house was refinished (and well maintained) by long-time resident lnger Koedt during her tenure at the ranch. The original entrance opens directly to a large space running the width of the building and serving as a dining area (southwest) and living room (northeast, near the fireplace). A central hallway extending southeast from the dining area opens to a small bathroom and a kitchen. The bedroom is accessed from the living room and from the hall.

All interior doors are constructed of 4" tongue-and-groove fir. All doors and windows are trimmed with varnished 6" butt joint trim; windows feature a wide (8") sill.

The dining room/living room, hallway, and bedroom are finished with 4" fir plank flooring (oiled). Exterior walls are log, finished with split-pole chinking. Varnished plywood panels, finished with 1 1/2" log-slab battens, cover the ceilings and interior walls. As on the exterior, the fireplace/window grouping is a dominant design element. The fireplace extends half way up the wall and is topped with a heavy-plank mantle. Built-in bookcases, constructed directly below the four-light fixed-sash windows, flank the fireplace to either side.

Both the kitchen and bathroom are finished with painted plywood on the walls and ceiling and rolled linoleum on the floor. Built-in cupboard units are constructed of 2" tongue-and-groove, varnished. Cupboard hardware appears to be historic.

The screened porch features softwood flooring, log walls with split-pole chinking, and tongue-and-groove planks on the dropped ceiling. Features within the northwest wall (the exterior wall of the primary structure) include a double-leaf door constructed of 4" tongue-and-groove, at the west end of the wall, and a boarded-over door (or window) at the east and.

Robin's Nest Cabin (Building #976), constructed ca. 19251, Contributing Building.

Cabin #976 - known as "Robin's Nest" - is located immediately adjacent to building #975 and was constructed as a single-room cabin, with no bath or kitchen facilities. Buster and Frances Estes' daughter historically used the cabin as a private bedroom and lnger Koedt subsequently used the building as a guesthouse. A bathroom was added during the modern period. The well (also used by building #975) is located beneath the cabin; a hatch door within the porch floor provides access to the basement level pump room.

This is a simple one-story log building constructed on a stone-pier foundation. Only a small gabled-roof addition to the southwest end of the northwest elevation and a front porch sheltered by the extension of the front gable end disrupt the square floorplan. The log walls and gable ends are saddle-notched log, with split-pole chinking. Rolled roofing covers the shallow front-gable roof, which features exposed log purlins and a metal stovepipe protruding from the east slope of the porch roof. All doors and windows described below are trimmed with oiled 5" butt-joint lumber.

The open porch created by the extension of the northwest gable end runs the length of the front elevation. Log columns support the roof, 3" tongue-and-groove decking covers the floor and the ceiling is open, exposing the log purlins and roof planks. A one-step wood stoop provides access. Features within the protective confines of the porch include a four-light/three-panel fir door offset to the northeast and a two-light fixed-sash window offset to the southwest. The frame bathroom addition extends southwest from the porch. Northeast-elevation

features are limited to a two-light by two-light sliding-sash window centered within the elevation. There are no features in the southeast elevation. Southwest elevation features include a two-light by two-light sliding-sash window, centered in the elevation (as per the northeast wall), and the frame addition.

The frame addition extends northwest from the north half of the southwest well and is protected by a shed roof that extends smoothly from the gable slope of the porch, creating the appearance of a saltbox roof. A new 8" fascia board disguises the break in the eave line. Stained plywood panels cover the exterior walls and rolled roofing covers the roof. Features are limited to two small one-light casement windows, within the southeast elevation, and an untrimmed plywood door, within the northeast elevation.

The four-light/three-panel varnished-fir door opens directly to the bedroom. The bedroom walls are log, with split-pole chinking. Three-inch fir planks, varnished, cover the floor. The ceiling is open, exposing fiberboard panels set between the log purlins. Split-pole battens are located at the panel/purlin end panel/wall seams. An unusual curved lodgepole brace/beam spans the two purlins. Varnished 5" butt-joint trim surrounds the windows and doors. Fixed-furnishings include a Majestic wood stove located in the northeast corner end an open shelf above all windows. All light fixtures and the electric baseboard heaters are modern.

A modern hollow-core door, located at the north end of the southwest wall, leads to the new bathroom. Vinyl tiles cover the floor and 12" knotty-pine paneling, varnished, covers the wells end dropped ceiling. All fixtures are modern.

Moviewood Cabin (Building #977), constructed ca. 1925, Contributing Building.

Cabin #977 is now known as "Moviewood" because it served as the main office and cutting room for a documentary, *Arctic Dance: The Mardy Murie Story*, covering Margaret Murie's life and her role in the conservation movement. It now serves as an office for the Murie Center. The cabin is a simple wood-frame one-story building with a rectangular floorplan. There is no discernible foundation. A shed-roof porch runs the length of the front elevation; the north half of this porch has been enclosed, creating a small room accessible only from the exterior. Horizontal log-slab siding covers all exterior wells. Decorative chinking has either been removed or was never applied - the tarpaper backing remains clearly visible between the log slabs. Rolled roofing covers the steep gable roof of the primary roof end the shed roof of the porch/addition. All windows and doors described below are untrimmed. The iron door hardware appears to be original, while the windows are all recent additions.

Northeast (front) elevation fenestration is limited to the primary door, constructed of 4" tongue-and-groove planks secured to interior Z braces, and the frame addition. Features within the addition are limited to a narrow door, also constructed of 4" tongue-and-groove, located within the northeast wall.

A new bay window is centered within the southeast elevation and a four-light by four-light sliding-sash window is located within the northwest elevation. There are no features within the southwest elevation.

Although the one-room floorplan has not been altered, all interior finishes are modern. Vinyl tile covers the floor and painted sheetrock covers the walls and vaulted ceiling. The 5" door trim is painted. All window trim has been removed. Photos of and quotes from Mardy Murie line the walls of this room - part of the laborious and on-going process of creating a documentary film covering Mardy's remarkable life. Among the many notes and finished narrative "sound bites" that line the walls is an introduction reading "this log home in the woods of Wyoming is the heart of the conservation movement, a place of personal transition for Mardy and three generations of conservationists."

Cabin (Building #978) constructed ca. 1925, Contributing Building.

Building #978 is a simple one-story log cabin with a square footprint constructed on a partial concrete-wall foundation. The corners of the building are joined with nailed bog-trough corners (but have no poles) and splitpole and full-pole chinking. Rolled roofing covers the shallow side-gable roof, which features exposed log purlins and a metal stove pipe located high in the northwest gable slope.

Windows are limited to a wood-frame one-light by one-light sliding-sash window centered within the rear (southeast) elevation and a wood-frame two-light fixed-sash window (half of a sliding-sash pair) centered within the northeast elevation. The glazed board-and-batten door (one-light, 12" boards, 1 1/2" battens) is centered within the front elevation and protected by a shed roof that extends smoothly from the eave of the primary roof. The porch roof is supported by a 4"x4" column and a 6"x4" column. There is no constructed porch floor/decking, only a narrow one-step stoop. All window and doors are trimmed with unfinished 5" butt-joint trim.

Single-room cabin #978 is finished with vinyl-tile flooring, log walls (with full- and split-pole chinking), and a vaulted ceiling faced with painted plywood panels. Five-inch butt-joint trim surrounds the windows and door.

Outhouse #979A, construction date unknown, Contributing Building.

Although the cabin with which it was historically associated is no longer extant, outhouse #979A marks cabin #979's location within the cabin circle and has been evaluated as a contributing building. This outhouse is a small, square, wood-frame building with a gable roof covered with rolled asphalt roofing. The exterior walls are covered with mill-ends. An entry with a board door is located in the south elevation.

The interior of this outhouse is finished with vertical, rough-out boards. One toilet seat (with a hinged board cover) is cut into the plank bench.

Outhouse (Unnumbered), construction date unknown, Contributing Building.

This outhouse is located north of Outhouse #979A and appears to have been used to serve the duplex cabin Alatna, thus giving that cabin two such structures. It is a small, square wood-frame building with a gable roof which has only remnants of its asphalt roofing. Probably constructed at the same time as the others, the exterior walls are covered with mill ends.

The interior of this outhouse is finished with vertical, rough-out boards and has a toilet seat cut into a plank bench.

Electric Utility Pole (Unnumbered), construction date unknown, Contributing Structure.

This utility pole, for holding electrical wires, is situated southeast of the cabin Alatna and appears to be the only surviving such feature in the historic district. The pole was made by trimming and peeling a young lodgepole pine about six inches in diameter and supporting it at its base with a slightly larger pole to which it was fastened. The pole (and its base) is leaning slightly but still retains its brown ceramic insulators near the top.

Duplex Cabin Alatna (Building #980), constructed ca. 1925, Contributing Building.

Duplex cabins #980 and #983 are distinguished from adjacent single cabins #981 and #982 only by the tworoom floorplan; construction styles (simple massing, one-story, box cornered logs) and building materials are consistent throughout this cabin loop.

Like its neighbors, Cabin 980 ("Alatna") is a one-story log building with a rectangular floorplan constructed on a shallow stone-pier foundation. Walls are log, joined with box corners concealed with vertical logs, chinked with split-poles, and daubed with mortar. Standing-seam metal panels cover the side-gable roof, which features a metal ridge finish and exposed log purlins. The original brick chimney has been removed from the north gable slope. All windows and doors described below are trimmed with unfinished 5" butt-joint rough-cut planks. The double-leaf doors are constructed of 4" tongue-and-groove planks secured to interior frames and cross braces. The historic iron latches, with a large and dramatic S-curve handle, are extant.

A short shed-roof porch once protected the south elevation entry. Front elevation features are now limited to a two-light hopper window and a double-leaf door within the west unit, and a two-light by two-light sliding-sash window within the east unit.

The north elevation contains a two-light by two-light sliding-sash window – centered in the east half of the elevation – and two four-light hopper windows symmetrically offset in the west half of the elevation. West elevation features are limited to a centered two-light by two-light sliding-sash window.

Cabin #980 is divided into two rooms, connected by an interior door yet each room also has a private entrance. The two units are not mirror images of each other – size and fenestration varies – and only one outhouse is provided, suggesting that the east room may have been used most often as a sitting room or auxiliary bedroom but was probably not rented as a separate unit.

Three-inch oiled fir planks cover the floors. All walls in the west room are log with split-pole chinking. The logs are hewn flat to accommodate the 5" milled-lumber window and door trim. Painted pressboard covers the walls in the east room. The ceilings are open, exposing the log purlins and 8" rough-cut ceiling planks, interior and exterior doors are constructed of 4" tongue-and-groove planks with exposed (interior) frame. Fixed furnishings include a wood stove/brick chimney centered along the interior partition wall within the west unit, log slabs fitted with wood dowels - rustic clothes hangers - remain on the walls. A built-in desk (located directly beneath the window) and two painted cupboard units line the north wall of the east unit. Electrical conduit - not knob and tube – is exposed. Each unit is illuminated by two ceiling-mounted bare-bulb fixtures.

Outhouse #980A, construction date unknown, Contributing Building.

This is a small, square, wood-frame outhouse with a gable roof that is covered with horizontal boards. The foundation (if any) is not visible. Exterior walls are covered with vertical 12" planks.

The interior of this outhouse has unfinished walls and ceilings. One toilet seat is cut in the interior plank bench.

Cabin Belvedere (Building #981) constructed ca. 1925, Contributing Building.

Like its neighbors, Cabin #981 – Cabin Belvedere – is a one-story log building, with a rectangular footprint created by a shed-roof porch that runs the length of the south elevation. Walls are log, joined with box corners, chinked with split-poles, and daubed with mortar. The building rests on a concrete foundation which replaces the earlier stone-pier foundation. Standing-seam metal panels cover the side-gable roof, which features exposed log purlins.

All windows and doors described below are trimmed with unfinished 5" butt-joint rough-cat planks. In contrast to the vertical-shiplap/cross-brace doors that are predominant in the complex, this double-leaf door is constructed of 8" boards and 1" battens (secured to an interior frame and cross brace). The original iron hardware remains in place.

The open shed-roof porch runs the length of the front (south) elevation. Four log columns support the shed roof. Features within the protective confines of the porch are limited to the double-leaf door, centered within the elevation.

The north elevation contains a centered two-light by two-light sliding-sash window and the east elevation contains a centered two-light hopper window. There are no features in the west elevation.

The interior of cabin #981 is identical to adjacent cabin #982. Three-inch oiled fir planks cover the floor. The walls are log, with split-pole chinking, and the ceiling is open exposing two log purlins, the ridgepole, and 10" roof planks. The metal stovepipe that once pierced the southwest of the ceiling has been removed. The door and windows are trimmed with 5" butt-joint trim; windows also feature an 8" windowsill and an 8" plank shelf, above the window. Fixed-furnishings include a two-door plywood cupboard in the northwest (holding kitchen utensils), two triangular shelves in the southwest, and a three-quarter-height closet constructed of random-width vertical planks.

Outhouse #981A, construction date unknown, Contributing Building.

This is a small, square, wood-frame building with a gable roof that is covered with horizontal boards. The foundation (if any) is not visible. Exterior walls are covered with vertical 12" planks, and the only feature is a board door in the northwest elevation that is held shut with a wooden toggle latch.

The interior of this outhouse has unfinished walls and ceilings. One toilet seat is cut in the interior plank bench.

Cabin Polaris (Building #982) constructed ca. 1925, Contributing Building.

Like its neighbors, cabin #982 – Cabin Polaris – is a one-story log building with a rectangular floorplan. Walls are log, joined with box corners. The logs are chinked with split-poles and daubed with mortar. There is no discernible foundation and sill logs are deteriorating. Standing-seam metal panels cover the shallow-pitch front gable roof, which features a metal ridgepole and exposed log purlins. The south gable end extends to shelter an open front porch; the gable end is open, exposing the purlins, ridgepole, and ceiling planks. Four log columns support the gable extension.

All windows and doors described below are trimmed with unfinished 5" butt-joint rough-cut planks; a log slab forms the lower horizontal member of the window surround. The double-leaf door is constructed of 4" tongue and-groove planks (secured to an interior frame and cross brace) and features original iron hardware.

South (front) elevation features are limited to a double-leaf door, centered within the elevation. The west elevation contains a centered two-light by two-light sliding-sash window and the north elevation contains a centered two-light hopper window. There are no features in the east elevation.

While the National Register nomination of the Murie Ranch notes that "Polaris" served as Adolph Murie's study, recent research has corrected that observation; instead this cabin was consistently a guest cabin. Three-

inch oiled fir planks cover the floor. The walls are log, with split-pole chinking; a log column supports the west purlin. The door and windows are trimmed with 5" butt-joint trim; windows also feature a 7" window sill and 8" plank shelf above the window.

Outhouse #982A, construction date unknown, Contributing Building.

This is a small, square, wood-frame building with a gable roof that is covered with horizontal boards. The foundation (if any) is not visible. Exterior walls are covered with vertical 12" planks and mill-ends. The door is missing from the entry which is located in the west elevation.

The interior of this outhouse has unfinished walls and ceilings. One toilet seat is cut in the interior plank bench.

Duplex Cabin Montana (Building #983) constructed ca. 1925, Contributing Building.

Duplex cabins #980 and #983 are distinguished from adjacent single cabins #981 and #982 only by the tworoom floorplan; general construction styles (simple massing, one-story, box corners) and building materials are consistent throughout this cabin loop. In contrast to duplex #980, the two units associated with duplex #983 are mirror images of each other, in size and fenestration.

Like its neighbors, Cabin #983 (a.k.a. "Montana" cabin), is a one-story log building with a rectangular floorplan constructed on a poured concrete foundation that replaces one of dry-laid river stone, strategically placed at the corners and staggered under the sill logs. Walls are log, joined with box corners, chinked with split-poles, and daubed with mortar. Corrugated metal panels (placed over the original boards-and-battens) cover the side-gable roof, which features a metal ridge finish, and exposed log purlins. All windows and doors described below are trimmed with unfinished 5" butt-joint rough-cut planks. Like cabin #981, the double-leaf doors are constructed of 8" planks and 1.5" battens; the battens are on the interior of the west-unit door and the exterior of the west-unit door. The original iron hardware and wood-frame screen doors are extant.

A front porch runs the length of the front (southeast) elevation. Two symmetrical door window groupings dominate the elevation: a two-light hopper window, flanked to the east by a double-leaf door – defining the southwest unit – and a double-leaf door flanked to the east by a two-light hopper window – defining the northeast unit. Additional features are limited to two-light by two-light sliding-sash windows symmetrically offset in the northwest elevation (one per unit). There are no features in the side elevations.

Cabin #983 is divided into two identical units with no interior connection. All walls are log with split-pole chinking. Windows and doors are trimmed with 6" rough-cut trim. The ceilings are open, exposing the five log purlins and 10" rough-cut ceiling planks; the Dutch doors are constructed of board-and-batten.

Outhouse #983A, constructed ca. 1925, Contributing Building.

This is a small, square, wood-frame building with a shed roof that is covered with boards. The foundation (if any) is not visible. Exterior walls are finished with 10" boards and 5" battens. The entry in the northwest elevation contains a vertical board door held in place with two metal hinges.

The interior of this outhouse has unfinished walls and ceilings. One toilet seat is cut in the interior plank bench.

Homestead Cabin/STS Lodge (Building #984), constructed ca. 1925, Contributing Building.

The kitchen in residence #984 represents the original homestead residence of Buster Estes. Over the course of years, through a number of additions, Buster and Frances Estes constructed lounge and dining room wings, converting the simple four-square homestead cabin to a substantial T-shaped building – the primary public building associated with the STS Dude Ranch. Probably in 1945 the building became the year-round residence of Louise and Adolph Murie. While the National Register nomination for the property indicates that the Muries added the library at the extreme north end of the north-south wing and the screened porch at the extreme south end of the wing, a photograph of the building during its use as part of the STS Ranch clearly indicates that the porch was constructed prior to the Murie acquisition of the property and the recollection of Louise Murie notes that the library section had already been constructed as well. Building #984 has been well maintained and seasonally inhabited in recent years.

This is a one-story log building with a T-shaped floorplan interrupted only by the intersecting gable-roofed porch centered within the east elevation. Exterior walls are log, joined with box corners and chinked with split poles; an undulating eave line over the original homestead component and protruding log ends (associated with the original exterior walls) clearly identify the original homestead component. Unpeeled log-slab corner boards disguise the box corners. The original component and the dining room and lounge additions were built on stone foundations while the library and screened porch were constructed on concrete piers; when the building was recently rehabilitated, a poured concrete foundation impressed with original stones gave the building new stability while retaining the original appearance.

Metal roofing replaces the earlier rolled roofing and covers the cross-gable roof, which features exposed log purlins, a new 10' milled-lumber fascia board, a metal stove pipe low in the east gable slope, and two brick chimneys - one in the south slope of the east-west wing and one in the west slope of the north-south wing. A substantial exterior chimney constructed of uncoursed river cobbles is located at the northwest junction of the two wings. The chimney is now circumvented by a modern stovepipe. Windows are wood-frame, multiple-light, and trimmed with 5"-wide rough-cut boards. Sash styles include sliding (the most common), fixed, casement, and double hung. Below, the building is described in a circular pattern, beginning at the south end of the east wall of the north-south wing (the "top" of the T).

Front (east) elevation features include the screened porch addition (see below) and a two-light by two-light sliding-sash window (demarking the original homestead cabin/kitchen), and the front-gable porch. The gable end is open, exposing the milled-lumber truss system. Log columns support the roof and the floor is made of 4" tongue-and-groove boards. The original door protected by the porch has been removed and replaced by a one-light fixed-sash picture window, custom cut to fit the door opening. The holes/depression associated with the door hinges remain visible on the side trim. Features to the north of this "entry" include a two-light by two-light sliding sash window (demarking the living room), box corners (indicating the end of the original component), and a two-light by two-light sliding-sash window demarking the library.

Features within the north elevation of the north-south wing are limited to a large fixed-sash picture window custom-fit to fill an original door opening.

The exterior stone fireplace, flanked to either side by a pair of two-over-two double-hung windows dominates the north half of the west wall of the north-south wing.

Features within the north wall of the east-west wing include a twelve-light over one panel door (the primary entry), flanked to either side by a pair of two-over-two double hung windows.

The single window once centered within the short west elevation of the east-west wing has been infilled with

log.

The south wall of the east-west wing contains an eight-light casement window, a two-light by two-light slidingsash window, a board-and-batten door (currently nailed shut), and a four-light casement window, located near the junction with the north-south wing.

The west wall of the north-south wing contains a two-light by two-light sliding-sash window and the screened porch. The screened porch is of log construction and is protected by a gable roof that matches the primary roof in height and pitch. Both side elevations are dominated by ribbons of screened one-light window openings. The south elevation contains a wood-frame screen door flanked to either side by a screened window opening.

The north to south wing of building #984 contains a screened-porch/bedroom, a kitchen, large dining/living room common area, and a library. The east-west wing contains a large study/bedroom/bathroom. All but the kitchen floor – finished with vintage rolled linoleum – are finished with varnished 4" soft-wood planks, interior and exterior walls are oiled log, with split-pole chinking, and the ceilings are open to the roofline, exposing sheetrock panels set behind the log purlins and substantial log beams. Built-in kitchen cupboard units are one-panel, painted. Windows and doors are trimmed with varnished softwood planks. One distinguishing feature of the buildings, especially notable on the interior of the Homestead, are the dimensions of the doors. Buster Estes, who constructed the building, was a short person and saw no reason to make doorways in his own living quarters unnecessarily tall. Thus some of these doorways still require people to duck as they pass through.

Wild Lone Cabin (Building #985), constructed ca. 1925, Contributing Building.

Cabin #985 (Wild Lone Cabin) is located outside the primary cabin circle (#980-#983), yet matches the other cabins in scale, construction style, and materials. This is a one-story log building with a rectangular floorplan constructed on a shallow stone-pier foundation that has been replaced with poured concrete. Walls are log, joined with box corners and chinked with split poles. Metal panels cover the shallow-pitch front gable roof, which features a metal ridgepole and exposed log purlins. The front (west) gable extends to shelter an open front porch; the gable end is open, exposing the purlins, ridgepole, and 8" roof planks. Four log columns support the gable extension which covers the porch.

All windows and doors described below are trimmed with unfinished 4" butt-joint rough-cut planks; a decorative log slab is positioned above the-upper horizontal trim pieces. The double-leaf door is constructed of 9" tongue-and-groove planks (secured to an interior frame and cross brace), features the original iron hardware, and is paired with a wood-flame screen door.

The west (front) elevation contains a double-leaf door centered within the elevation (and sheltered by the porch). The east elevation contains a two-light hopper window and the south elevation contains a two-light by two-light sliding-sash window. There are no features in the north elevation.

This building, like some of the others in the complex, now has its own interior bathroom created by boxing off a corner of the single cell. A long built-in desk positioned against the south elevation allows the person working at the desk to view the open space to the south.

Engine Room (Building #986), constructed ca. 1925, Contributing Building.

The "Engine Room" (#986), is a simple one-story log building with a rectangular floorplan exaggerated by an addition to the west elevation. As its name suggests, this utility building housed the gasoline engines,

ultimately an automobile engine that was used to charge storage batteries to provide electricity for the complex. After the ranch was connected to the electric power grid in 1954, the power system was used as a backup and then not at all.

Walls are constructed of large logs, joined with box corners, daubed with cement mortar, and chinked with split-poles. Unpeeled vertical log slabs disguise the box corners in all but the southwest corner. Eight-inch tongue-and-groove or shiplap planks clad the east gable end and board-and-batten clads the west gable end. The building rests on a poured concrete foundation which replaces the original badly deteriorated wood-pier foundation. Metal roofing covers the front-gable roof. The chimney has been removed.

The addition, mirroring the original component in width, height, and roof pitch, is attached to the west elevation of the original component. A board-and-batten door, located in the extreme west end of the north elevation provides access; there is no interior connection between the two components. Sliding-sash windows finished with a wide window ledge dominate the west elevation of the addition.

Features within the south elevation of the central engine-room component include a series of windows, now boarded. The entrance on this elevation is now enclosed by logs continuing the adjacent courses on each side.

East elevation features are limited to a board-end-batten door trimmed with unpeeled log slabs.

There is no interior connection between the original engine (generator) room and the addition to the west elevation. The engine room component is divided into two rooms, arranged in "shot-gun" style.

Particleboard panels cover the floor in the west addition. Walls are log and the ceiling is open, exposing the milled-lumber (6"x12") truss system and 8" roof planks. The entry and screened window openings were once trimmed with 6" butt-joint boards; only the bottom trim piece remains.

Both rooms in the original (east) component are finished with 8" softwood floor planks, log exterior walls, unfinished partition walls - faced with tarpaper, and an open ceiling - exposing the milled-lumber truss system and roof planks. The door between the rooms is constructed of vertical planks secured to a Z-brace. The iron latch/handle and hinges appear to be original. Doors and windows are untrimmed, with the exception of a milled-lumber lower horizontal trim piece.

Outhouse #986A, construction date unknown, Contributing Building.

This is a small, square, wood-frame outhouse with a gable roof that is covered with asphalt shingles. The foundation (if any) is not visible. Exterior walls are covered with vertical 12" planks and mill-ends. The entry in the east elevation contains a vertical board door, and is protected by a privacy screen made with milled lumber.

The interior walls and ceiling of this outhouse are unfinished. One toilet seat is cut in the interior plank bench.

Garage and Workshop (Building #987), constructed ca. 1925, Contributing Building.

The garage and workshop (#987) is a one-story log building composed of two structural components – of equal height, width, length, and roof pitch – that create a long rectangular floorplan. The mortar daubing on the interior wall of the southwest component suggests that the northeast (garage) component is the original structure while the southwest (workshop) is an addition. The rectangular floorplan is further exaggerated by the construction of a small addition to the southwest elevation. Both components rest on a poured concrete

foundation that replaces an earlier wood-wall foundation. Walls are log, joined with box corners containing a vertical log in the indentation, and daubed with mortar (northeast component) or chinked with split poles (southwest component). Corrugated metal panels, representing an earlier generation of roofing than the standing-seam metal panels found elsewhere in the complex, cover the front-gable roof. Roof features include exposed log purlins, and a metal ridgepole. All doors and windows described below are wood-frame and trimmed with unfinished 5" rough-cut lumber; exterior logs are hewn to accommodate the trim pieces.

For most of its history, double side-hinged vehicular doors, accessed by a wood ramp, dominated the front (northeast) elevation. That elevation has been altered in the past year as part of the rehabilitation effort. The vehicle doors have been replaced with a short extension which gives the building a three-sided projection to the front (north). A new single doorway is then located in that projection. The roof has also thereby been extended forward and a wood plank platform surrounding the projection has been added. The original garage doors have been restored and replaced on the sides of the new entrance to preserve the connection to the original appearance of the building. Although the changes to this building have been substantial, a concerted effort on the parts of the Murie Center, the rehabilitation consultant, and the Wyoming SHPO have assured that the building can be evaluated as contributing.

The mid-wall box corners filled with vertical logs define the break between the two primary structural components and visually divide the side elevations in half. Features within the east half of the southeast elevation include a two-light fixed-sash window, offset to the east, and a two-light by two-light sliding-sash window. Features within the west half of the southeast elevation include a six-light by six-light sliding-sash window, a four-over-four double-hung window, and the initiation of the southwest addition. The date at which the two components were joined is unknown. One 1954 photograph clearly shows the current configuration, and they probably were joined substantially earlier, quite likely during the STS Ranch years.

The southwest includes only an entry in the southwest elevation. This entry contains a double-leaf door (constructed of 8" boards), with four fixed lights in the upper leaf. Features within the west half of the northwest (side) elevation are limited to a six-light by six-light sliding-sash window. The east half of this side elevation contains an entry with a double-leaf door (constructed of 8" boards and 2' battens, with four-fixed lights in the upper leaf), and a two-light by two-light sliding-sash window.

Garage #987 is divided into two components, each accessible only from the exterior. The northeast component once served as a garage while the southwest component was used as a workshop and storage space. When the rehabilitation project is finished, the building will house office space. All walls are log with full-pole chinking. Windows and doors are trimmed with 5" butt-joint trim.

Oil House (Building #988), constructed ca. 1925, Noncontributing remains.

The oil house (building #988) was in an advanced state of decay at the time the district was placed on the National Register of Historic Places and at that time it was listed as noncontributing. Since that date the building has been intentionally burned and only a pile of ashes and cleared ground mark its location.

Frame Cabin (Building #991), constructed ca. 1925, Contributing Building.

Cabin #991 is the only wood-frame cabin at the Murie Ranch and the only residential unit within the cluster of utilitarian outbuildings located along the southwest boundary of the building complex. It has not been upgraded or rehabilitated. This is a simple one-story building with a rectangular floorplan. Walls are wood-frame, clad with $8^{"} - 12^{"}$ horizontal rough-cut planks and $2^{"}x 4^{"}$ battens. The building rests on an insubstantial log

foundation. Eight-inch to 12" boards cover the steep-pitched front gable roof. The north gable end extends to shelter an open front porch; the gable end is clad with 8" horizontal planks and 2" battens. The ceiling is open, exposing the 2" x 4" truss system. Four 2" x 4" columns support the gable extension. Random-width (5"-8") decking covers the on-grade porch floor.

Fenestration is limited to a board-and-batten door, trimmed with 4" rough-cut trim and centered within the front (north) elevation, and a six-light by-six-light sliding-sash window, trimmed with 4' rough-cut trim and centered in the east elevation. The door and window hardware appears to be historic. Currently, there are no features in the west or south elevations, however there may once have been a window opening centered within the west wall.

The interior of this one-room cabin is unfinished save for the rolled-linoleum flooring (set over 8" floor planks). The window and door are untrimmed (exposing the wood casing), the walls are unfinished (exposing the framing system and exterior siding), and the ceiling is open (exposing the roof planks). Fixed-furnishings are limited to open shelving units located on all but the north wall.

Storage Shed and Barn. (Buildings 989 and 990), removed, Noncontributing.

These two buildings, utilitarian in function and design, were situated at the southwest corner of the historic district and were removed in the 1970s. The loss of these buildings represents a lamentable injury to the complex, but does not impair the integrity of the remaining features because of their physically peripheral location.

Bath House. (Unnumbered), Noncontributing building.

The modern bath house, newly constructed in 2003, is located west and north of the Homestead Cabin. It is constructed of logs with a gabled roof in the same general design as the historic buildings in the district. It is obviously noncontributing. Because its appearance is non-intrusive, however, and because it is located on the peripheries of the district, and even partially obscured by them, it does not impair the integrity of the other buildings that are contributing.

Summary

The Murie Ranch Historic District in the nearly quarter century since the end of the period of historic significance (1980), has been able to withstand the forces that have caused other historic properties to lose integrity. Despite a decline in use of the buildings, despite limited maintenance, and despite a recent major restoration effort, the integrity of the district remains. The changes to the buildings were primarily those associated with deterioration, something common with log structures in severe environments, with damage especially to roofs and foundations. There are three identifiable categories of change with the potential of impacting the integrity of the historic district.

Building Losses

Building losses include two buildings, the barn and storage shed, which were removed and taken to another distant location, however, this removal actually took place during the period of historic significance in the 1970s. One other building, the oil house, located on the periphery of the site and near the barn and storage shed sites, was burned, within the past five years. The loss of these three buildings is lamentable, but it does not impact the integrity of the district because of their size, location, and utility-service functions.

Site Restoration

In the last five years a major effort by the Murie Center and the National Park Service has endeavored to restore the resources of the Murie Ranch Historic District to its historic appearance with full functionality and to modernize the infrastructure of the site. A daunting challenge, fraught with delicate tasks, the project involved the Wyoming SHPO in its planning and execution to assure sensitivity to the historic integrity of structures. Foundations and roofs were replaced and logs and windows that needed to be replaced were done so with careful attention to original materials and designs and utilities were concealed within buildings and underground. Probably the most extensive changes were those in which the northlight window in the roof of the studio was closed with the new roof and the garage and workshop vehicle entrance was converted to a windowed office with porch; even those changes, however, were undertaken with sensitivity to retaining original appearance and did not compromise the integrity of the resources.

Building Additions

None of the original buildings have been added onto since the end of the period of significance. One building has been added to the site in 2003—the bath house noted above, which is noncontributing, but because it continues the same design, materials, and scale and is located generally in a concealed location on the extreme periphery of the complex, does not impair the integrity of the other resources.

<u>8. STATEMENT OF SIGNIFICANCE</u>

Certifying official has considered the significance of this property in relation to other properties: Nationally: \underline{X} Statewide: Locally:

| Applicable National Register Criteria: | $A_B\underline{X}C_D$ |
|---|--|
| Criteria Considerations (Exceptions): | $A_B_C_D_E_F_G\underline{X}$ |
| NHL Criteria: | 2, Exception 8 |
| NHL Theme(s): | VII. Transforming the Environment3. protecting and preserving the environment |
| Areas of Significance: | Science Conservation |
| Period(s) of Significance: | 1945-1980 |
| Significant Dates: | 1945, 1963, 1974, 1980 |
| Significant Person(s): | Olaus J. Murie, Margaret E. Murie, Adolph Murie |
| Cultural Affiliation: | N/A |
| Architect/Builder: | Buster Estes, Olaus Murie |
| Historic Contexts: | XIII. Science C. Biological Sciences XXXII. Conservation of Natural Resources C. The Conservation Movement Matures 2. Birth of Wildlife Management 8. Wilderness System |

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Introduction

The Murie Ranch Historic District is significant under Criterion 2 for its association with Olaus Murie, his brother Adolph Murie, and his wife Margaret (Mardy) Murie, in their (1) contributions to biological science and natural resource management in the nation and (2) contributions to conservation in the nation. During the 1920s and 1930s the Murie brothers achieved national prominence as influential scientists within the federal government as a result of their rigorous biological research that distinguished them as proponents of an ecological view that emphasized the intricate connections within the whole environment rather than favoring one species over another. Following World War II, their careers altered course and gained force in both of these thematic areas. Between 1945, when the two families moved to the former STS Dude Ranch near Moose, Wyoming, and 1980, when Congress passed, and the president signed into law, the Alaska National Interest Lands Conservation Act, these three individuals used the ranch as a base for their science and conservation activities. Those activities shaped not only the field of natural science and its use in public agencies charged with responsibility for natural resource management, but that also shaped the American conservation movement, including the development of legislation and public policies that sought to protect and preserve natural resources, and especially wildlife and land areas that contained wilderness areas. When Mardy Murie carried forward in this effort after Olaus's death in 1963, she quickly emerged as a significant leader in her own right and she became both the voice of the conservation movement in key issues and a powerful symbol of the broader cause for which all three had labored. It is important to note that even though the Muries began living at the ranch in 1945, the property is illustrative of the cumulative lifetime contributions of Olaus, Adolph, and Mardy Murie from the 1920s on, and is the best remaining site associated with their lives and careers. Because their activities and contributions reached beyond the period ending fifty years ago, this nomination will address Criterion Exception 8 as well as document the significant roles these people performed in the following two contexts:

1. Natural Resource Management and Biological Science. The Muries proved nationally significant because of their influence as scientists on policy in resource management agencies, especially, but not limited to, the National Park Service and the Fish and Wildlife Service, as they guided them to a more scientific approach. Their involvement was greatest with the National Park Service and the evolution of policy is most striking in that agency, but it was not alone. The policy gradually shifted away from one that was designed to protect only certain species of animals which, for various cultural and economic reasons, were deemed to be more valuable and beneficial, or at least more attractive to tourists, and to extirpate other species such as predators which fed upon the preferred, "beneficial" species, and shifted to a policy that was more sensitive to all the fauna as equally valuable. The key formulation in this, which is intimately associated with the scientific research of both Olaus and Adolph Murie, is that of an ecological approach which considers all the organisms in a biotic community to be important for their interaction with each other. This perception led both Olaus and Adolph Murie to press the different agencies for minimizing (or reversing) human intervention in the public lands and to allow as much as possible nature to be self-regulating. This also involved, by implication, an enlarged role of natural science professionals in policy formulation in those agencies. In addition, these scientists left their mark on the understanding of science through significant studies of species like elk, wolves, coyotes, and grizzly bears. Not only were these studies undertaken in the framework of ecology, so that their subjects were considered as part of their environment and not studied in isolation from that context, but often their studies were the first serious examinations of such species, and in that they left a legacy of important baseline studies that continue to guide mammalian research at the beginning of the twenty-first century. Finally, their significance can be seen in their effort to communicate their findings to a broad public audience

rather than restrict the discourse to other scientists and resource managers.

2 **Conservation.** The activities of the Muries also demonstrate the rise and evolution of a strain of the conservation movement that saw nature in terms other than as a resource to be developed and a commodity to be marketed, and which found in nature values capable of elevating the human spirit and restoring a sense of purpose often missing in modern urban society. At the end of World War II, Olaus Murie became director of The Wilderness Society, and in that capacity changed the course of the organization so that in addition to seeking the preservation of lands that were undisturbed by modern development, the group also began to seek protection of places beyond wilderness where contact with nature could be retained in smaller ways. In doing so, and as part of a broader trend in the nation, the conservation movement gained in size and strength and after such pivotal engagements like that of preventing a dam from being constructed inside Dinosaur National Monument, the movement shifted from its defense of threatened sanctuaries to shaping policy so that those crises would not define the conservation agenda. This led to the pressure for a Wilderness Act, ultimately enacted in 1964, and the creation of a wildlife range in Alaska in 1960 and the even stronger legislation in 1980 that created the Arctic National Wildlife Refuge and expanded the wilderness holdings in that state administered by several public agencies. In the course of this evolution, the conservation movement changed, and even became the modern environmental movement, and the role that Olaus Murie had performed was continued by his widow Margaret, or Mardy, who likewise left her mark on modern conservation. As the conservation movement transformed into the environmental movement, it was increasingly Mardy Murie who personified the cause, with her distinct ability to articulate complex issues in human terms and to gain the respect of adversaries, all the while pressing forward the ideas, values, and goals that had been identified with the Murie family over six decades.

The Muries and Natural Resource Management and Biological Science

In the early months of 1920 Olaus Murie submitted an application for a position with the United States Bureau of Biological Survey and by the autumn of that year he launched his quarter-century career with that agency and an even longer life-mission as a scientist concerned with natural resource management.¹² In that career and in that mission Olaus would be joined by the enthusiastic and talented efforts of his younger brother Adolph and by his wife Margaret. This future as a naturalist, in fact, was clear when he developed a love for the outdoors in his early years; ever after he was most anchored when he pursued a life in and with the nation's wilderness.

Born to immigrants in 1889 and raised in the strongly Norwegian community of Moorhead, Minnesota, Olaus Murie found opportunities to learn about and immerse himself in the environment of the Red River area. Influenced by wildlife artist / naturalist and storyteller Ernest Thompson Seton, whose articles and books were especially popular with the nation's youth at the turn of the century and whose home is now a National Historic Landmark, Murie spent much time in the field and developed a serious interest in wildlife and acquired informally some of the techniques of the artist. That life was hardened by the death of his father when Olaus was nine years old, and all members of the family suffered hardship and had to work together to hold onto the small homestead where they lived. Olaus was not especially excited about the prospects of formal education, preferring instead the education of exploring areas that he and his brothers called their wilderness, but his mother continued to push him in the direction of school, and Olaus nonetheless did well. His proclivities were set at an early age as he excelled in his understanding of nature and his abilities to draw and paint what he saw.

Reluctantly agreeing to go to college, and with the way eased by a scholarship, he found his niche early as he enrolled at the nearby college in Fargo, North Dakota where he took courses in biology. When the zoology

¹² Gregory Kendrick, "An Environmental Spokesman: Olaus J. Murie and a Democratic Defense of Wilderness" (master's thesis, University of Wyoming, 1977), 34.

professor who had introduced him to a new level of intellectual investigation that merged with his interest in nature left the college at the end of Murie's first year, Olaus followed the professor to Pacific University in Oregon, with yet again another scholarship, and Murie graduated from that institution in 1912. Although he was now part of a larger, more urbane and modern institution than he had been on the farm in Moorhead, he persisted in his desire to live in a wooded environment which he sometimes likened to a form of wilderness, part of a pattern that he would retain throughout his life.¹³ But he also had started to make a contribution to the area of science that he studied, publishing his first article—with photographs even—on the nesting habits of the mallard in 1913 in a scientific journal.

Several subsequent jobs or, more accurately, adventures and expeditions, then occupied Murie as he roamed the wilds of Oregon, the Hudson Bay area, and the Labrador Peninsula. At first he took a position as an Oregon conservation officer, his first government position, and it allowed him to develop his scientific expertise, collecting faunal specimens, and also engage his artistic skills, adding to his repertoire greater depth in wildlife photography. Seeking, however, more remote regions to explore, after two years as an Oregon conservation officer, Murie secured a position as an assistant on an expedition directed by E. E. Clyde Todd, under the sponsorship of the Carnegie Museum of Pittsburgh, to Hudson Bay. For three months the expedition gathered specimens and scientific data regarding wildlife distribution in the area, and in the process Murie matured, personally and professionally. As Gregory Kendrick writes about Murie's experience, "his mind grew more penetrating, more persistent and with each passing day, more self-confident. Furthermore, the expedition reaffirmed his belief in field study."¹⁴ Afterwards Murie remained in the Hudson Bay area through the following winter and beyond, and finally joined another Todd expedition in 1917 across the Labrador Peninsula—following Indian guides for seven hundred miles across an unmapped area that whites had not previously entered. The journey was actually longer because of a mistaken course and obstacles, but by its end, Murie had demonstrated his disciplined powers of observation, recording fastidious details of the natural world they engaged, gathering specimens for the collections they would submit, and documenting the Indian perceptions of the landscape and wildlife. He was clearly, at this point, a seasoned naturalist and an accomplished field biologist.¹⁵

After a brief stint in the U.S. Army during World War I, Murie returned to Moorhead, working at a variety of jobs, but charting his future. In 1920 his grand opportunity came when he received a position as a field biologist for the U.S. Bureau of Biological Survey. His first assignment was to study the Alaskan caribou, identifying their migration routes and estimating their population. This position led Murie into new territory, both literally and metaphorically. As "Assistant Biologist and Federal Fur Warden," the object of his research had a particular conceptualization that shaped the study and set Murie on his own distinctive course. The Biological Survey was studying the caribou as part of a game-management project, the purpose being to help develop an industry raising domesticated animals, considered to be the wild cousin of domesticated reindeer. This approach carried explicit assumptions about the role of science in government agencies and about the priorities and purposes of resource management. In other words, Murie's work fit into the category of economic studies rather than scientific research.¹⁶ In fact, such efforts dominated the Biological Survey's activities in the early twentieth century. At this time, wildlife policy, like forest policy, focused especially on the protection of desirable species usually to be hunted and the extirpation of undesirable species like predators. At the same time, much of the biological science in the government seemed intent on justifying organized, purposeful manipulation of the environment so as to encourage population growth of the species desired by

¹³ Kendrick, "An Environmental Spokesman," 15.

¹⁴ Ibid., 19.

¹⁵ Ibid., 30.

¹⁶ Ibid., 39.

hunters, and to get rid of the predators who reduced the populations of the same game animals. As Stephen Fox points out, "Wildlife management was not yet a science. The first, tentative waterfowl census was not published until 1930. In the absence of hard facts, people took firm positions depending on what they wanted to believe."¹⁷ Some species were considered, in this light, special and valuable because of their economic marketability (or, in the case of caribou, their anticipated market), and thus other species that hindered the propagation of the prized species became targets of reduction.

In this case, Murie was supposed to chart the areas inhabited by caribou. Where some eagerly hoped that reindeer herds could be expanded and regulated, Murie and his supervisor, E. W. Nelson, the Chief of the Survey, were apprehensive about the cross breeding and the impact the reindeer would have on the caribou herds.¹⁸ Murie was also skeptical of the prevailing belief that the main threat to the caribou was the predators—the fur-bearing carnivores that were the continued subject of eradication efforts. In the following six years he had ample opportunity to explore not just the wildlife and the landscape of Alaska and the Yukon, but a cluster of scientific, political, and economic issues as well.

Between 1920 and 1926, Olaus Murie undertook a variety of official projects for the Biological Survey, and he both grew in his understanding and contributed to the scientific knowledge surrounding the area's wildlife. More than mapping the migration routes of the caribou, Murie also attempted to understand them, for the migratory patterns were at once immense, complex, irregular, and puzzling. His quest for explanation led him to theorize that the animals moved in response to changes to their environment, a perception that marked him as far ahead of others who speculated on the habits of the caribou, and other animals too. He discovered nesting areas for birds whose roosts had been previously unknown. He discovered a new species of mouse as he continued his long habit of setting lines of mousetraps and gathering specimens. While those efforts generated dramatic success, his assignment to domesticate caribou failed miserably, but meshed intellectually with his other observations: it was possible, he concluded, for wildlife, even predators and prey, to coexist in the wild unimpaired by the involvement of humans; conversely, the greatest threat to the caribou was not the wolf. "The caribou's greatest menace," Murie reported, "is not the wolf, nor the hunter, but man's economic development, principally the raising of reindeer."¹⁹ There was one other development, too, that signaled Olaus Murie's future. Attempting to serve the interests of both science and economics, as the Biological Survey had since its origin, led to conflict not just between the scientific and economic efforts, and not just between the purposes which they assumed, but sometimes between Murie and the Survey itself.

In this regard, it is important to note that Murie's Alaska years demonstrated his ability to communicate on an open, honest, and sincere basis with all kinds of people. He was welcomed into the villages of the indigenous peoples and he managed to communicate with them past the language barriers, and would dance with them in their native dances. He would take his team of dogs and sled into encampments of prospectors, of trappers, of hunters, of people trying to domesticate reindeer, and he managed to find common ground, learning from them all and befriending them all. So too with his superiors in the Bureau of Biological Survey; despite disagreement, he still managed cordial, even friendly relations. Sometimes that meant doing things differently, as early on when he and his superior had different approaches in gathering information from people who lived in the area. His boss would proceed to interrogate them about the animals they had seen. Murie, instead, would share news, actually make friends with them, and then get much more information from the people.

¹⁷ Stephen Fox, *The American Conservation Movement: John Muir and His Legacy* (Madison: University of Wisconsin Press, 1981), 163.

¹⁸ Adolph Murie, *A Naturalist in Alaska* (1961; repr., Garden City, New York: Anchor Books, Doubleday & Company, Inc., 1963), 1-2.

¹⁹ Olaus Murie, "Alaska-Yukon Caribou," quoted in James M. Glover, "Thinking Like a Wolverine: The Ecological Evolution of Olaus Murie," *Environmental Review* 13 (Fall/Winter 1989): 34.

would be useful in the future.

On still another level the Alaskan years produced new relationships for Olaus Murie that would be crucial for him the rest of his life. One such relationship was the close working affiliation with his younger half-brother, Adolph. Ten years his junior, the two had been close anyway, and, as Adolph later recalled, "Olaus had always been more than a big brother to me."²⁰ Sharing Olaus's love for the outdoors, Adolph was attending college with a similar career in mind but, before he finished, he joined Olaus in 1922 as his brother's assistant for a year and a half.²¹ The two traveled over Alaska on dogsled and together explored, discussed, gathered specimens, and made notes of their observations. The intellectual and working partnership between the two was close and long lasting. Adolph returned to the states and finished school at Concordia College, taught high school in Hamilton, Montana, and, returning to graduate school received his Ph.D. in zoology from the University of Michigan in 1929. In the coming years the two would frequently discuss their research, and each would make his own mark as research biologists and preservationists.

The other relationship that Olaus developed in Alaska began when he met Margaret Thomas in Fairbanks. Born in Seattle, this young woman had moved to Alaska with her family, had taken positively to the climate and the people, and would soon be the first female graduate of the new University of Alaska. She and her sister Clara taught the Murie brothers how to dance and the men taught the women about the outdoors. Olaus and Margaret, or Mardy, as she has always been known, embarked upon various Alaskan adventures, and their 1924 honeymoon following their marriage was appropriately enough spent on a six-week dogsled journey gathering data (and more specimens) for the caribou study. It was a true partnership in every sense from the beginning. Mardy Murie later recalled an event, as the two prepared to embark, with these prefatory words of joint dedication and common mission: "When we returned from our trapline in the afternoon"²² Mardy helped record the data and label the specimens, but also learned both the particulars and the general of the Alaska ecology, learning the qualities of different species and also the relationship of them all, big and small. Her role as a field assistant took in vast territory, and the two shared the hardships of life in the wild along with the satisfactions of that life. Soon even there were three of them when their son Martin was born in 1925. Once Mardy Murie described the beginning of yet another journey in Alaska with words that could have been repeated so many times in the course of her four decades with her husband. As she loaded up her baby to accompany Olaus into some of the most isolated parts of Alaska, she commented, "Here was the real departure into the unknown. From here on we would be in territory that none of us knew."²³ Throughout their life together, Mardy and Olaus, and often with Adolph too and his wife-Mardy's half sister Louise-and then after Olaus's death, Mardy alone, would feel pulled to the uncharted territory that had few trails and landmarks, even when that was far from wilderness, in the "civilized" world of public policy formulation.

Biological Science and Natural Resource Management at Moose, Wyoming

In 1926 Olaus Murie completed his caribou study and came to conclusions that prefigured the ecological assessments of others, like Aldo Leopold, by perhaps a decade, with the central perception that game would be managed best not by human intervention, but by removing human intervention, restoring the environment to as close to a natural basis as possible, and allowing the ecology to regulate itself. The results of his study were mainly, however, submitted in the form of periodic reports to his superiors and when he was finished he took the logical step of taking time off and returning to school, completing his master's degree at the University of

²² Margaret E. Murie, *Two in the Far North*, 106.

²⁰ Adolph Murie, *A Naturalist in Alaska*, 2.

²¹ "Adolph Murie," typed autobiographical data sheet prepared by Adolph Murie, in file, "Adolph Murie, Biographical Material," Adolph Murie Collection, American Heritage Center, University of Wyoming, Laramie.

²³ Ibid., 220.

Michigan, evidently in zoology, using his caribou notes to craft a master's thesis in 1927. Within three months of receiving his master's degree he was on a new assignment that bore a remarkable resemblance to his caribou work: he would investigate the elk of Jackson Hole and Yellowstone. The family moved to the valley beneath the Tetons, residing in the town of Jackson, Wyoming. Murie's study of the elk herd of Jackson Hole attempted to address the nationally visible issue of the continuing decline of the elk population, often in wretchedly poignant circumstances. As he proceeded, and building upon his previous investigations, Murie's sentiments both deepened and broadened and a passionate commitment to wilderness as a biotic community emerged.

For some reason the elk in Jackson Hole were dying in large numbers, although it appeared to many that everything that could be done to help the elk had already been put into place. The elk lacked food in the winter and were often seen trying to reach the haystacks of cattle ranchers in the valley, so the federal government fed them hay. But that did not stop the decline of the elk and they still seemed to be starving. Many of his colleagues in the government blamed the predators who fed on the elk, and they shared gruesome stories of wolves and covotes decimating large numbers of the ungulates. So the predators were being killed systematically to protect the elk. But no matter how many covote hides were brought in, the elk continued to die. Once again, working out in the field, gaining the intimate knowledge of the species he was studying and also the other plants and animals that entered the lifecycle of the elk, Murie concluded that the problem had been framed backwards. Human intervention had thrown off the ecological equilibrium by viewing elk as a favorable species. It certainly was not predation that threatened the elk. His analysis of coyote stomach contents and feces revealed that they were living on rodents and small mammals, not elk, and thus the finger that had been pointed at the coyotes was misplaced. Moreover, the more the elk were "protected" and artificially encouraged to gather in a small area, the more they died from malnutrition; the more they had to share their range with domestic cattle, the more the carrying capacity of their range was pushed beyond its limit. Pressure from hunters for larger elk herds for more hunting, pressure from ranchers for use of public lands by their stock, and even pressure from those who saw the animals as captive tourist attractions combined to undermine the natural ecology. The elk, far from being a wild healthy herd, were now sickly, vulnerable, manipulated, and dependent on the hay that was doled out to them at congested central dispensing stations on the National Elk Refuge and no longer ranged free in the mountains and valleys. (That refuge had been established in 1912 and expanded in the following years in an effort to solve exactly this problem of high elk mortality.) In fact, the hay that the elk were being fed contained cheat and squirrel tail grasses that cut the mouths of the animals and caused them to become infected with necrotic stomatitis, which proved fatal especially in young and old elk.²⁴ The poison that had been set for coyotes wound up often killing birds of prey and while it succeeded in depleting the coyote population, it was not helping the elk.²⁵ Obviously this analysis, based on careful observation and scientific research, held implications for the remedy that would conflict with long-standing conventions, in the community and in the government agencies alike.

His recommendations generated controversy. Murie called for the elk herd to be reduced to a size commensurate with the restricted land area available. This angered hunters who sought larger herds. He called for the government itself to alter its predator control programs, a suggestion that angered his colleagues in those programs. In fact, he also concluded that his own agency—in its economic divisions—sometimes failed to consider the larger ecology, and simply viewed the wildlife from the perspective of the hunters and ranchers who wanted to harvest the "beneficial" species or the cattle that took away the range of those ungulates. As early as 1930 Murie found himself being reprimanded, censured, and his work delayed in publication by the

²⁴ Kendrick, "An Environmental Spokesman," 81; Margaret and Olaus Murie, Wapiti Wilderness, 138-139.

²⁵ Michael Cassity, "Murie's Prestige Grew in Rural Wyoming," Jackson Hole *News*, December 12, 1990. Olaus J. Murie, *The Elk of North America* (Harrisburg, PA: Stackpole Books, 1951; Jackson, WY: Teton Bookshop, 1979) and Olaus Murie, "The Elk of Jackson Hole," *Natural History* 35 (1935): 237-247.

agency for which he worked. "Am I a black sheep in the Bureau fold now?" he asked the acting chief of the Biological Survey in 1931. To some degree he was, but at the same time, his stature in the scientific community grew.

Olaus Murie's scientific work with the Biological Survey (and after 1940 with the Fish and Wildlife Service following the transfer of the Biological Survey and the Bureau of Fisheries to the Department of the Interior where they were then combined) continued. And his thinking increasingly articulated a principle that other biologists were coming to as well. This soft-spoken scientist's ideas merged with those of others like Aldo Leopold and Walter Taylor. In 1935 Walter Taylor, also in the Biological Survey, formulated what he termed the "Significance of the Biotic Community in Ecological Studies," which called upon scientists (and land managers) to think not of a specific species, outside the context in which it lived, but to think in terms of "the biotic community," a single system of material and energy that included a complex whole of organisms and even inorganic elements.²⁶ Like Aldo Leopold, however, a scientist with the Forest Service who contemplated some of the same kinds of problems as Taylor and Murie,²⁷ Murie arrived at his conclusions not through a theoretical borrowing from others, but through a process of examining, in the field, the processes of nature at work and the results of specific human interventions. A growing number of scientists were calling for land managers to manage and preserve the system as a whole rather than skewing it toward what they considered to be "favorable" species—like game animals—and away from the "harmful" or "undesirable"—like predators. As Murie himself expressed the idea in 1935, when evaluating "The Food Habits of the Coyote in Jackson Hole," the "wilderness question must resolve itself into sharing the values of the various species among the complex group of participants in the out-of-doors and wilderness wealth, with fairness to all groups."²⁸

For another ten years Olaus Murie continued his work with the Jackson Hole elk herd but he also found himself on assignment to other parts of the nation to investigate similar circumstances. Olaus's recommendation to enlarge the Olympic Peninsula of Washington National Monument (and soon national park) to accommodate the elk herd migration routes and to restore the predator-prey relationship that had been disrupted, was adopted in 1940. He also studied the commercial fox industry in the Aleutians which was not enclosed, but free ranging, which threatened the survival of bird populations, and which demonstrated again the consequence of altering the natural balances of an area. A variety of bird populations were threatened by the foxes, and Murie's study came too late to save some of them, such as the Aleutian Canada geese, of which Murie found only a few pairs of on Agattu. Introduction of the foxes, however, was stopped in 1939, and World War II likely prevented any recovery efforts, which did not begin until 1949.

At least two patterns were clear in his studies of different species. One was that every time Murie focused on an environment under stress, ostensibly because of threats to prized game animals, the problem turned out, upon close, empirical examination, to be otherwise. The economically "beneficial" animal populations tended to be out of control and were destroying the environment upon which they depended while the predators who could keep them in check were being systematically eliminated and then blamed for the environmental degradation. The other pattern was that his findings, firmly based in science and close observation, were often unwelcome to both government managers and commodity interests.

But Olaus Murie had one close ally in his work. His brother Adolph not only had completed a doctorate in the

²⁶ Walter P. Taylor, "Significance of the Biotic Community in Ecological Studies," *Quarterly Review of Biology* 10 (September 1935): 291-307.

²⁷ See Susan Flader, *Thinking Like a Mountain: Aldo Leopold and the Evolution of an Ecological Attitude toward Deer, Wolves, and Forests* (Columbia: University of Missouri Press, 1974), 152-153.

²⁸ Murie, "Food Habits of the Coyote in Jackson Hole, Wyo.," U.S. Department of Agriculture, Circular no. 362 (October 1935),
23.

field, something which Olaus did not, but he also developed into an outspoken scientist, articulating some of the same perspectives and performing the same kind of research as his older brother. Graduating in 1929, Adolph developed his own expertise, researching and publishing his acclaimed study of the moose on Isle Royale two years later, serving as assistant curator of mammals at the University of Michigan Museum of Zoology, and conducting independent studies of wildlife as far away as Guatemala. In 1934 he went to work for the National Park Service in the new Wildlife Division of the agency under George Wright, for which he supervised research in the western parks and conducted his own research, especially of the elk in the then Olympic National Monument. And his work was being noticed.

Adolph also was outspoken, perhaps more so than his brother, in the National Park Service. From the very beginning of his career with the National Park Service, Adolph Murie articulated his view of preserving wilderness and its natural conditions, even when those natural elements included factors long viewed as destructive or even enemies, whether they be fire or predators—hardly a popular position in the agency.²⁹ In 1937 he began a study of coyotes in Yellowstone that was completed in 1940 when it was published as Ecology of the Covote in the Yellowstone, number four in the bold new series of Fauna of the National Parks of the United States, or the Fauna Series—a revolutionary new approach using science to understand the wildlife of the parks, implicitly incorporating a view that challenged the prevailing orthodoxy oriented toward desirable or undesirable species.³⁰ His study concluded, among other things, that the impact of the covote on prey populations, like elk, was in fact negligible, and he therefore recommended against continuing the coyote control programs then in use by the Park Service. That recommendation, as Richard Sellars notes in his study of natural resource management in the National Park Service, "drew severe criticism from within the Service. Indeed, some individuals in top management apparently wanted Murie fired." The venerated Horace Albright-former Director of the National Park Service and former Superintendent of Yellowstone National Park—now retired but still involved in policy formation, especially regarding the Yellowstone and Jackson Hole areas, disagreed vehemently with Murie and the other biologists, continuing to seek protection of the desirable elk from the undesirable predators. In this case, however, National Park Service Director Arno Cammerer sided with Murie saying that the coyote is a "natural and desirable component of the primitive biotic picture," words, as Sellars says, "that sound as if they were written by Murie himself."³¹ The scientific perspective was gaining some hold, even in the highest echelons of the National Park Service.

The debate over coyote control in Yellowstone illustrates Adolph Murie's contribution to biological science and natural resource management in a variety of ways. First of all, Murie's intellectual contribution in his study of the Yellowstone coyotes represented a sea change in official thinking about this predator and about the ecology in which the coyote lived. Murie provided a dramatic example of the need to move beyond single-species management and to try to understand nature instead of manipulating it to artificial objectives. Secondly, this was clearly one of the most controversial and heated disputes within the natural resource programs, and there

²⁹ Richard Sellars, *Preserving Nature in the National Parks: A History* (New Haven: Yale University Press, 1997), 128, 130.

³⁰ Adolph Murie, *Fauna of the National Parks of the United States*, No. 4, *Ecology of the Coyote in the Yellowstone* (Washington, DC: U.S. Government Printing Office, 1940). An online version of this classic study can be found at

http://www.cr.nps.gov/history/online_books/fauna4/fauna. The Fauna Series itself was, as NPS biologist Gerald Wright, observed about the first in the series in 1933, Fauna No. 1, "revolutionary in its day." Wright also goes on to note that Fauna No. 1, which addressed wildlife management policies in the National Parks, "remains remarkably contemporary. In reading, one soon recognizes that the problems confronting park animals have not changed in almost sixty years. Unfortunately long out of print, the book is largely unavailable and unknown to most current biologists and administrators. Fauna 1 was the first document that defined a clear rationale for managing wildlife in national parks. It recognized the fallacy of single-species management. More important, it placed recommended actions in an ecosystem framework that recognized the role that natural processes played in achieving management objectives." R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992), 40.

³¹ Sellars, *Preserving Nature in the National Parks*, 122.

can be no doubt that Murie risked his career by standing by his scientific findings. Finally, his study had a specific, practical, application. Although the last coyote had been killed in Yellowstone in 1935, and although the pressure would continue even into the 1950s for the resumption of predator control inside that national park, with Murie's study the proponents of coyote killing could mobilize political forces, but not scientific rationale. Because of Adolph Murie's path-breaking study of coyotes, the practice of killing coyotes in Yellowstone was dead.³²

With some satisfaction of the support he received on the Yellowstone coyote study, Adolph Murie continued his work with yet another project that was published in the Fauna Series, this one subtitled *The Wolves of Mount McKinley*. Based on research he did for the National Park Service in 1939-1941, the study was not published until 1944, by which point Murie was employed as a biologist for the Fish and Wildlife Service—the successor to the Bureau of Biological Survey.³³ This study, parallel to Murie's similar study of coyotes in Yellowstone, explicitly drew upon that earlier work and his research again scientifically established the importance of wolves in maintaining the balance of the Denali ecology. Within a decade of the publication of this study the National Park Service in 1952 terminated its wolf control program at Mount McKinley.³⁴

During World War II, one issue surged forward that involved the federal government and the area where, as it happened, Olaus and Adolph Murie had been living-Jackson Hole, Wyoming. This issue, the creation of Jackson Hole National Monument, also revealed the growing connection for the Muries between science and public leadership. During the 1930s, John D. Rockefeller, Jr., had quietly purchased lands around Jackson Hole with the intention of consolidating them and giving them to the U.S. government to expand the small Grand Teton National Park, which at the time mainly included the mountains themselves rather than the land in the valley. This provoked a controversy within the county between the proponents of a larger national park and especially cattle ranchers who feared their range would be lost. As the issue took a variety of twists and turns and seemed unable to proceed in Congress, in 1943 President Roosevelt proclaimed the Jackson Hole National Monument, transferring to the National Park Service Forest Service land, withdrawn public land, and private land, some of which was owned by the Jackson Hole Preserve, Inc., a legal entity that controlled the lands purchased by Rockefeller.³⁵ The political firestorm in Jackson Hole that ensued was not just local, but extended to Congress as the move was challenged with threats, hearings, and delaying tactics. In creating the national monument, the president had cited the scientific and historic value of the area; both such qualities were being questioned by opponents. Olaus Murie testified as to the scientific value. As historian Robert Righter notes, "the scientific importance of Jackson Hole was established primarily by biologist Olaus Murie and geologist Fritiof M. Fryxell."³⁶ This was a clear choice for Murie, but it also put him at odds not only with some of his neighbors, but with even The Wilderness Society, a conservation organization which he served as a member of the board of directors. The organization devoted almost half of one entire issue of its publication, The Living Wilderness, to the issue and its editor, Robert Sterling Yard, vehemently denouncing the proclamation because the area included in the new monument was not wilderness.³⁷ Murie, having testified for the scientific values of

³² See on this question, especially, James A. Pritchard, *Preserving Yellowstone's National Conditions: Science and the Perception of Nature* (Lincoln: University of Nebraska Press, 1999), 138-161.

³³ Adolph Murie, *Fauna of the National Parks of the United States*, No. 5, *The Wolves of Mount McKinley* (Washington, DC: U.S. Government Printing Office, 1944). An online version can be found at http://www.cr.nps.gov/history/ online books/fauna5/fauna.htm.

³⁴ Sellars, *Preserving Nature in the National Parks*, 160.

³⁵ Robert Righter, *Crucible for Conservation: The Creation of Grand Teton National Park* (n.p.: Colorado Associated University Press, 1982), 110.

³⁶ Righter, Crucible for Conservation, 120.

³⁷ See especially, Robert Sterling Yard, "Jackson Hole National Monument Borrows Its Grandeur from Surrounding Mountains," *The Living Wilderness* 8 (October 1943).

the area next turned his attention to his own colleagues and urged them to not fall into the same dead-end logic as those who resisted preserving the area. The issue was not the quality of the land, Murie argued. That had been resolved: "here at one time ranged the bison and the antelope. Here, still we find the sage grouse. And here too, pass many of the Jackson Hole elk in annual migration." The issue instead, he said, is "whether or not we can retain the ability to be attuned to the many facets of primitive America and keep our souls receptive to their uplifting message."³⁸ Some measure of Murie's success can be charted in his ability to preserve the monument from its adversaries, but perhaps more can be seen in his ability to change the thinking of some who were opposed to the monument.

Murie's position was neither expedient nor political; it was simply based upon science and the principles and values that he held important and which he urged others to consider. That position also courted danger, running the risk of antagonizing both those of his neighbors in the valley who fought the national monument because they wanted to graze their cattle on that land, and also his friends and associates in The Wilderness Society who opposed the monument because the land had already been used by ranchers and others. Obviously, the Jackson Hole National Monument survived the affray, and so did Murie, his integrity intact as ever and his stature perhaps greater.

Since Murie lived in Jackson Hole, it would be possible to dismiss the events surrounding the creation of the Jackson Hole National Monument as of local significance only. The reality is, however, that the parties to the various issues involved were national, that Murie moved within a national venue in his own actions, and that the denouement of the episode was itself national. If Olaus Murie had entered the discussions as a prominent and respected scientist, it was clear afterwards that he was also an articulate, honest, and principled leader on the national stage.

By the end of World War II, Adolph and Olaus Murie had articulated a coherent view of the biotic community as central to an understanding of the various individual species it contained, had pressed for their own agencies in the U.S. government to accept the role of science in the management of natural resources, and had even seen some success and acceptance of their views, views which were shared by a growing coterie of biologists and naturalists in and out of the government. There was, in fact, some support in the higher echelons for the role of ecological science. By the mid-1940s, for example, Ira Gabrielson, head of the Fish and Wildlife Service and once a staunch predator-exterminator, according to Thomas R. Dunlap, "was defending predators, citing Adolph Murie's work as evidence that the animals had a function and should be saved."³⁹ There had been occasional triumphs and a few systematic victories for the Muries in particular ecosystems, but probably the major victory had been that of slowing down an aggressive program of the manipulation and destruction of natural resources, both predator and prey, and forcing managers to question their premises and their evidence in each undertaking.

In 1945 Robert Sterling Yard, the president and permanent secretary of The Wilderness Society for a decade, died, and the society needed to find a new leader. Olaus Murie was the clear choice because of his active involvement in the organization and because of his reputation and high profile within the growing community of scientific naturalists. And Murie, discontented in his work with the government where he was tolerated more than listened to, was ready for a change and a new forum. Murie's frustrations with his work as a scientist for the federal government had grown. The institutional support for his commitment to science in the face of political pressure, while steadily growing and sometimes marked with courage and resolve, could not be

³⁸ Olaus Murie, "The Jackson Hole National Monument," National Parks Magazine 75 (October 1943): 3-7.

³⁹ Thomas R. Dunlap, Saving America's Wildlife: Ecology and the American Mind, 1850-1990 (Princeton: Princeton University Press, 1988), 128.

guaranteed, and some parts of the agency, like its predator control section, simply launched campaigns that, according to Murie, "were in great part designed to insure continuance of appropriations." And the Fish and Wildlife Service still, after all these years, persisted in its belief that "certain species at least were particularly bad and unworthy of consideration."⁴⁰ When he was queried about the possibility of working for The Wilderness Society, Murie responded, noting first that "Adolph and I have given much thought to the matters you discussed in your letter," and more particularly, "I have no illusions about the 'scientific' work of the Fish and Wildlife Service. In a sense I have been marking time, watching the Service pass up numerous opportunities for doing a real service to conservation. In many ways I should not complain and I am treated well enough, so far as that goes. But there still remains the fact that my associates and I do not see things the same way and it inks one after a time. And recently, in spite of the shortage of paper, the amount of red tape is unbelievable."⁴¹ He had obviously discussed the possibilities of The Wilderness Society work with his brother Adolph, but he also had talked it over with his wife, Mardy. Her response? "Mardy keeps egging me on, and recently asked me if I am man enough to take a dare. She wants me to do some writing and art work, and wants me to do it soon."42 Murie took the dare and soon moved his family to the former STS Dude Ranch near the village of Moose, Wyoming. From Murie's perspective, it appears that he was leaving government service, but he was not leaving his mission of shaping resource management policy; instead he was moving forward to a new way of applying his science to public policy. Judging from the energy and vision he poured into his work, this was a decision that signaled a renewal of commitment with great promise as he applied the valuable lessons of his twenty-five years with the government to a broader venue.

The Muries and the Struggle for Science in Resource Management 1945-1974

The period up to 1945 was, for the Muries, an incredibly fertile period of intellectual growth and maturation, of insight and perseverance in communicating their data and their conclusions to their colleagues in the biological sciences and to their co-workers in government agencies who often lacked their scientific backgrounds and even their commitment to the role of science in resource management. It would seem, then, that in the ensuing years some decline in productivity, in impact, and in significance of their work in biological science might follow. That expectation, however, would underestimate the commitment these scientists held to their profession and their perceptions. Indeed, in the three decades after 1945 their productivity even increased, their impact enlarged, and their mark on the understanding of biological science and resource management deepened.

Their influence in biological science continued sometimes in unexpected forums with unanticipated allies and adversaries. In the fall of 1945, the National Park Service sent Adolph Murie back to Alaska to update his studies and make recommendations. Returning to Moose, Murie made his re-evaluation and noted that the Dall Sheep population had reached what he considered "an all time low," and that for the sheep population to recover it would be necessary to make a reduction of the wolf population by a maximum of ten or fifteen animals.⁴³ This modest recommendation was consistent with Park Service policy, including within the guidelines of Fauna No. 1, which noted that it may be necessary to reduce one species to protect a *threatened* (not just preferred) species, and the Park Service, with the approval of the Secretary of the Interior, prepared to implement Murie's recommendation. When the proponents of even more severe reduction of the wolf

⁴⁰ Murie to Cottam, December 10, 1947, cited in Kendrick, "An Environmental Spokesman," 116.

⁴¹ Olaus Murie to Robert F. Griggs, May 30, 1945. Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library.

⁴² Olaus Murie to Robert F. Griggs, May 30, 1945. Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library.

⁴³ Sellars, *Preserving Nature in the National Parks*, 159.

population mobilized an effort in Congress against Murie's proposal because it called for more limited wolf extermination than they wanted, the Park Service called for hearings with leading scientists to testify against the bill offered by Murie's opponents. Aldo Leopold, the formulator of what he called "the conservation ethic," and a former biologist with the Forest Service, in those hearings referred to Adolph Murie as being "widely respected as one of the most competent men in his profession."⁴⁴ This kind of praise could possibly be interpreted as routine mutual regard of colleagues for each other except for the context in which it came. The significance of this assessment was large, as Dr. Sellars indicates. In the view of Aldo Leopold, Adolph Murie "was far better prepared to deal with this issue than was Congress."⁴⁵ That the issue was framed in this way was revealing since it indicated not only the support of the scientific community for the views of Adolph Murie, views that he had been articulating for a long time, but that the National Park Service itself in this case concurred with those perceptions. Not only was Murie vindicated by his colleagues in the profession, but the proposed legislation to overturn his recommendation failed.

A similar instance, at precisely the same time after the Muries moved to Moose, involved Olaus. Olaus Murie had been a member of the board of Jackson Hole Preserve, Inc., the legal entity that held title to the land that had been purchased by the Snake River Land Company, Rockefeller's purchasing agents in the 1930s. He had supported the creation of the Jackson Hole National Monument, and his views were highly regarded locally and nationally on the issue. In late 1945 Laurence Rockefeller and Fairfield Osborn proposed the creation of Jackson Hole Wildlife Park, essentially a zoo with fenced areas containing elk, antelope, deer, and bison where they would be available for tourists to see and for scientists to study. This offended not only Olaus Murie's sensibilities, but also flew in the face of the gradual, but noticeable, change in the National Park Service, through the efforts of the Muries and others, over the previous decades. "Ever since the 1920s when Superintendent Albright displayed wildlife at Mammoth Hot Springs in Yellowstone," historian Robert Righter observed, "the National Park Service, found it prudent to avoid confronting Rockefeller, although he appears to have opposed the idea of a wildlife park.

Olaus Murie, however, never one to be restrained, protested vehemently. As Righter says, "As a wildlife biologist who had spent the better part of his life studying the habits of free-roving animals in Alaska and Jackson Hole, he knew that confinement was the antithesis of a healthy habitat for big game. He had always accepted the National Elk Refuge in Jackson Hole as a necessary compromise rather than an ideal situation."46 His opposition was on scientific grounds, in the name of biological science: "Imagine naturalists, particularly this, that the individuals and the group Murie criticized had been his allies on the expansion of Grand Teton National Park with the Jackson Hole National Monument just two years earlier. When the Jackson Hole Preserve, Inc. went ahead with the plan against Murie's admonitions, Murie tendered his resignation from the board of that landholding entity. In the words of Gregory Kendrick, he resigned knowing "that he must do so to preserve his integrity."48 The significance of this incident is two-fold. In the first place, it reflects Murie's commitment to science after his departure from government service, a commitment that he held passionately and continued to press with all his energy. Secondly, it demonstrated how far the NPS itself had come at the urging of people like Murie over the years in one part of the new approach to biological science and resource management. The National Park Service at one time would have embraced this plan with enthusiasm; now it discreetly declined to endorse the proposal. While the Muries doubtless would have hoped for a more

⁴⁴ Ibid., 160.

⁴⁵ Sellars, *Preserving Nature in the National Parks*, 160.

⁴⁶ Righter, Crucible for Conservation, 132.

⁴⁷ Ibid., 132.

⁴⁸ Kendrick, "An Environmental Spokesman," 108.

aggressive posture, it is also clear that Murie and the NPS were in accord; it was, after all, a position that he and his brother had pushed the government in its various resources agencies to adopt for years and years.

That pressure continued in the coming years, and additional cases followed in the Muries' effort to extend the biological science and natural resource ideas they had been advocating. In the 1960s a series of issues converged to provide a climax to the larger struggle and some broad concrete results for the pressures of the Muries and the growing number of scientists and public leaders who followed their lead. Where they had continued to push for a greater role of science and scientists in the formulation of wildlife management policy, increasingly those issues became the focus of public discussion rather than internal agency conflicts, specifically, the fights over public hunting in the national parks and a proposed piece of legislation that would ultimately become the Wilderness Act, which the NPS resisted. These issues made it increasingly clear to critics of the NPS, in Dr. Richard Sellars' assessment, "that the Service wanted no interference in its management of the backcountry."⁴⁹ In 1961 the Director committed once again to using scientific knowledge as the basis for wildlife management decisions, but in so doing only aroused pressure from the other side of the issue—those hunters who preferred management on the basis not of science but of promoting the populations of preferred species-and he also failed to satisfy the community of scientists; the issue therefore intensified instead of subsiding.⁵⁰ In 1962, a proposal called "Comprehensive Natural History Research Program for National Parks," was circulated among park biologists, and Adolph Murie offered his comments: "In my opinion, the report is an effort to make do with the slim research staff we now have within the Service. It crystallizes the inadequate situation that now prevails in Service biological research. It is a renunciation of the program that George Wright envisioned thirty years ago, and which some of us have continued to hope would eventually be realized."⁵¹ Clearly the response from the National Park Service to the pressure of the scientists failed to persuade them that science would be an important consideration in the formulation of policy. This was no longer an issue having to do with a single species or a single park; in the Murie framework, the issue was now joined exactly where it should be-system wide.

As a result of a growing sense of crisis at the highest levels of the NPS over what the mission of the Service was and where science fit into it, Secretary of the Interior Stuart Udall commissioned external studies on the science and resource management programs of the park service. As Sellars notes, "The studies would address concerns expressed long ago in Fauna No. 1 and by wildlife biologists such as Lowell Sumner and Adolph Murie⁵² Two studies would be undertaken. One would be conducted by the National Academy of Sciences to examine the "natural history research needs and opportunities" in the NPS. The other, headed by A. Starker Leopold, would study the NPS wildlife management policies and practices. These studies, from outside the Park Service, were unprecedented. Both studies were completed and presented in 1963.

These reports offered in different ways sweeping criticisms of the role science had been playing in the National Park Service and broad recommendations as to what that role should be. The Leopold report boldly called for "major policy change," and called upon the National Park Service to "recognize the enormous complexity of ecologic communities and the diversity of management procedures required to preserve them." The National Academy of Sciences report was, in the words of one of the scientists, "a blunt condemnation of the past and present NPS research program."⁵³ Historian Sellars notes that "In fact, written by scientists (mostly biologists),

⁴⁹ Sellars, Preserving Nature in the National Parks, 193.

⁵⁰ Ibid., 199, 200.

⁵¹ Adolph Murie to Regional Director, Region IV, March 5, 1962, Adolph Murie Collection American Heritage Center, University of Wyoming. At the time, Murie was working in Medford, Oregon.

⁵² Sellars, Preserving Nature in the National Parks, 200.

⁵³ See the summaries of both reports in R. Gerald Wright, *Wildlife Research and Management in the National Parks* (Urbana: University of Illinois Press, 1992), 26-28.

both the Leopold and National Academy reports gave a *scientific* perspective to national park management—a kind of ecological countermanifesto that marked the beginning of renewed efforts to redefine the basic purpose of the national parks."⁵⁴

For a number of reasons, these studies could reasonably be interpreted as signs of the cumulative influence of the Muries on public resource management policy since they called for resource management to be based on science, since they accepted a biotic community as a scientific given, and since they had the imprimatur of no less than the Secretary of the Interior. As it happened, however, Adolph Murie actually had strong reservations about the Leopold report since, ironically, that report proposed freezing the natural setting in time at the point at which the first white visitors entered the area, and doing so through active resource manipulation. This was, in fact, as Murie seems to have inferred, a partial drawing back by Leopold from his father's, Aldo Leopold's, classic formulation of the land ethic with the goal of a natural self-regulating ecology. Murie welcomed some parts of that report because of its endorsement of ecological complexity and its commitment to expanding biological research within the Service, but subjected the report and its recommendations to serious criticism, both general and detailed, in a ten page, closely-written commentary.⁵⁵ Although the report represented an important change in direction for NPS resource management and science programs, Adolph Murie pressed for additional such changes, and did so in ways commensurate with another report issued five months after the Leopold committee.

If anything the National Academy of Sciences Report, also known as the Robbins Report after its chair, biologist William J. Robbins, took the NPS to task even more forcefully for failing to support science. Scientific research, it argued, was critical for managing the national parks. A longer report, a more detailed report, and even a more science-grounded report in its embrace of ecological complexity, the Robbins Report essentially represented a culmination of criticism of the NPS approach to biological science and natural resource management that had been present since the 1930s and that continued from scientists within its own ranks, like Adolph Murie. As Murie wrote about it, it "is a highly important document. My only comments on this fine report would consist of minor alterations here and there. . . . But discussions become pinpointed and targets are raised for legitimate examination."⁵⁶ Elsewhere, he called it "a hard-hitting, fine report."⁵⁷

It would be difficult to overstate the significance of this point in the history of the National Park Service. It was a watershed in which the Park Service finally articulated the fundamental issues implicit in the role of biological science in resource management. The recommendations were not immediately implemented, of course, and resistance remained powerful. But the agenda for the future had been set, a baseline had been recorded, and the goals had been accepted at the highest level of the government. Indeed, as historian Sellars comments, "Much of National Park Service history since 1963 may be viewed as a continuing struggle by scientists and others in the environmental movement to change the direction of national park management, particularly as it affects natural resources."⁵⁸ This would not be the final battle, there would be major lapses in the coming years, the debate would continue, and the ecological perspective would gain influence with additional legislation, but this series of reports and debates in 1963 can be seen as directly addressing the

⁵⁴ Sellars, *Preserving Nature in the National Parks*, 214-217.

⁵⁵ Adolph Murie, "A Plea for Idealism in National Parks: A Critique," Adolph Murie papers, American Heritage Center, University of Wyoming. Unfortunately, the document is undated although clearly prepared in 1963. More to the point, it is unclear if this was a response to a draft version of the Leopold Report, for which his review had been solicited, or the final version. It appears, however, that the Committee did not circulate it for review within the National Park Service before submitting and publishing it.

⁵⁶ Murie, "A Plea for Idealism in National Parks: A Critique," 1.

⁵⁷ Adolph Murie to Howard Zahniser, November 11, 1963, Adolph Murie Collections, Subject File 1948-1964, Zahniser, American Heritage Center, University of Wyoming.

⁵⁸ Sellars, Preserving Nature in the National Parks, 217.
questions raised over the previous several decades by Adolph and Olaus Murie.

All of this discussion doubtless would have stimulated Olaus Murie to generate his own observations and provide input of many pages. On October 21, 1963, however, Olaus Murie died. Adolph shortly afterwards wrote a mutual friend and colleague, Howard Zahniser, about the National Academy report: "This report and the news of Wirth's resignation arrived the day Olaus left us. As always, I wanted to discuss both events with Olaus, and how poignantly I realized that I could not, not ever."⁵⁹

Adolph continued his work at Moose. In fact, when Mardy went to Washington the winter after Olaus' death, Adolph and his wife Louise moved into her house from their own "rambling ranch house," the old Estes homestead. Adolph preferred the homestead, he wrote Zahniser, "But this house is warmer, especially for Weezy's feet! And it is a good place to work, with lots of space. I am here officially for the winter, writing up a bulletin on the grizzly."

Based at Moose, Adolph continued to research and to publish on biological science. Within a few years he left the Park Service, but he continued to write his letters from Moose as "Adolph Murie, National Park Service Biologist, Retired." Perhaps one indication of his continuing prominence in the field, though, could be seen in 1968 when he was asked by L. David Mech, who had just finished his comprehensive reference book on the wolf, to write a foreword to the study. Mech wrote Murie at Moose in words that testify to the tracks that the older scientist had left in the field: "Because of the association of your name with the first scientific ecological study of the wolf and because of your reputation for careful and significant research on predators and wilderness species, the publishers and I would regard your Foreword as a most valuable addition to what we consider the first scientific reference book on the wolf."⁶⁰ This was not exactly a passing of the torch in biological science, but it was certainly a measure of the distance the ecologists had come, both in government service and in the academic community, and a measure of how large a role Adolph Murie had played in traversing the distance.

Another measure came in a legislative adoption of one of Adolph's proposals. Adolph Murie had made an extensive study of Isle Royale in Lake Superior in the 1940s, and during the 1950s his recommendation for it to be managed for its wilderness potential emerged in several ways. One was the colonization of the island (actually an archipelago) by wolves. In this instance, the National Park Service welcomed the wolves.⁶¹ When the island began to be developed in substantial ways over the next decade, however, the fate of that wilderness status was far from certain. It was only in the early 1970s, in the words of historian John J. Little, that Senator Philip Hart "discovered the long dormant reports of Adolph Murie, the Bryant Committee, and George F. Baggley, and presented them on the Senate floor. It marked the first time that a direct historic link between the original administrative justifications for NPS activity on Isle Royale and the wilderness question were made."⁶² Vindication sometimes takes time.

Adolph continued writing, providing input both solicited and otherwise, in critical issues of biological science and resource management, addressing as a professional biologist a multitude of issues. In 1966 he took aim at

⁵⁹ Adolph Murie to Howard Zahniser, November 11, 1963, Adolph Murie Collections, Subject File 1948-1964, Zahniser, American Heritage Center, University of Wyoming.

⁶⁰ L. David Mech to Adolph Murie, Adolph Murie correspondence, 1935-1974, American Heritage Center, University of Wyoming. Several pencilled drafts, obviously anguished, of Murie's response to Mech express appreciation for the honor, but declined on the basis of time constraints and a full load of projects he was already committed to.

⁶¹ Dunlap, Saving America's Wildlife, 80.

⁶² John J. Little, "Adolph Murie and the Wilderness Ideal for Isle Royale National Park," in Ronald J. Lora, ed., *The American West: Essays in Honor of W. Eugene Hollon* (Toledo: University of Toledo, 1980), 109.

the pesticide program in Grand Teton National Park, arguing that the effort to exterminate the bark beetle, "a species that is part of the native fauna" and an essential part of the natural cycle, falls "in the same category as coyote control."⁶³ He continued to push for minimizing the human manipulation of nature in the national parks and he did so until his death in 1974. Even at that, his influence continued. In 1975, his widow Louise wrote the superintendent of Yellowstone National Park from her home at Moose, commenting on a fire management plan Environmental Assessment, reminding the superintendent that the purpose of the park was to maintain the park in as natural a condition as possible and minimizing human manipulation of the environment. She also noted, after expressing her own views on the subject: "Last summer my late husband, Adolph Murie, and I were very much concerned about the plans for prescribed burning in Teton Park, and he wrote a commentary-critique for the superintendent here at that time. I am taking the liberty of sending herewith a copy of it, since it applies to <u>all</u> national parks as well as to Teton."⁶⁴

The Continuing Scientific Legacy of the Muries

The voice of the scientist lingered on, it seemed. In fact, even beyond their deaths, the voices and the perceptions of both scientists still endure, because of their influence on colleagues, students, and others who came to the Murie Ranch seeking guidance, seeking mentors, seeking encouragement. And they invariably found the Muries more than receptive. Even after Olaus left government service his connections with the scientific community remained strong and even grew in his years as a "civilian" scientist. In fact, now scientists from around the world were trekking to Moose, Wyoming to consult with the Muries. In the early 1960s, Mardy would note that scientists, young people, friends, and strangers would visit the compound at Moose: "Every conservationist or friend of a conservationist, every biologist or friend of a biologist, every schoolmate of our three children, or friend of a schoolmate, who happens to be traveling through Jackson Hole will naturally come in to call." In addition to the usual summer's fare of visitors, she noted,

We had the pleasure of entertaining scientists and students from Norway, Sweden, Finland, India, Kenya, France, England, Australia, New Zealand, Denmark, South Africa, Canada, and members of the United Nations Secretariat. They all seemed happy to walk in the woods or to swim in our "swimming channel," to talk over all sorts of topics by the fireplace at night.⁶⁵

And those visitors who came to learn science from the Muries took away important lessons, not just about wildlife, but about the role of science in natural resource management. Having been at the ranch for less than a year, Adolph Murie wrote a letter in 1946 indicating that "The Craighead boys and wives are living in two of our cabins this summer. We enjoy having them here."⁶⁶ John and Frank Craighead, twin brothers, were starting their careers as biologists too and ultimately became the distinguished experts on grizzly bears, and, like the Muries had done with other species in other parks, pressed Yellowstone National Park to use science in its bear management program.⁶⁷ The ranch served as a place for mentoring its many visitors from its very beginning.

In a broader way, the Muries served as mentors to future generations of scientists as well. In focusing on the way nature was viewed that formed the intellectual core of their studies, it is easy to overlook the actual field

⁶³ Adolph Murie, "Pesticide Program in Grand Teton National Park," National Parks Magazine 40 (June 1966): 17.

⁶⁴ Louise G. Murie to Robert Haradan, Acting Superintendent, Yellowstone National Park, June 24, 1974, Adolph Murie collection, American Heritage Center, University of Wyoming.

⁶⁵ Murie and Murie, *Wapiti Wilderness*, 281-282.

⁶⁶ Adolph Murie to Victor H. Cahalane, June 7, 1946. Adolph Murie Collection, box 2, Correspondence, 1940-1972, American Heritage Center, University of Wyoming, Laramie.

⁶⁷ Sellars, *Preserving Nature in the National Parks*, 251; a detailed study of the conflict that echoes the Muries' experiences can be found in James A. Pritchard, *Preserving Yellowstone's National Conditions: Science and the Perception of Nature*, 238-250.

research, the enormous amount of data that they compiled about the species and ecosystems they studied. It is also of significance that their work was so new that often it produced the only data about various species and represents still something of a baseline for evaluating wildlife populations and behaviors. A cursory look at citations in the scientific literature even in the last few years reveals that the scientific studies of Adolph and Olaus Murie still provide guidance to naturalists. One database produced a list of thirty-eight scholarly articles and monographs published between 2000 and 2003 that drew upon the work of Adolph and Olaus Murie. These included work published in the *Journal of Mamalogy, Evolution, Journal of Vertebrate Paleontology, The Wilson Bulletin, Comparative Parasitology, The American Midland Naturalist, The Bryologist, Mammalian Species,* and even the *Journal of Medical Entomology*, and included studies ranging from the Bering Sea, to the Fayum, Egypt, from the Bialowieza Forest in Poland to the Aleutian Archipelago, and from the tropical forests of western Mexico to suburban USA.⁶⁸ The literature on wildlife has multiplied by untold degrees since the Muries produced their studies, the science has splintered into multiple specialties, and the research methods have drawn upon elaborate and sophisticated computer models unknown a half-century ago, but still the work of Adolph and Olaus Murie guides the modern naturalist in the details of their field work and in the insights their research generated.

Ecological Science for the Public

There is one more aspect of the significance of the Muries in biological science and resource management that is not completely captured in the interaction between these scientists and other scientists or between them and resource managers. That is the conviction, especially evident about the time that Olaus left the government service and the families moved to the ranch at Moose, that it was vital that the concepts of ecological complexity and interactive biotic communities become part of the vocabulary of ordinary citizens as well.

One aspect of this can be seen in their published work. For Adolph, his pathbreaking studies—two of which had been included in the Fauna Series—would be hard to match in coming years. On the other hand, these studies, as pioneering as they were, as influential as they were in scientific circles, were far from achieving a wide circulation. And those were the prominent studies that he produced. In addition, there was his work on the ecology of the coyote in the Yellowstone, a study he prepared on mammals from Guatemala and British Honduras, an Alaska study, *Following Fox Trails*, all of which had been printed by the government with limited circulation. And there was also his study of moose on Isle Royale in Lake Superior.

Similarly with Olaus Murie. His studies, important and controversial in science and government cloisters, had not often been broadcast to the larger public. Even his studies of the coyote and the wapiti in Jackson Hole, to which he had devoted enormous time and energy, saw their results in unpublished government reports and brief summaries in science periodicals. In other words, much of the work of these prolific, prodigious researchers wound up on a shelf far from public discourse. And that public discourse was especially the target that Adolph

⁶⁸ See, for example: Kevin Winker, Daniel D. Gibson, Arthur L. Sowls, Brian E. Lawhead, Philip D. Martin, Eric P. Hoberg, Douglas P. Causey, "The Birds of St. Matthew Island, Bearing Sea," *The Wilson Bulletin* 114, no. 4 (2002): 491-509; Theuerkauf, Jorn, Jedrzejewski, Włodzimierz, Schmidt, Krzyszstof, Okarma, Henryk, Ruczyllski, Ireneusz, Sniezko, Snaislawa, Gula, Roman, "Daily Patterns and Duration of Wolf Activity in the Bialowieza Forest, Poland," *Journal of Mammology* 84, no. 1 (2003): 243-253; Angela M. Doroff, James A. Estes, Tim M. Tinker, Douglas M. Burn, Thomas J. Evans, "Sea Otter Population Declines in the Aleutian Archipelago," *Journal of Mammology* 84, no. 1 (2003): 55-64; Stephen S. Talbot, Sandra Looman Talbot, John W. Thomson, Fred J. A. Daniels, Wilfred B. Schofield, "Lichens from Simeonof Wilderness, Shumagin Islands, Southwestern Alaska," *The Bryologist* 105, no. 1 (2002): 111-121; Todd J. Mabee, Veronica B. Estelle, "Assessing the Effective of Predator Exclosures for Plovers," *The Wilson Bulletin* 112, no. 1 (2000): 14-20; Mircea G. Hidalgo-Mihart, Lisette Cantu-Salazar, Carlos A. Lopez-Gonzalez, Enrique Martinez-Meyer, and Alberto Gonzalez-Romero, "Coyote (Canis latrans) Food Habits in a Tropical Deciduous Forest of Western Mexico," *The American Midland Naturalist* 146, no. 1 (2001): 210-216.

and Olaus had in mind. They did not abandon their scholarship; on the contrary, they pressed forward vigorously, but now they sought to communicate the data and the concepts and the implications to more and more people.

They turned increasingly to the popular press. In postwar America, a variety of magazines with a focus on nature gained in circulation, and the Muries sent plenty of material to them. In the three decades between 1945 and 1974, the *Reader's Guide to Periodical Literature*, a standard reference of citations in popular magazines, not the technical, specialized professional journals, listed articles by Adolph, Olaus, and Mardy, and often by two of the three every year except 1968 and 1969; Olaus had died in 1963 and Adolph died in 1974. As early as 1950, Ferris M. Weddle commented that Olaus Murie "has never been a prolific writer of popular articles because he has not found the time to do them," but then acknowledged that "he has managed to write 75 or more which have appeared in Audubon Magazine, Nature Magazine, The Atlantic Monthly, Rotarian, American Forests, and others."⁶⁹ When Olaus finally published his elk study, it did not focus on just the Jackson Hole herd. It was titled, appropriately, The Elk of North America. Published in 1951, this tome, nearly 400 pages long, was privately published with the sponsorship of The Wildlife Management Institute, the director of which, Ira Gabrielson, had been the first director of the Fish and Wildlife Service. Hailed as definitive and as a model, the study was also accessible to the lay reader and illustrated with Murie's own drawings and photographs. Olaus' other book-length study reached an even wider audience. At first glance, his A Field Guide to Animal Tracks may appear to be just a list of animal descriptions and drawings of their tracks and scat—a simple catalog for reference by anyone from the rankest novice to the specialist, but a simple catalog nonetheless. That appearance, however, is deceptive. As Roger Tory Peterson commented in his "editor's note" to the volume, ". .. [the book] is a bridge between the art of identification and the science of ecology. There is a story behind the tracks in the snow or along the river's edge and study may reveal much about the animal in relation to its habitat."⁷⁰ True to his form, Murie offered far reaching observations on the animals whose tracks he sketched and examined in the book, contemplating the larger meaning of the presence of the animals: "I sometimes think that the most conspicuous coyote sign is his night song. Certainly a camp on the plains in the Southwest or in the western mountains is cozier when enhanced by the serenade of coyote in the moonlight. He who would follow the mammals in the wild should know something of the significance of this." He then proceeds into a discussion of the meaning of the song of the coyote.⁷¹

As a biologist continuing in government service Adolph continued to produce his government studies, of course, but he also produced other materials. Perhaps most notably, he published in 1962 his autobiographical account of his Alaska research. Murie's *A Naturalist in Alaska* reveals something of the author, but his focus is especially on the wildlife he had studied in his Alaska years. Yet, it is clear, as he discusses the grizzlies and mice and lynx and wolves and others, that he is not separating them out and isolating them as much as the literature had previously done, but that he was making each a set of fine, carefully crafted strokes on a large canvas where all the parts fit together to make the whole more than the sum of the parts. The foreword to the paperback edition of the book, written by Harold E. Anthony, Curator Emeritus of Mammals of the American Museum of Natural History, wrote that "It will soon become apparent to the reader of anything written by Adolph Murie that he wants to be on friendly terms with every animal about him, that he can assess the behavior of each as it affects the other wild creatures of the community, and that he does not overlook the necessity, deplorable as it may be to conservationists, of recognizing that man is ever anxious to remake the

⁶⁹ Ferris M. Weddle, "Wilderness Champion--Olaus J. Murie," Audubon Magazine 52 (July - August 1950): 227.

⁷⁰ Olaus Murie, A Field Guide to Animal Tracks (Boston: Houghton Mifflin Company, 1954), v.

⁷¹ Murie, *Field Guide to Animal Tracks*, 95. Of relevance to this particular entry, Murie also provided the illustrations and some input into the text, for J. Frank Dobie's *The Voice of the Coyote* (Boston: Curtis Publishing Company, 1949; Lincoln: University of Nebraska Press, 1963). Dobie, of course, had visited Murie at the Murie Ranch. See Ferris M. Weddle, "Wilderness Champion---Olaus J. Murie," *Audubon Magazine* 52 (July-August, 1950): 224.

wilderness nearer to his heart's desires."⁷² Another aspect, hinted at in that comment, became explicit in Olaus Murie's foreword to the same volume written by his brother. Writing from Moose, Olaus noted that "What is much needed today is more mutual respect among the exponents of science, philosophy, esthetics, and sociology. Although we are beginning to think in terms of human ecology, it is now time that we recognize all elements of the good life and give them the emphasis they deserve."⁷³ In other words, the canvas on which Adolph was painting a picture included not just the fauna of Alaska, but the human community as well. At one time, the Muries had focused on the consequences to nature of imposing an essentially urban vision onto the wilderness as a field with crops to be harvested; now they were turning the tables and using the concepts of wilderness ecology to understand better the human community itself.

The writing of both scientists emphasized the importance of an ecological perspective and did not speak down to the audience. They wrote without pretense and in an effort to communicate clearly. In his study of *The Grizzlies of Mount McKinley*, published posthumously in 1981, Adolph wrote in a draft for the introduction, "I have, I think, avoided the ecologists' jargon, the scientific phrases so frequently created by ecologists and animal behaviorists to make simple facts sound profound and impressive." And he quoted his brother's words as he did so: "It seems to me we should get away from the strictly scientific methods of today, so much like the laboratory technique. We have to speak the truth but we can use human language in doing so."⁷⁴

Olaus's work likewise continued in this vein until his death—and then beyond. He sought the wider audience and the wider connections, following the implications of his biological science perspective, and with Mardy together they wrote about their adventures in Jackson Hole, drawing upon small incidents of encounters with nature to draw larger lessons for science and public policy. The result of that effort was their combined work, *Wapiti Wilderness*, a set of essays, about half by each, which told not just the stories of their life in Jackson and at the Murie Ranch, but in subtle ways revealed their outlook on the valley, on the world, and on life. There could be no doubt, after reading *Wapiti Wilderness*, that the Muries had found in their life in Jackson Hole, and especially at the ranch at Moose, the peace and contentment that their ecological perspective promised.

Summary

It is difficult to overstate the importance of Adolph and Olaus Murie in the field of biological science and natural resource management. When they embarked on their careers with the federal government, science was used, if at all, to justify programs and policies that had their origins in culture or economics and that imposed on nature a set of priorities and values that were anything but scientific in their origin and formulation. Through intellectual rigor, through sustained and intensive effort, through years of determination, and through resolute acts of courage, these two brothers pressed the government, first, to consider nature as a complex of subtle relationships, each species dependent upon others directly or indirectly, and, second, to implement policies consistent with such an ecological perspective. While the intellectual achievement of helping others to see nature through different eyes would be impressive by itself, it is especially the translation of their insight and perception into policy that adds real-world significance to their endeavors. Because of their work, long traditions and entrenched programs that approached nature as a garden to be harvested or artificially cultivated ground slowly to a halt in the national parks and wildlife refuges and new objectives and policies replaced them to help restore the wilds to their natural health and balance. In the study of different species and their roles in the ecosystems they inhabited, and in the understanding of the intimate, dependent, relationships of predators

⁷² Anthony, "Foreword," Adolph Murie, A Naturalist in Alaska, ix.

⁷³ Olaus Murie, "Foreword," Adolph Murie, A Naturalist in Alaska, xii.

⁷⁴ Adolph Murie, *The Grizzlies of Mount McKinley* (Washington, DC: U.S. Department of the Interior, National Park Service, 1981), xi-xii.

and prey, both Murie brothers brought new light to bear on wildlife and challenged prevailing orthodoxies about its management. Moreover, eminent and thorough field researchers who spent countless days and nights in the field with their subjects, they were equally at home wrestling with the administrative structures of government service where policy formation took place. Often frustrated, frequently alone, and sometimes threatened, they persevered, they saw results, and they were recognized by their peers for their contributions and more scientists and public agencies came to agree with them. But there was more even. In addition to the intellectual discourse at the highest levels, they mentored countless other specialists and generalists and they also took their science beyond discussions with other experts and infused ecological concepts in the popular discussion of nature and natural resources. As a result, the field of study in which the Muries worked still ripples from the waves they set in motion in the twentieth century. In developing a scientific approach that included complex biotic systems, in pressing for changes in the management of resources to reflect such an approach, in conducting field research that is still a standard referent, and in educating the public to ecological concepts and their policy implications, the Muries at the ranch near Moose, Wyoming, made an enduring mark.

The Muries and Conservation

"I think we should broaden our views on our program," Olaus Murie wrote in 1945 to a colleague in The Wilderness Society. "We have, of course, put our chief effort on preserving some wilderness areas that come up to our specifications. I think we should go farther than that...."⁷⁵ With these words, Olaus Murie, not yet at the helm of the organization whose agenda he contemplated, concisely pointed the direction of the future. Soon after this, Murie accepted the position, and responsibility, of director of The Wilderness Society, left government employment behind, moved into the wooded setting of the Murie Ranch near Moose, and shifted his attention to the broader concerns of promoting conservation, wilderness, and the values of nature in modern society. This did not mean leaving behind his previous commitments to science and ecology but in fact represented a logical extension of that work by acting on the implications of science for public policy. As he did so, however, and joined by his wife and his brother as full partners in that effort, he also altered the direction of The Wilderness Society so that it both fought for the protection of natural areas that were not technically wilderness but still held important natural values, and identified areas that needed to be preserved as wilderness. This change meant that the conservation movement now took the initiative in defining its goals instead of just reacting to specific threats to existing wilderness areas. While this meant that the Muries moved forthrightly into the public policy arena, while this brought them into high profile, and while this represented a reformulation of the program of The Wilderness Society, it also marked the beginning of the larger transformation of the conservation movement into a broader environmental movement in the nation.

The movement into which the Muries stepped into after World War II lacked a clear direction and future at the time, and its history has not always been clear either. Once portrayed as the story of romantics enamored of the wilderness fighting powerful interests who sought to exploit the public domain for their own profit, the conservation movement in American history has often been identified since the 1960s in a narrower, more technical, framework, with early twentieth-century leaders of the movement, people like Theodore Roosevelt and Gifford Pinchot, characterized as appreciating not so much unspoiled lands, but favoring the efficient utilization of natural resources through sustained yield and scientific management. Samuel Hays, at one time the leading historian of conservation, maintained in his study, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1922*, "Conservationists were led by people who promoted the 'rational' use of resources, with a focus on efficiency, planning for future use, and the application of expertise

⁷⁵ Olaus Murie to Ernest Griffith, May 30, 1945, Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library.

to broad national problems."⁷⁶ There are many examples to confirm his argument, and it would even be fair to suggest that people with such a conservation outlook sometimes dominated the U.S. government agencies for natural resource management. Of course, that view has its limits, and one that was noticeable from the outset was that it tended to leave out other conservationists, conservationists more in the spirit of John Muir, people who saw nature in terms other than as a resource to be developed and a commodity to be marketed, and who found in nature values capable of elevating the human spirit and restoring a sense of purpose in life often missing in modern urban society. The Muries belong to this tradition of conservation and the leadership these people exercised in the conservation movement in the nation between 1945 and 1980 demonstrates not only their national significance, and the significance of the Murie Ranch near Moose, Wyoming that provided them, and their associates, a haven and base of operation, but also the significance of this broader strain of conservation in modern America.

The National Park Service Study of Theme XIX, Conservation of Natural Resources, published in 1963, written by Charles W. Snell, carries the study of conservation up to 1916 and the final passage of legislation creating the National Park Service.⁷⁷ Because of the National Park Service's critical mission "to conserve the scenery and the natural and historic objects and wild life therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations," this legislation indicated that this preservationist component of the conservation movement, as opposed to the utilitarian wing, was now "legitimatized," in the words of Snell.

That, of course, was but the beginning of a long, complex history of discussion, activism, and legislative conflict over the use of natural resources in the public domain in the decades since then. In the 1920s, the conservation movement itself, as an organized entity, at least, was fractured and myopic. As Stephen Fox summarizes: "the Sierra Club addressed itself to mountaineering and national park matters; Pinchot's National Conservation Association covered forestry and power development; the Audubon Association discussed birds and other wildlife. . . . The old groups guarded their respective domains and no one asked the large questions."⁷⁸ The Izaak Walton League held a larger following than the established groups, and that following was based not in the Northeast as were the others, but all across the Midwest and West; but that organization, after a spectacular rise, soon shriveled to become no more influential than the others. Beset by internal rancor, scandalous commercial connections, and inept leadership, the conservation movement of the 1920s and 1930s was at best a standoff between honest amateurs and organized special interests.

The massive government programs of the 1930s, whether under the aegis of the Civilian Conservation Corps, the Soil Conservation Service, or other government economic and social programs, or even like the Tennessee Valley Authority, aspired to making the nation's natural resources more accessible and profitable, and, in the sense that the government now sought to protect large public areas and preserve them for public use, the government seemed to be moving in a conservation direction. This was especially true of the National Park Service, which during the Roosevelt administration launched an ambitious program of expansion, both within the existing parks and in adding to the parks already in the system. Even so, as Fox tells the story, "the most striking new direction in conservation at this time took place outside the New Deal, in the development of Muir's ideal of wilderness preservation—not by the Park Service or its supporters but by noncommercial

⁷⁶ Samuel Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890-1922* (New York: Atheneum, 1969; originally published by Harvard University Press, 1959). This quotation is from the preface to the Atheneum edition.

⁷⁷ [Charles Snell], *Conservation of Natural Resources: The National Survey of Historic Sites and Buildings, Theme XIX* (Washington, DC: National Park Service, 1963).

⁷⁸ Fox, American Conservation Movement, 160.

elements within the Forest Service Lobby."⁷⁹ Proponents of wilderness, rather than for facilities for people to view scenery, such as activists Robert Sterling Yard and Robert Marshall, found the Forest Service sometimes receptive to their ideas and after 1924 the Service designated some parts of its inventory as primitive areas. But these conservationists sought greater protections and they wanted wilderness in places other than Forest Service land. Finding themselves critical, ultimately, of both Forest Service and National Park Service management of natural resources, one encouraging logging and the other building roads and concessionaire opportunities, and neither committed to protecting wilderness and wildlife, in 1935 a group of eight such people, including scientific professionals in the government, organized The Wilderness Society. This group took on a number of issues in the next decade and emerged as a small but articulate organization with a deep commitment to preservation and to science. Olaus and Adolph Murie became part of that group and in the coming years Olaus in particular emerged as an individual who could articulate the powerful preservation vision.

There had been a time when Olaus Murie, the scientist for the Biological Survey, had a foot in both camps of that agency-the economic division and the science division. Increasingly in the 1930s, Olaus Murie, still the scientist for the Biological Survey, had a foot in the scientific community pressing for a rethinking of nature and the environment in terms of its holistic relationships, and a foot in the conservation community seeking land management policies that would increase habitat available for wild species, restore the relationship between predator and prey, and preserve wilderness in areas in and out of public control. Clearly, too, his audience, both scientific and popular, was national now, not just local. In 1935 Olaus Murie had joined the small group of like-minded people who had just formed The Wilderness Society, with the mission of "fighting off invasions of wilderness and of stimulating an appreciation of its multiform emotional, intellectual and scientific values"⁸⁰ and in the same year Adolph Murie received a letter from Robert Sterling Yard, the executive director of the new Wilderness Society invited Murie to join that organization, which it appears he did.⁸¹ Robert Sterling Yard, Aldo Leopold, Robert Marshall, and a few others with the Muries, now had a new institution to press their agenda that was both scientific and aesthetic in its valuation of nature unimpaired. In 1937 Olaus Murie became a member of the council of the organization. What this meant for Murie was that his attention would be increasingly directed at issues that were national in scope, even when they were in his own back yard.

His ideas, born in meticulous often hardship-laden scientific investigation, were increasingly finding a receptive audience beyond the community of scientists among those who identified themselves, more generally, as conservationists and especially those who sought to steer public land policy toward preservation rather than sustained-yield preservationists. As Gregory Kendrick notes in his study of Olaus Murie,

By the time that Murie completed his Aleutian studies, his interests and writing style had changed. Biology still fascinated him, but gradually Murie the conservationist emerged. How could a sensitive person study elk when predators were rapidly vanishing, when entire forest watersheds were overgrazed and while congress refused to honor the appeals for more national parks? If he could express his feelings toward nature and the need for continued existence of wild areas to the American people, Murie was convinced that some of America's natural beauties could be preserved for future generations. Soon he was writing impassioned articles for popular magazines rather than preparing monographs for technical journals.

The periodicals of The Wilderness Society, the National Audubon Society and the National

⁷⁹ Ibid., 203.

⁸⁰ Kendrick, "An Environmental Spokesman," 105.

⁸¹ Robert Sterling Yard to Adolph Murie, May 6, 1935, in Adolph Murie Collection, American Heritage Center.

Parks Association became his favorite outlets.⁸²

At the end of World War II Murie had increasingly taken public positions not just on particular aspects of natural resource management, and not just on science in agency policy, but on a range of broad policy issues that brought him heightened visibility. In so doing he had been able to win over people who had initially held opposing views, such as in the controversy over Jackson Hole National Monument. His values, knowledge, courage, and leadership ability made him a natural choice when The Wilderness Society needed a new director; they enthusiastically offered him the position. The problem in taking such a position with The Wilderness Society, however, was that Murie understandably preferred to live in the woods, close to the wilderness that he sought to protect. This was more than a matter of personal convenience. The woods and access to wilderness, were important to him. After giving it some thought he told The Wilderness Society: "I still feel that I do not want to move permanently to either Washington or Chicago. . . . I could enjoy, after a fashion, dealing with Congressmen and such. But I would not feel fully alive. I want to be out here somewhere in the West, where my inspiration is and, I believe, my work."⁸³

The Wilderness Society contemplated this condition and readily accepted. When Robert Griggs shared Murie's thinking with other members of the Executive Committee of The Wilderness Society, he noted first of all that he was convinced more than ever that Olaus Murie would be the best person "to lead The Wilderness Society if we could make some arrangement whereby he would do it. No one else is so completely devoted to that cause as he, and no one is wiser in his dealing with the problems thereof." He then addressed the location that their leader should have. "It is perfectly clear from his letter that he would not be willing to come to Washington. He is in fact a product of the wilderness and there he will stay. Should we of The Wilderness Society expect it to be otherwise? What would you think of an arrangement whereby he could undertake the program without coming to Washington?"⁸⁴ The arrangement was made, and Olaus began working for The Wilderness Society as Director on a half-time basis from Jackson Hole. The other half of the position was in Washington, D.C. There, Howard Zahniser, in whom Murie had full confidence and a warm working relationship, would edit the organization's publication, *The Living Wilderness*, and take care of the rest of the society's administrative business.

Olaus Murie and his wife Mardy then moved their home, and family, deeper into the woods. They had lived in the town of Jackson since 1927, and this new position gave them the opportunity, and need, to find a new place to live. They had long been friends of Buster and Frances Estes who lived up the Snake River, about fourteen miles north of Jackson, and often visited them at their ranch—the STS. The Estes ranch started two decades before as a homestead and like other such operations in this harsh climate, their ranch seemed to offer greater promise for entertaining eastern dudes than for growing cattle or crops. Thus around their homestead cabin the Estes built a cluster of guest cabins and transformed the ranch into a popular dude ranch. In the autumn of 1945, Olaus and Mardy Murie and Adolph and Louise Murie together purchased the STS ranch and shortly afterwards, Adolph and Louise moved to their new home and headquarters, Olaus and Mardy joining them the next summer.

When Olaus Murie took over leadership of The Wilderness Society in 1945, The Wilderness Society and the conservation movement were at a crossroads with an uncertain future. Olaus had already articulated his vision

⁸² Kendrick, "An Environmental Spokesman," 103.

⁸³ Olaus Murie to Robert F. Griggs, May 30, 1945. Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library.

⁸⁴ Robert F. Griggs to members of the executive committee, June 7, 1945, Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library.

of the direction the society should move during 1945. Encouraging a broadening of goals, rethinking the organization's tendency to only preserve certifiable wilderness parcels, and pondering the value of nature for modern life, Murie argued "Rather than confining our attention solely to certain marked-out areas, we should give our attention to arousing the Nature outlook in receptive people. The germ is still there, though latent, in modern man, with all his mechanization. Accordingly, why not support any tendencies that are in the right direction—the Nature trail to be sure, even if it is not in a wilderness; the management of state parks, even though not true wildernesses; the naturalist programs in national parks; the recreation program of the Forest Service; perhaps even some city parks. We may be able to get in some modest 'leanings' toward naturalness in many such land categories. Anything that fosters getting close to earth in the best sense tends to foster a desire to retain the wilderness principle. This broader view of the subject puts us more directly in the light of working for a philosophy instead of only for a certain type of land use, and on that plane I believe we should be able to enlist the sympathy and cooperation of able minds in our country." Then he added, almost as an afterthought, but with huge implications: "And let us keep an interested eye on efforts in other countries."⁸⁵ This was a breathtaking vision but it summarized the course that Olaus Murie charted for The Wilderness Society.

Symbolically, as Murie planned to move The Wilderness Society in new directions, he also was moving his family almost literally into the wilderness. When the family purchased the STS ranch and moved up the valley, this actually proved to be a welcome change of venue. Mardy Murie recalled that after spending the war years working at the Bear Paw Ranch on the west bank of the Snake River, "I did not want to go back to town. The Bear Paw had spoiled me. I wanted to live where I could walk out of the door and into the woods." She also recognized that the decision to purchase the STS ranch was not exactly conventional: "Our friends in town no doubt thought Weezy and I slightly balmy. We were both leaving modern town houses to go up the valley where in 1945 no electric power was available and all side roads, and often the main roads, were snowed in from December until late April."⁸⁶

Part of the new life at the Murie Ranch was simply living in that semi-wilderness. Part of it, though, came from the intensity of their commitment to conservation. Mardy would write, "After Olaus became Director of the Wilderness Society and we moved to the ranch, the days were never long enough. Besides all the mountains of mail to be handled, on wilderness or other conservation matters—and they averaged about fifteen letters a day—Olaus was working on his book *A Field Guide to Animal Tracks* and also at times doing illustrations for other people's books."⁸⁷ The adventure that began at the ranch at Moose marked a new, larger life for the Muries. "We had become immersed in the conservation battle, and enthralled and stimulated by it and by the interesting people we met in connection with it, and we both knew that life was blooming, expanding, growing because of the new work Olaus had undertaken. It demanded a great deal of us both. Correspondence was never quite caught up with; there were articles Olaus must write, lectures he must prepare, trips here and there and everywhere, to lecture, to meet, to confer, to testify, to teach, to persuade, to urge, to decide, to stand firm."⁸⁸

Thus, from the Murie Ranch Olaus Murie guided The Wilderness Society in the post war years. And the organization grew. Apparently the group had about seven hundred members at the end of the war and possibly as many as a thousand; by 1947 it had 1747 members,⁸⁹ and by 1952 had five thousand members.⁹⁰ That made

⁸⁵ Olaus Murie to Ernest Griffith, May 30, 1945, Wilderness Society Collections, Folder 1:100, Governing Council Correspondence, 1945, Denver Public Library. Griffith was the Treasurer of The Wilderness Society.

⁸⁶ Murie and Murie, Wapiti Wilderness, 267, 268.

⁸⁷ Ibid., 273.

⁸⁸ Ibid., 275.

⁸⁹ Annual Report, Governing Council, The Wilderness Society, Annual Meeting, 1947, Folder 1:100-200, Wilderness Society Collections, Denver Public Library.

it by 1952 still the smallest of the major conservation groups, but, as Stephen Fox argues, "Its power derived not from numbers but from the reputations and personal qualities of an extraordinarily capable staff and council."⁹¹

The direction became clear almost immediately. In 1946 The Wilderness Society reorganized its structure and modified its program and set out to work with a new commitment. That year the executive committee of The Wilderness Society endorsed the recommendation presented by Murie to oppose modification of the San Gorgonio Primitive Area and stood firm against any change in the boundaries.⁹² Six months later when Howard Zahniser gave his report to The Wilderness Society, he acknowledged the intense, almost exclusive, focus on holding onto the San Gorgonio boundaries, "and in developing in connection therewith policies in dealing with threats arising from other recreational demands for the wilderness." But then he added, "This effort has been unexpectedly successful. Although we were advised that the results were sure to go against us and that at this stage of our movement we should not risk the loss of prestige which would result from defeat in opposing such groups as skiers and such a small modification of a relatively small area, we now have the Forest Service final decision proving that we were right in taking the stand that we did. . . . We are now similarly engaged in a defense of the Olympic National Park."⁹³ Not surprisingly, the same meeting decided that the next year's meeting would be held at the Murie Ranch—called the STS Ranch of the Muries—at Moose.

In addition, as Zahniser reported, and which quelled any doubt about where the real headquarters of The Wilderness Society were located—Washington or Moose—the executive secretary reported that "The major travel of the year... was to and from Moose, Wyoming, where summer [1947] headquarters was maintained."⁹⁴ The results of the experience were salutary and underscored the importance of the Murie Ranch as a location for this growing hub of conservation. Zahniser reported that "although a totally unexpected volume of paper work made it necessary to carry on desk work to an extent that seemed disrespectful of the surroundings, the summer's experience was rich not only personally but also officially if the two may be divided. The close association with the Director was most helpful, and the opportunity to live in such surroundings (actually within the Grand Teton National Park) was a rare privilege—even if the sound of the typewriter did often rudely punctuate the whispers of the aspen. The opportunity for educational work in Jackson Hole (and by inference in other such areas) was keenly sensed, and perhaps one of the greatest advantages of the summer's experiment was in learning how one might in the future take better advantage of such a rich opportunity."⁹⁵ Zahniser would, in the future, be a regular feature at the Murie Ranch. The Wilderness Society had found a home—a home in the wilderness.

Mardy Murie later recalled the first meeting of the council of The Wilderness Society at the Murie Ranch in 1948: "the council meeting at our ranch at Moose the next year was a revelation. Long hours of confab stimulated by hiking and canoeing and square dancing and bird watching, and teasing and tall tales; and an ineffable warm satisfaction in just being together. These are the gleaming memories I have of Council meetings."⁹⁶ In addition to the council meetings that were scheduled at the Murie Ranch, there were also the

⁹⁰ Fox, American Conservation Movement, 266.

⁹¹ Ibid.

⁹² Executive Committee Meeting, minutes, December 24, 1946, The Wilderness Society Collections, Folder 1:100-200, Denver Public Library. San Gorgonio was a primitive area in the San Bernardino National Forest in southern California; the change proposed altering the boundaries to permit the development of a downhill ski area.

⁹³ Report of the Executive Secretary for 1946 and first half of 1947, folder 1:100-200, The Wilderness Society Collections, Denver Public Library.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ M. E. Murie, "Life Blossomed at Moose," typed manuscript dated 1980 in files of Murie Center, Moose, Wyoming.

informal gatherings of officers and individuals on issues between regular meetings.⁹⁷ And sometimes the people were just dropping in when they happened to be traveling somewhere in the West. The influx of visitors was constant, and they seem never to have been discouraged. Historian Peter Wild notes that "His guest cabins harbored environmentalists on pilgrimage to Moose." Wild notes too the meaning of that pilgrimage: "For the next twenty years the Muries' log cabin on the banks of the Snake River was a focus, something of a Mecca, of American conservation."⁹⁸

Olaus Murie and the Conservation Movement at Mid-century

In the following decade, one after another of the defining issues of the modern conservation movement found its connection to the Muries and to the Murie Ranch. And that included work that went well beyond The Wilderness Society. In 1949, for example, the National Audubon Society records in its official chronology of that organization that "Olaus Murie, president of The Wilderness Society, eloquently represents his organization and the Sierra Club in a public hearing to help stop a plan to build a dam that threatens Montana's Glacier National Park."⁹⁹ The other conservation organizations were also looking to Murie for leadership. In that case, as in others, Murie found himself up against the Corps of Engineers and the Bureau of Reclamation which were already set for development, so he worked with local people in the area of the proposed dam and also with the Montana Fish and Game Commission. He was even able to get the Director of the National Park service to testify against the proposal by another part of the administration. He was successful, and the dam was dropped from the plans. There was also, of course, the expansion of Grand Teton National Park in 1950, an effort that would ultimately take in the Jackson Hole National Monument. In this case Murie was able to lead not only The Wilderness Society's efforts, but was able to join them with local sentiment in Jackson Hole which was likewise recognizing the benefits of expansion. Again, he was successful.

By the century's midpoint, it was clear that Olaus Murie was active in new ways in the conservation movement and that he was as comfortable working with local residents where development threatened wilderness as he was with scientists and administrators. Murie's prominence, and effectiveness, as a national leader continued to grow and that leadership role expanded in The Wilderness Society and beyond. In 1950 he was elected President of The Wilderness Society—an unusual move that recognized his skills as leader and also his contribution to the field more broadly. He held that position until 1957 in addition to his salaried position as director. Moreover, for his efforts, Olaus Murie was recognized by the Wildlife Society which presented him its Aldo Leopold award in 1952, for "service to wildlife conservation" and also the Aldo Leopold Certificate for his book, *The Elk of North America*. In 1962 he received the Audubon Medal from the Audubon Society. And the Sierra Club presented him its second John Muir Award. The Audubon and Sierra Club awards, of course, came from competing organizations, a mark of the universal esteem with which he was regarded.

Generally that leadership was evident in several key issues that emerged where Murie took a prominent role. One involved Echo Park on the border between Colorado and Utah. The Bureau of Reclamation in the Truman administration had proposed building a dam on the Colorado River that would be located in Echo Park, inside Dinosaur National Monument. In 1950, after a meeting of The Wilderness Society council at the Murie Ranch, Olaus and Mardy Murie and a group of other board members drove down to Echo Park, territory that was new

⁹⁷ See, for example, Mardy Murie's letter to Zahniser as they planned for a small group from The Wilderness Society to visit the ranch the winter of 1956-1957: "We can sleep 6 or 7 besides ourselves in our house, and the Denali cabin is two good bedrooms which can also be heated; it has been used for winter guests many times." Mardy Murie to Zahniser, October 20, 1956, folder 3:200, "Margaret Murie 1948-1952,"The Wilderness Society Collections, Denver Public Library.

⁹⁸ Peter Wild, *Pioneer Conservationists of Western America* (Missoula: Mountain Press Publishing Company, 1979), 124.

⁹⁹ "Chronology of the National Audubon Society: 100 Years of Conservation – 1899 to 1999," located on the world wide web at http://www.hlla.com/reference/audu~chron2.html. (Murie was also a frequent contributor to the bulletin of the Sierra Club.)

to them and to which they responded with excitement and enthusiasm. They launched their own efforts to prevent the construction of the dam. Later, after their visit, Mardy Murie wrote about the visit in *The Living Wilderness*, describing their discoveries and their perception of the loss that would come with inundation. With as many twists and turns as the river itself, that issue was then passed on to the Eisenhower administration and by 1954 as Stephen Fox writes, "Echo Park had grown into the biggest conservation issue in decades, probably the biggest since Hetch Hetchy itself. With Echo Park as the goad, the movement was booming as never before."¹⁰⁰ As Mark Harvey argues in his study of the issue, the dam in Echo Park was but a symbol of larger issues, and the various groups that mobilized across the conservation spectrum did so because of their common commitment to defending the National Park System from such additional intrusions. Olaus Murie was explicit about his own motivation and that of The Wilderness Society: the park had to be defended "for our happiness, our spiritual welfare, [and] for our success in dealing with the confusions of a materialistic and sophisticated civilization."¹⁰¹

Echo Park was important and beyond the specific issue of blocking the dam, the victory achieved was critical in part because during the course of the struggle, Murie helped the environmental groups rethink their strategy. Instead of allowing themselves to be placed on the defensive, Zahniser and Murie maneuvered the issue as a positive one that pressed the benefits of wilderness, that hailed the scientific concepts of ecology and the notion of complex biotic communities that enrich human society. Increasingly they called upon people to savor the wonders of the wilderness.¹⁰² It was not just that the dam had been prevented, The Wilderness Society, and the conservation movement had matured, had changed, had grown, had been led. It was shifting attention to the broader vision that Murie had articulated in 1945.

Another indication of the new breadth of the movement came when Murie helped shift attention to important natural resources in the urban east, not just in the West. In 1954, Murie joined with other environmentalists like Sigurd Olson of the National Parks Association and Justice William O. Douglas of the United States Supreme Court to save the 184 mile long C&O Canal that had run from Cumberland, Maryland to Georgetown in Washington, D.C. This strip of land with a canal and a towpath beside it, bordered by forest, was hardly wilderness, but it was owned by the National Park Service and Murie and the others hiked the route for eight days to publicize its historic, aesthetic, and ecologic values against the proposals within the National Park Service to turn it into a highway. Attracting the cameras of the television networks, and with Murie often the spokesperson, the hikers turned the issue into a national cause and the road plan was dropped, the canal was saved, and the route became a national park in 1961.¹⁰³ Once again, the conservation movement had scored a victory, and the movement was turning more in the direction of legislative goals to secure something beyond protecting wilderness when it was specifically threatened.

In fact, a critical part of this 1950s transformation was the formulation of a precise longer-term goal. After the Echo Park controversy, The Wilderness Society increasingly pressed for legislation to establish a national wilderness system; the existing system of wilderness—road less areas or primitive areas in the national forests—consisted of specific parcels mandated so by decree; they could be undone as easily as they were made.¹⁰⁴ The conservation movement wanted to protect wilderness by law, not by administrative determination.

¹⁰⁰ Fox, American Conservation Movement, 285.

¹⁰¹ Murie quoted in Mark W. T. Harvey, *A Symbol of Wilderness: Echo Park and the American Conservation Movement* (Albuquerque: University of New Mexico Press, 1994), 54.

¹⁰² Harvey, Symbol of Wilderness, 154-157.

¹⁰³ See especially Jack Durham, "The C&O Canal Hike," *The Living Wilderness* 48 (Spring 1954): 1-28.

¹⁰⁴ See the minutes of the Executive Committee Meeting for January 22, 1953, p. 2; also, Report of the Executive Secretary, June 11, 1953 (Dear Olaus); folder 1:201, The Wilderness Society Collections, Denver Public Library.

The wilderness proposal found a cool, even hostile, reception by both the Forest Service and the Park Service. Both services resented the intrusion in their management options and claimed that they were already protecting wilderness areas. So the battle would be long and neither Murie nor Zahniser would live to see it signed into law. Both labored hard over a period of years for the measure, and the division of labor was such that each drew upon his own strengths and proclivities and complemented the work of the other. Although they shared a common vision, the two men were vastly different people. Murie was at heart a scientist and the visible spokesperson for The Wilderness Society, bringing instant credibility to the cause whether he was testifying before Congress or meeting locally with western ranching interests, because of his scientific and rural background. Zahniser, on the other hand, valued wilderness sincerely, but was an easterner much more comfortable in the halls of power lobbying members of Congress and their staffs on legislative language, strategies, and the fine points of policy. Although Gregory Kendrick and Professor Mark Harvey both assign Zahniser major credit for the passage of the Wilderness Act, ¹⁰⁵ it is important to recognize that Olaus Murie's commitment to the bill was strong and was voiced early and often, and that he was widely associated with the measure. Murie was concerned that The Wilderness Society's lobbying could endanger the organization's taxexempt status but he was nonetheless on the stump urging the support of others for the measure. As early as 1957, for example, Murie reported to The Wilderness Society Executive Committee that he had attended the Dude Ranchers Association meeting in Billings, Montana, and talked to that group about wilderness preservation, noting also that "With my urging, the convention passed a resolution favoring the Wilderness Bill."¹⁰⁶ Gregory Kendrick details Murie's speaking efforts around the country in support of the bill at other times, and the conservation movement pressed relentlessly for this law.

This was an especially arduous challenge, and, as one study reports, "Congress lavished more time and effort on the wilderness bill than on any other measure in American conservation history. From June 1957 until May 1964 there were nine separate hearings on the proposal collecting over six thousand pages of testimony."¹⁰⁷ When finally, and after modifications and compromises, the bill was passed into law in 1964, Zahniser himself had died only the week before and Olaus Murie had died a year earlier. At the signing of the legislation by President Johnson, however, were both Alice Zahniser, widow of Howard Zahniser, and Mardy Murie, who had been called from Moose, Wyoming to attend the ceremony.

The Wilderness Act was a long time coming with other battles being waged at the same time. In fact, one other issue that attracted Murie's attention in the late 1950s suggested the direction and power of the movement he steered. At the same time as the push to create a national wilderness system, Murie focused also on the Alaska that he had previously known so intimately and that still existed with large parts undisturbed by development. He sought to create a nine-million-acre Arctic National Wildlife Refuge along the eastern portion of the Brooks Range in Alaska. Larger than any such measure previously contemplated, and where other set-asides usually were designed to save a particular species that was threatened this proposal would include an entire ecosystem. Murie himself had generated baseline data on the area in his earlier studies in the region and his work had been supplemented by others since then, except for one part in the Chandalar-Sheenjek River drainage. Murie was able to secure private funding for an expedition to gather data on the remaining part of the ecosystem and assembled a team of researchers including his wife and experts and conservationists (Justice Douglas joined for part of the time), and also had the wildlife and scenery filmed. Once back at Moose, Olaus and Mardy launched

¹⁰⁵ Kendrick, "An Environmental Spokesman," 154; Mark Harvey, "Howard Zahniser: Architect of the Wilderness Act," SUWA Fall 1999 Newsletter, available at www.suwa.org/newsletters/1999/fall.

¹⁰⁶ Report of Olaus Murie to "Members of the Council," July 20, 1957, p. 2, in minutes of the Executive Committee, 1957; folder 1:201, The Wilderness Society Collections, Denver Public Library.

¹⁰⁷ Roderick Nash, Wilderness and the American Mind (New Haven: Yale University Press, 1967), 221.

an intensive effort in their writing and in speaking to promote the proposed refuge.¹⁰⁸ When the Secretary of the Interior in the Eisenhower administration, Fred Seaton, endorsed the proposal, he did so with important qualifications, making it a wildlife range, rather than a refuge, which meant a lower level of protection than a refuge offered, but Murie appreciated the support and moved forward. Pressing ahead gaining the support of conservation organizations, scientists, and government agencies, he finally reached success, one of the most important victories for him and for the conservation movement. As Mardy Murie recalls, on December 7, 1960 she had walked down the road from the ranch to the post office at Moose and discovered a telegram waiting; the Murie Ranch still had no telephone. When she returned to their house at the ranch, she related: "Olaus was at his table at the back of the room, writing. I held out the telegram to him; he read it and stood and took me in his arms and we both wept. The day before, December 6, Secretary Seaton had by Executive Order established the Arctic National Wildlife Range."

Olaus Murie died of cancer just at the moment that his leadership of The Wilderness Society and in the modern conservation movement was achieving unprecedented victories, taking the initiative as never before, and redefining itself to include the protection of natural resources that transcended the isolated wilderness areas that had once occupied The Wilderness Society. While the conservation movement lost an outstanding leader when he died, there was something symbolic about the moment of victory in these instances that hinted to the future. In 1960 when Olaus Murie learned about Secretary Seaton's creation of the Arctic National Wildlife Range, it was his wife Mardy who gave him the news and shared with him the deep sense of fulfillment. When President Johnson signed the Wilderness Act, it was Mardy Murie who was at the president's side, carrying on for her husband. Just as one chapter in the history of the conservation movement in modern America came to a close, another opened.

Mardy Murie and Conservation

"My name is Margaret Murie and I am a staff consultant for The Wilderness Society, a conservation organization of some 37,000 members" The year was 1967 and Mardy Murie was testifying at a public meeting of the National Park Service Master Plan Study Team.¹¹⁰ In a few short years, after a sometimes difficult transition, Mardy Murie had emerged as a spokesperson in her own right in national venues, on national issues, with a national audience.

In retrospect, Mardy Murie's ability to navigate the turbulent waters associated with the passing of her husband and the creation of a new life for herself should be no surprise. In her four decades with her husband, Mardy Murie had long been more than the dutiful spouse of Olaus Murie. She had been a partner and co-worker in the cause. Not trained as a scientist she nonetheless had worked closely enough with her husband on his projects that she understood the science issues and could articulate them in human terms without doing an injustice to the science involved. Given, moreover, that Olaus Murie himself increasingly spoke in the broad language of public support for conservation, in the vocabulary of the importance of wilderness for the human community, she was eminently capable of carrying on with that mission. The Wilderness Society minutes often note her participation at meetings. Howard Zahniser's frequent gratitude to "you and Mardy," as he wrote Olaus, reflected the common understanding that Olaus and Mardy were a fully cooperating team. But she was even more than that. As early as 1948, and perhaps earlier, her name appeared as a separate budget line on the

¹⁰⁸ Kendrick, "An Environmental Spokesman," 148-152.

¹⁰⁹ Margaret Murie, Two in the Far North, 345.

¹¹⁰ "Statement of Margaret E. Murie, at a public meeting of the National Park Service Master Plan Study Team, At Idaho Falls, Idaho, on Sept. 25, 1967," typescript located in folder 3:200, Margaret Murie, 1967-1975, The Wilderness Society Collections, Denver Public Library.

annual budget and she was being compensated—quite modestly—for her work for the society.¹¹¹ When the governing council met in July 1949 in Olympic National Park, the minutes note: "Margaret E. Murie was appointed recording secretary."¹¹² She was more than a hanger-on; she was a part of the organization as well as a part of the cause in which she labored with her husband.¹¹³

Nor did she allow herself to live in his shadow. In 1947 she published what appears to be her first work in *The Living Wilderness*, an article entitled "On the Mountain."¹¹⁴ This actually was a story that formed part of a novel she was writing about native villagers in Alaska. She hesitated to call it fiction, though, "because everything is absolutely true, but it is told as a story."¹¹⁵ The book that it was taken from, *Island Between*, had been submitted to a publisher that closed its doors, then the manuscript fell victim to the shortages of World War II; it would not be published until 1977. She continued her writing, though, often jointly with her husband, and sometimes alone. Her first major published work focused on their Alaska years, *Two in the Far North*, and was written with a quiet elegance and warmth of spirit that belied the frigid lands they traveled and studied.¹¹⁶ In *Wapiti Wilderness*, she shared authorship with Olaus, and gained additional respect for her writing ability as well as for the content she provided. Robert Cushman Murphy, Curator Emeritus of Birds at The American Museum of Natural History, reviewed the book in *Natural History*, and pronounced it "pure gold, every word of it, every sketch." He congratulated Mardy Murie for bringing the essays together and blending it into "a harmonious unity, flowing without jolt or dislocation."¹¹⁷

Even in their work together, when Mardy helped Olaus, she was not just responding to her husband's needs; she had a will of her own. Mardy would routinely take care of correspondence for Olaus, and Olaus once penned a note to Zahniser at the bottom of one her letters to him, saying with gratitude, "Mardy seems to be taking over my job, as well as writing to you! And I am not complaining!"¹¹⁸ There is perhaps a deeper dimension to this. Later, Mardy Murie would describe her role in these words: "All that mattered to me for so many years was that Olaus knew what I contributed. . . . I was the secretary. I managed the money. I bought most of his clothes. In our work it was I who remembered the names of the people, and Olaus remembered the names of the birds and mammals."¹¹⁹

When Olaus died in 1963, Mardy's involvement in conservation and The Wilderness Society could easily have come to a close. Instead, it opened a new chapter. Shortly after his death she left the ranch and returned to her native Seattle for the winter. And she did not know what to do with her own life. Her son Donald encouraged her to involve herself in other kinds of work, telling her "that I ought to occupy myself with something entirely different from what Olaus and I had done. I considered it. But I knew that my mind would always be returning

¹¹¹ See Minutes, Governing Council Annual Meeting, June 25, 1948, folder 1:100-200, The Wilderness Society Collections, Denver Public Library.

¹¹² Minutes, Governing Council Annual Meeting, July 3, 1949, folder 1:100-200, The Wilderness Society Collections, Denver public library.

¹¹³ One biographical essay notes that after moving to Moose, "Mardy was at [Olaus'] side all the way, calling herself his 'secretary,' but in reality acting more as a partner, contributing facts and advice during the bitter struggles over the proposed Echo Park Dam in Dinosaur National Monument and other issues. Her children were grown now, and she was able to travel with Olaus wherever the battles took him." Frank Graham, Jr., "Mardy Murie and Her Sunrise of Promise," *Audubon* 82 (May 1980): 124.

¹¹⁴ Howard Zahniser to Mardy, January 10, 1948, folder 3:200, "Margaret Murie 1948-1952," The Wilderness Society Collections, Denver Public Library.

¹¹⁵ Graham, "Mardy Murie and her Sunrise of Promise," 120.

¹¹⁶ Margaret E. Murie, Two in the Far North.

¹¹⁷ Murphy, "A Foursome on Nature," Natural History 75 (August – September 1966): 6.

¹¹⁸ Mardy Murie to Zahniser, May 10, 1952, folder 3:200, "Margaret Murie 1948-1952," The Wilderness Society Collections, Denver Public Library.

¹¹⁹ Murie quoted in Graham, "Mardy Murie and her Sunrise of Promise," 107.

to the land and what was happening to it."¹²⁰

In May 1964 she returned to the Murie Ranch, where Adolph and Louise had been living in her house during the winter. The return was difficult for her. When she opened the door and went in,

I thought: "No, no, I can't do it. I can't stay here; I can't stand it."

There were all the places of his being, not only the log house he loved so much, his study, his desk, the bedroom, the bed, his place at the table; but outside, the trails to the beaver ponds and down to the river; the far beaver pond where he sat on a grassy bank on his last walk and wrote some paragraphs about how he felt about grass and sky and birds. All too much; not bearable.

But how could I move away, and where else could I take up life again? And there were people just then depending on my being here.

So, get busy - do the spring cleaning, greet the friends who came, try to get to sleep at night without thinking, without feeling, without remembering - oh, the remembering.

And after those first few days a new feeling came into me. It was almost as though this loved log house put its arms around me. There was warmth and purpose again and each day made its specific demands, and carried me through. Even the nights full of tears were followed by days full of activity. Spring bloomed inexorably and carried all with it and life and people continued their demands.

And so began these eleven years of a different chapter at Moose.¹²¹

Moving forward, but casting about, she worked part time for The Wilderness Society, and she worked for the Sierra Club in Seattle giving presentations to conservation groups. Then something happened. As Frank Graham, Jr., relates: "she felt out of place at first, because she had always thought of herself as Olaus' helper and suddenly she was on her own, sought after as a prominent conservationist in her own right."¹²² In her own words, she said, "I found I was no longer the secretary, the listener, the observer, but the writer and deliverer of speeches, the testifier at Wilderness hearings, the writer of brochures, the persuader, the recruiter, the lobbyist."¹²³

As early as 1965 Mardy Murie was on the lecture circuit. In December of that year, she presented the keynote address at the Montana Wilderness Association.¹²⁴ In the spring of 1966 she served on the Northwest Wilderness Conference planning committee in Seattle.¹²⁵ But her circle was not limited to the local community or even the region. She had ready entrée to the nation's media. In 1965 she could get the attention of Bayard Hooper, an editor at *Life* magazine, by opening her letter with these words: "Do you remember the summer of 1957 and your visit to the Muries at Moose, Wyoming?"¹²⁶ She then called his attention to a proposal to build a

¹²⁰ Graham, "Mardy Murie and her Sunrise of Promise," 127.

¹²¹ Mardy Murie, *Two in the Far North*, 353-354; Mardy Murie, typescript, "Life at Moose," Murie Center files. There are some minor differences between the typed draft and the version that ultimately was published.

¹²² Graham, "Mardy Murie and her Sunrise of Promise," 127.

¹²³ Mardy Murie, typescript, "Life at Moose," Murie Center files.

¹²⁴ "Wilderness Consultant Asks Renewed Interest," Great Falls Leader, December 11, 1985.

¹²⁵ Seattle *Post-Intelligencer*, April 27, 1966.

¹²⁶ Mardy Murie to Bayard Hooper, July 3, 1965, in folder 3:200, Margaret Murie, 1967-1975, The Wilderness Society

dam on the Yukon River and urged *Life* to write a story on it. More and more the letters flowed from her home at Moose on a broad range of issues, generally areas where she indeed held precious expertise and first-hand knowledge. Alaska was a continuing concern. So too was the Grand Teton National Park, including wildlife harassment there by snow vehicles, and proposals for the expansion of the airport inside the park. She would write Gale McGee, Senator from Wyoming, "I wish some of your Congressional Committees could meet here in my living room looking out at the Grand Teton."¹²⁷

Mardy Murie proved active in these years. In 1965 she joined the governing council of The Wilderness Society; the next year *Wapiti Wilderness* was published. In 1967 she returned to Alaska for most of the summer, gathering information about the wildlife range and its ecology, and then she made another trip to Alaska in 1975, this time sponsored by the National Park Service, surveying the area for the Alaska Lands Act. She received honorary degrees from the University of Alaska, the University of Wyoming, and Trinity College. In 1974, during the Nixon administration, Secretary of the Interior Rogers C. B. Morton recognized her contributions to conservation with a citation which in part observed that "Mrs. Murie's courage and leadership coupled with her warmth and sincerity have earned the deserved respect of friend and foe alike. In recognition of her many years of outstanding leadership in the conservation movement and for her unswerving loyalty to the land, Mrs. Margaret E. Murie is granted the Conservation Service Award of the Department of the Interior."¹²⁸

The Alaskan wilderness remained a special concern of hers even though she was located in Wyoming. In 1960 the Eisenhower administration had set aside about nine million acres of land as a wildlife range, an accomplishment for which she and her husband Olaus had worked for years. It was, however, only a partial victory since range status included provisions for human activity and development. The effort continued to preserve these lands, and more, as wilderness, and when legislation was introduced to do this Mardy once again became vigorously involved. She returned to Alaska to study the lands proposed for wilderness-much of which she was already intimately familiar with-and criss-crossed the region by plane and on ground gathering further information observing that significant chunks of it still remained not only pristine but parts were even unmapped with rivers and mountains uncharted and unnamed. She pressed hard for the measure and became something of a symbol herself in the movement to secure the enactment of the law. In 1977, when she testified before the House Committee on Interior and Insular Affairs endorsing the legislation to protect the lands, her comments were brief but to the point, and the chair of the subcommittee conducting the hearings, Ohio Congressman John F. Seiberling responding, "I am touched by the eloquence and the obvious love of this land and we want to do what Mrs. Murie wants us to do."¹²⁹ Indeed, her statement revealed that she was eminently qualified to speak for the preservation of the wilderness of Alaska, and disarmed the argument of critics that the advocates of wilderness were strangers to that unique land. Mardy Murie could speak as an Alaskan when she noted that "When I was a child, Alaska seemed too vast and wild ever to be changed, but now we are coming to realize how vulnerable this land is. I hope we have the sensitivity to protect Alaska's wilderness "She spelled out her own credentials plainly:

I grew up in Fairbanks, Alaska. During the latter years, with my biologist husband, I went back to Alaska many times, and in more recent years three more times, including 1975 and 1976. I have been in the Brooks Range 5 times; I am familiar with 11 of the areas proposed in H.R. 39, a

Collections, Denver Public Library.

¹²⁷ Mardy Murie to Gale McGee, January 5, 1971, in folder 3:200, Margaret Murie, 1967-1975, The Wilderness Society Collections, Denver Public Library.

¹²⁸ Copy of the citation, in folder 3:200, Margaret Murie, 1967-1975, The Wilderness Society Collections, Denver Public Library.

¹²⁹ Inclusion of Alaska Lands in National Park, Forest, Wildlife Refuge, and Wild and Scenic Rivers Systems, Hearings before the Subcommittee on General Oversight and Alaska Lands of the Committee on Interior and Insular Affairs, House of Representatives, 95th Cong., 1st sess., June 4, 1977, 26.

bill which I am here endorsing.¹³⁰

When one Alaska Senator questioned her familiarity with Alaska, as he was wont to do with virtually every environmentalist who proposed natural resource conservation in that state, Mardy Murie reportedly told him, "With all due respect, Senator, I was dog sledding across Alaska before you were born." That statement was literally true. The proponents of the measure could not have had a more appropriate standard bearer as they pressed for the enactment of the measure.

The course of the legislation as it wended its way through Congress over the next several years was marked with compromises on all sides, political maneuvers, and moments of personal courage and sacrifice, but finally in December 1980, President Jimmy Carter signed into law the Alaska National Interest Lands Conservation Act, termed by at least one student, "the most important single act in the history of American wilderness legislation."¹³¹ Expanding the holdings of wilderness in the National Park Service, the National Wildlife Refuge System, and the National Forest system, though far from everything that Murie and other proponents had sought, the law designated nearly fifty-seven million acres of critical wildlife habitat on public lands in Alaska as units of the National Park System, National Wildlife Refuge System, National Wilderness Preservation System and National Forest System. The law included provisions also for comprehensive land management of all Alaska federal lands.¹³² As political scientist Craig Allin observes, this law "did more for conservation and for wilderness preservation than any law in human history."¹³³

It is always difficult to assign key credit to any one individual in something so complex as the enactment of a broad piece of legislation and there were many people who played important roles and contributed significantly to the passage of this law. Some had great legal and political skills and some had esoteric scientific backgrounds. Yet Mardy Murie made capital of her simple, every-person approach to the issue as she humanized the issue and gave it an Alaska face. "I am only trying here to tell you why I, an emotional woman, but a woman familiar with Alaska, think [the lands] should all in their innocence and beauty be cherished." And her efforts were recognized. In 1980, the year that the measure was finally enacted, she received the Audubon Medal from the Audubon Society, and the next year the Sierra Club presented her that organization's John Muir Award. And in 1986 The Wilderness Society itself presented her the Robert Marshall Conservation Award. Perhaps the most explicit recognition of her role in conservation and in this Alaska campaign came nearly two decades after the measure was signed into law, after the political turmoil of the battle for the Alaska National Interest Lands Conservation Act had quieted down and proper measure could be taken of the law and the process through which it was enacted. In 1998 President Bill Clinton singled out that measure for its importance and singled out Mardy Murie for her contribution to its enactment, referring to her as "the prime mover in the creation of one of America's great national treasures, the Arctic National Wildlife Refuge." He continued, noting that "her passionate support for and compelling testimony on behalf of the Alaska Lands Act helped to insure the legislation's passage and the preservation of some of our most pristine lands." And with those words President Clinton presented Mardy Murie the Presidential Medal of Freedom.¹³⁴

¹³⁰ Testimony of Margaret E. Murie, *Inclusion of Alaska Lands in National Park, Forest, Wildlife Refuge, and Wild and Scenic Rivers Systems,* Hearings before the Subcommittee on General Oversight and Alaska Lands of the Committee on Interior and Insular Affairs, House of Representatives, 95th Cong., 1st sess., June 4, 1977, 25-26.

¹³¹ Craig W. Allin, *The Politics of Wilderness Preservation* (Westport, Connecticut: Greenwood Press, 1982), 256.

¹³² See the discussion of the measure in G. Frank Williss, "Do Things Right the First Time:" Administrative History, The National Park Service and the Alaska National Interest Lands Conservation Act of 1980 (National Park Service, 1985), online at: http://www.cr.nps.gov/history/online_books/williss/adhi.htm.

¹³³ Allin, Politics of Wilderness Preservation, 256.

¹³⁴ President Clinton's presentation comments can be found recorded on the videotape, Arctic Dance: The Mardy Murie Story

Mardy Murie turned eighty years old in 1982. In the following two decades she continued to live at the Murie Ranch, celebrating her one hundred-first birthday in August 2003 and passing away on October 19, 2003. In those years she continued to accumulate honors and awards for her role in the conservation movement and the Murie Ranch has not lost its visibility in the national discussion. A steady stream of visitors to her cabin at the Murie Ranch included students, colleagues, scientists, activists, and the multitude of young people she always made special time for. They included people who came to express their appreciation, people who came to learn, and people who simply came for inspiration. Because of her decades of visible and significant participation in the wilderness movement and in conservation and environmental issues more broadly, and because of her leadership and stature in the movement, she became a living icon of conservation. Known familiarly as the grandmother of the conservation movement, in 1993 a biography of Mardy Murie was published, directed at young readers, and in 2001 a video focusing especially on her Alaska years was released.¹³⁵ When she died in 2003, tributes to her life long accomplishments as a conservationist poured in from every part of the country and every part of the political spectrum. "No one embodied the spirit of wild America more than Mardy Murie," noted Bruce Hamilton, Sierra Club Conservation Director. John Turner, a friend and neighbor of the Muries who learned much from them as a child, became Director of the U.S. Fish and Wildlife Service in the administration of President George H. W. Bush and Assistant Secretary of State, Bureau of Oceans and International Environmental and Scientific Affairs, in the administration of President George W. Bush. Turner, a fond admirer of Mardy Murie observed that "She was a reminder to all of us that we need to embrace a spirit that is integral to the American experience, and that's wilderness. It's integral to what defines us as Americans."¹³⁶ Clearly the understanding and appreciation of Mardy Murie's lifelong significance in conservation in the nation continues to grow.

Summary

In 1953 Olaus Murie argued in a famous essay that wilderness was a national asset, not as a commodity to be bartered, but as a place where people could regain a natural sense of dignity, harmony, tranquility, and individuality. That philosophy guided his actions as a conservationist as he believed that in close contact with nature, the human community thrives and ethnic, economic, and other barriers erode. Close to nature, he believed, people nurture simple virtues and understand money as a means, not as the end. Wilderness thereby permitted not only the wildlife to find a home, but the human spirit to be at peace as well, and nature represented to Olaus Murie the essence of what others would call quality of life. Murie would be significant for his articulation of this view of nature alone, but he did more. With his brother Adolph and his wife Mardy literally at his side as director of The Wilderness Society, he helped shape public policy so that nature and wilderness became a national priority with legislative protections, and he also helped transform the conservation movement itself so that it gained the initiative in defining goals for the nation and so that it broadened into a national awareness of the fragility of the environment humans inhabit.

Taking the orientation of their science—an ecological perspective that emphasized the intricate and interdependent relationships of all living creatures—to the next step, the Muries moved into the public forum and mobilized a political force that had previously too often held a limited vision under a weak leadership. The Wilderness Society became a guiding force, respected not only by its rival organizations in the cause of conservation but also by Congress and presidents. Taking on seemingly impossible goals of protecting from destruction areas that were threatened even though they were already supposed to be preserved, like the San

⁽Moose, Wyoming: Craighead Environmental Research Institute, 2001).

¹³⁵ Jennifer Bryant, Margaret Murie: A Wilderness Life (New York: Twenty-First Century Books, 1993); Arctic Dance: The Mardy Murie Story.

¹³⁶ Casper [Wyoming] *Star-Tribune*, October 21, 2003.

Gorgonio Primitive Area when its boundaries were about to be altered and Echo Park when the Bureau of Reclamation proposed building a dam within Dinosaur National Monument, the organization under Olaus Murie's leadership achieved remarkable tangible results early on. From there the movement gained strength and momentum and pushed for setting aside more parcels of public land as wilderness. With victory coming at first in the Eisenhower administration with the creation of the Arctic National Wildlife Range, the passage of the Wilderness Act in 1964 that gave legislative protection to such areas, and then, especially following the guidance of Mardy Murie, the enactment in 1980 of the Alaska National Interest Lands Conservation Act. Along the way, these modest people living at the Murie Ranch at Moose, Wyoming earned virtually every major conservation award and recognition in North America (and often beyond, too), were recognized by their peers and the public for their contributions, and came to symbolize the movement they spoke for. As Stephen Fox notes of Olaus Murie in his standard history of the conservation movement, "As a symbol and spokesman he was invaluable to the wilderness cause."¹³⁷ Likewise, when Mardy Murie was called in her later years the "Grandmother of the Conservation Movement," that suggests that she was not only recognized and honored in her own right as a spokesperson for conservation but as a symbol of the movement too. Finally, the one place that in turn symbolized the Muries, and their association with the conservation movement, was the Murie Ranch at Moose-the place where the Muries found their own solace with nature and where countless others equally imbued with the spirit of conservation made their own pilgrimages for inspiration, insight, and strategic formulation for advancing the cause of conservation in public policy.

Comparative Properties

In evaluating the national significance of the Murie Ranch, the appropriate range of comparable properties is first of all, other properties associated with the Muries, and also similar meeting places and residences associated with other prominent leaders of the conservation movement and with contributors to biological science and resource management of the post-World War II period. In addition, it is necessary to compare the Muries to other important individuals in these two contexts.

Murie Properties

The Murie Ranch Historic District near Moose, Wyoming has already received recognition for its importance in history and was listed on the National Register of Historic Places as nationally significant in 1998; moreover, the Murie Ranch was the object of a "Save America's Treasures" grant which is only awarded to nationally significant resources. It is now being nominated as a National Historic Landmark. Before 1945, the two Murie families lived in a variety of places around the country, from the boyhood home of Adolph and Olaus (which apparently no longer exists) in Moorhead, Minnesota to Washington, D.C. to Alaska to Michigan to Jackson, Wyoming. Most of those residences, however, were brief and were associated with specific projects rather than the lifelong, cumulative contributions of the Muries. In 1927 Olaus and Mardy Murie moved to Jackson, Wyoming where they lived in a log cabin on Kelly Street until the house they had built was finished. That house, known as the Pumpkin House, was razed at some point after the family moved to Moose in 1946. Adolph and Louise Murie moved to Jackson in 1939 and lived on a farm property in town until 1945 when they moved to Moose. Both families then lived at the Murie Ranch, Olaus dying there in 1963, Adolph following in 1974, and Mardy in 2003. Louise Murie remained there a few years after Adolph's death and then she moved back to the town of Jackson. The Murie Ranch at Moose thus represents the period of longest residence. In addition, this was the location where Adolph, Olaus, and Mardy performed the overwhelming portion of their

¹³⁷ Fox, The American Conservation Movement, 268.

work for which they are nationally significant. The narrative above in the two contexts indicates the role the ranch played as a basis for Olaus's research and writing, for his service with The Wilderness Society as director, for Adolph's continued research even when his fieldwork took place elsewhere, and for Mardy's extensive conservation work.

Indeed, the Murie Ranch itself has achieved important recognition for its associations. Immediately after Olaus Murie's death in 1963, Supreme Court Justice William O. Douglas, who had visited at the ranch, suggested and apparently with the concurrence of other friends and colleagues of the Muries, that the ranch at some point be acquired by the National Park Service and "made into a sort of sanctuary – place where a man or woman on a salary could go for a week or a month, or two months, to complete some writing or research on outdoor or recreational matters. I long for it to be known as the Olaus and Mardy Murie house." Justice Douglas had already approached Director of the National Park Service Conrad Wirth about the idea and Wirth was enthusiastic. Others were equally taken with the idea, and he had even suggested as much to Olaus in 1962.¹³⁸ The family was receptive and the concept underwent a series of changes to assure that the use of the ranch would be true to the spirit of the Muries and not just become a museum or visitor center "with velvet ropes." The Park Service acquired the property with life estates for Mardy and also for Adolph and Louise. In the past several years this use has come to fruition with the establishment of the Murie Center at the ranch and the rehabilitation of some of the buildings for use as a research center. Throughout the years, as Paul Schullery expressed it, "the Murie Ranch has become a symbol of the accumulated wisdom it sheltered and the ideas it helped inspire."

There is one other property associated with the Muries that needs to be addressed. Adolph and Olaus both performed extensive work in Alaska over the years and their investigations took them over thousands of miles of the habitat they studied. In that research one structure associated with Adolph's work remains. A patrol cabin, Sanctuary River Cabin No. 31, in Denali National Park was constructed in 1926 by the Alaska Road Commission and was used by Adolph Murie in the summer of 1939 to begin his fieldwork on the wolf-Dall sheep relationship in Denali in 1939. This property, listed on the National Register of Historic Places as part of the Multiple Property nomination, "Patrol Cabins, Mount McKinley National Park," in 1986 clearly holds some potential because of its relationship with Murie in his important research on Alaska wolves, but unlike the Murie Ranch at Moose, it was of relatively short duration and focused on the one study rather than the series of studies he performed. The nomination of this cabin does not base its significance on its association with Murie. This does, however, indirectly raise a larger question: Since Adolph Murie in particular spent considerable time in Alaska, can the Murie Ranch in Jackson Hole accurately be associated with his national achievements? Aside from the fact that much of Adolph's work also focused on Yellowstone and Grand Teton National Parks, even when he wrote about Alaska, he did his writing during the winters in Jackson Hole. A letter from National Park Service Regional Director O. A. Tomlinson provides a 1950 record that "we believe that everyone agrees as to the desirability of Dr. Murie's spending the winter months at Jackson, Wyoming, preparing for publication, in cooperation with Olaus Murie, a book on the mammals of Mount McKinley National Park . . . After living at the ranch for thirteen years, Murie wrote a friend, "You will recall that some years ago my headquarters were shifted from McKinley to Teton so that I could work readily in both parks and not be stuck away in Alaska with my family too long, etc."¹⁴¹ In 1963, after Olaus's death, Adolph once again wrote his friend and associate in their conservation work, Howard Zahniser, that "I am here officially for the winter,

¹³⁸ Justice William O. Douglas to "Dear Mardy," November 20, 1963, and "Dear Olaus," January 11 and February 1, 1962, CONS 90, Folder 42, Denver Public Library.

¹³⁹ Paul Schullery, "Honoring the Murie Legacy," Yellowstone Science 10 (Fall 2002): 14.

¹⁴⁰ Memorandum to Director, from Regional Director, Region Four, Re: Dr. Murie's Winter Assignment, September 14, 1950, Adolph Murie Collections, Box 1, folder 1, American Heritage Center.

¹⁴¹ Adolph Murie to "Ben," April 16, 1958, Adolph Murie Collections, Box 1, folder 3, American Heritage Center.

writing up a bulletin on the grizzly."¹⁴²

No matter how examined, because of the length of association with the Muries, because of the period in which they lived and worked at the ranch, and because of the specific activities at the ranch during their tenure, the Murie Ranch in Jackson Hole consistently remains the single property best associated with the lives and achievements not only of Olaus and Mardy Murie but also of Adolph Murie.

Comparison of Muries with Others Prominent in Conservation and Science, Biological Sciences

George Bird Grinnell, something of a polymath because of his expertise in paleontology, ornithology, Native American history, and natural sciences, received his formal training in paleontology but became editor of *Forest and Stream*, an outdoors publication, in the late nineteenth century. In the 1880s he became a leader in the movement to conserve habitat through resource management, pressing especially the notion of sustained yield and harvesting of resources. In comparison Olaus Murie and Adolph Murie, also concerned with natural resource management, approached the subject from a perspective that valued all species rather than placing a premium, protected status, on those species to be harvested. Buildings associated with Grinnell are unknown.

George Wright

George Wright, often considered the originator of biological science programs in the National Park Service, went to work at Yosemite as assistant park naturalist in 1927 after graduating from the University of California – Berkeley in forestry. Pressing for gaining more information on the wildlife in the parks, Wright offered to fund a survey of wildlife from his own resources; and the Park Service launched such a survey, and also moved to develop scientific expertise commensurate with expertise it already held in landscape architecture and engineering. Wright, one of the authors of Fauna No. 1, thus played an important role in launching what historian Richard Sellars terms "the National Park Service's first extended, in-depth scientific research in support of natural resource management."¹⁴³ Support for that program, however, faded and Wright's death in an automobile accident in 1936 removed this powerful force from the agenda of the Park Service and by the end of the decade of the 1930s, the role of biological science and ecology-based policy in the Park Service had diminished drastically. A contemporary of Olaus and Adolph Murie, at least in their early careers, Wright and the Muries shared an ecological awareness that challenged traditional assumptions and policies in the Park Service accept the central tenets of such an approach in official policy and structure.

While there is an active and important George Wright Society today that brings together "researchers, managers, administrators, educators, and other professionals who work on behalf of the scientific and heritage values of protected areas," the physical remnants of a home or other structure associated with George Wright seem not to exist.

W. L. McAtee

Serving in the Bureau of Biological Survey from 1904-1934, and at one time heading the Bureau's food habits laboratory, McAtee saw what was to him the decline in respectability of science in the Bureau since that agency's programs were not based on objective field research, and the Bureau used as "science" the biased

¹⁴² "Dear Zahnie," November 11, 1963, A. M. Subject File, 1948-1964, Adolph Murie Collections, American Heritage Center.

¹⁴³ Sellars, Preserving Nature in the National Parks, 91.

reports of government trappers in the Predator and Rodent Control program. When he was removed from his position he was one of the organizers of the Wildlife Society in 1936 and became first editor of the *Journal of Wildlife Management*. McAtee's importance is undeniable, and as a voice calling for a close look at predator control policies he provided both scientific information (his study of the contents of bird stomachs remained a standard reference in the debate during the 1930s) and he helped broach discussion of the larger purpose of wildlife management. Compared with Olaus and Adolph Murie, however, McAtee's role in the promotion of biological science in resource management did not take on the central focus of both resource managers and the critics of their programs, the carnivorous predators and prey, and while he was at the peak of his influence in the 1930s his role was fading as the contribution of Olaus and Adolph Murie increased; they were certainly able to build upon his work and take it further, both in science and in its policy implications. No residence or other structure associated with W. L. McAtee is known to exist.

Aldo Leopold

Aldo Leopold was one of the giants in the field of biological science and natural resource management in the twentieth century and his formulation of what he called "the land ethic" laid the base for many subsequent policy shifts as the role of predators in the ecology acquired both a scientific and public appreciation. Fundamentally, this concept articulates a philosophy of a natural self-regulating environment that carries with it the mandate of resource managers to participate in intervention that would restore a balance within nature that had been disrupted by interventions less respectful of nature's complexity. A professional in the U.S. Forest Service, Leopold left government service to pursue his scientific interests and was one of the founders of The Wilderness Society. A colleague and contemporary of Olaus and Adolph Murie, the relationship between Leopold and the Muries is unclear, but intriguing, and certainly the intellectual exchange among them before Leopold's sudden death in 1948 was fertile. One study attributes to Olaus Murie great influence on Leopold, arguing that "Murie helped to convert his friend Aldo Leopold from a utilitarian to a holistic approach to nature"144 but the documentation for such an assertion is not conclusive. Susan Flader, in her standard treatment of Leopold's development of an ecological attitude, does not mention Murie.¹⁴⁵ In either case, it is clear that Leopold and the Muries shared this approach to science, shared some of the same frustrations in coping with its policy implications in resource management, and endeavored to lead their colleagues in science and the general public toward a greater ecological awareness. That Leopold died before public agencies accepted some of his ideas does not diminish his significance, but it underscores the importance of the Muries in that ongoing effort.

There remains an important structure associated with Aldo Leopold. In 1935, Leopold acquired a farm that he sought to restore to ecologic health, and on that farm was a modest building that he called "the shack" and to which he and his family would frequently retreat. At that site, he formulated and wrote much of what appeared in his *Sand County Almanac*, a classic in environmental thinking. The building, listed on the National Register of Historic Places, however, is markedly different from the Murie Ranch. Where the Murie Ranch was a widely publicized location and attracted a steady stream of visitors (including, it appears, Aldo Leopold) to discuss the issues of biological science and resource management, Leopold's "shack" was a private, closely held, and almost secretive refuge for solitude.

Conservation: Aldo Leopold

Aldo Leopold, better known in his own time as a scientist than as a conservationist although his influence in

¹⁴⁴ Peter Wild, Pioneer Conservationists of Western America (Missoula: Mountain Press Publishing Company, 1979), 124.

¹⁴⁵ Flader, *Thinking Like a Mountain*.

environmental policy has been huge, is probably the best comparison with Olaus Murie in both fields given their similar scientific base. In fact, they worked together in The Wilderness Society on conservation issues. Therein however, may lie the chief distinction between the two. When Leopold served on the council and as Vice President of The Wilderness Society before his 1948 death, the organization, though important and critical in conservation issues was small (a few thousand at most), and included in its membership especially science professionals and others who followed resource management issues closely. Under Murie's leadership the organization grew to include a much broader following. By the time Mardy Murie had emerged into the spotlight, the organization had nearly fifty thousand members and was a powerful, visible presence in the conservation movement.

That different focus is, again, reflected in the building associated with Leopold, the Wisconsin shack in the sand country, more conducive to reflection and contemplation than to building a movement.

Sigurd Olson

It would be unfair to associate Sigurd Olson just with the Quetico-Superior country of Minnesota, since he became involved in leadership positions in national organizations defending wilderness everywhere. Yet in many minds he remains very much "the canoe country's philosopher," in the words of Roderick Nash¹⁴⁶ and his eloquent, even lyrical, writing drew heavily from his northern Minnesota wilderness attachments. The institutional bonds that the Muries and Olson shared were substantial in the conservation movement, and their general outlook was similar; to seek the differences is almost to suggest the presence of dividing issues when there were none. Even so, it would not overstate the contrast to suggest that Olson's environmentalism carried with it a spiritual element often missing in the Muries' approach which, when it moved beyond ecology and science dwelled in the realm of aesthetics.

The Sigurd Olson Environmental Institute at Northland College (where Olson went to school) maintains an academic and outreach program that seeks to prepare students for leadership in wilderness protection efforts. Two structures are also known to exist that are associated with his life. The first is the so-called "Writing Shack," located in Ely, Minnesota, where Olson penned some of his environmental essays. The interior furnishings associated with Olson have been removed and questions about the structure's integrity exist. The second structure, "Listening Point," is a log cabin located near Voyagers National Park. "Listening Point," built by Olson, is said to be the embodiment of his "Northwoods Place" or environmental perspective and still contains many of the original furnishings associated with his life.

David Brower

As leader of the Sierra Club from 1952 to 1969, David Brower accumulated a string of political victories and expanded the membership rolls of the organization substantially and by some lights was the most effective conservation activist in the twentieth century. Often he was fighting the same battle as the Muries and The Wilderness Society, from Echo Park on. Unlike the Muries, however, Brower's leadership, while sometimes brilliant and often charismatic, was also divisive; his opponents would say it was reckless. It may be that Brower had an instinct for the politics of environmental issues that the Muries could never approach, but that instinct was far removed from the image of Mardy and Olaus as sincere neighbors talking with other neighbors about how to solve a common problem. In truth, they were different kinds of political activists. Just as the Muries were drawn to the wilderness, even though it meant engaging in political give-and-take, Brower was

¹⁴⁶ Nash, Wilderness and the American Mind, 208.

drawn to political strife to save the wilderness.

Brower's Earth Island Institute and Friends of the Earth probably represent the institutions most closely identified with the conservationist. It is not known if a building has been associated with his national contribution.

Rachel Carson

Rachel Carson's *Silent Spring*, published in 1962 became widely known as "the *Uncle Tom's Cabin* of modern environmentalism"¹⁴⁷ as she combined her background as a scientist with the Fish and Wildlife Service, impressive research, and literary ability to create a best-seller. Her focus on pesticides aroused great public debate and ultimately contributed to legislation banning or restricting twelve of the most toxic agents she had described in her book. In the process she helped transform, as Stephen Fox suggests, conservation into environmentalism—the difference being a wider concern with pollutants everywhere rather than the protection of specific parcels of land. In that specific arena, she clearly was the recognized national leader and spokesperson. On the other hand, although the implications of her study reached across the spectrum of technology and its political end economic infrastructure, she was identified with a far narrower set of issues than the biotic-community / ecologic complex of the Muries.

The Rachel Carson Homestead in Springdale, Pennsylvania is on the National Register of Historic Places . A five room farmhouse, this is the family residence where she was born and grew up and is currently dedicated to preserving and interpreting her legacy to visitors "and to design and implement education programs in keeping with her environmental ethic." The homestead provided a base for her to appreciate the environment, and it now serves as a reminder of her contribution to environmentalism, but its relationship to Carson and environmentalism is different from the relationship of the Murie Ranch to the Muries and conservation. For the Muries, their ranch was the hub of conservation activity; for Carson, the homestead is where she was born and grew up. Rachel Carson's home in Silver Spring, Maryland, where she lived from 1956 until her death in 1964, is a National Historic Landmark, designated in 1991. This is where she wrote her seminal book *Silent Spring*. Again, rather than being a gathering place for people to study nature, it was the private place where she wrote her call to arms against pollution.

Howard Zahniser

Howard Zahniser could be considered, with a little imagination, to be the alter ego of Olaus Murie, and vice versa, as the two shared responsibilities for staff leadership of The Wilderness Society. They shared much in common, worked well together, respected each other deeply, and after serving The Wilderness Society for eighteen years, Zahniser died within a year of Olaus Murie. Yet they were different people. As Stephen Fox, points out, "Murie harked back to the old field naturalists; Zahniser represented the newer generation of city-bred nature lovers."¹⁴⁸ Unlike the Muries, and although Zahniser thoroughly loved his trips to the Murie Ranch to work with Olaus, Mardy, and Adolph Murie, as The Wilderness Society website commemorating Howard Zahniser acknowledges, "Generally, though, he preferred to admire the wild country from afar and to ponder its inherent goodness from a philosophical standpoint."¹⁴⁹ Zahniser is generally credited as the author of the Wilderness Act of 1964 and for shepherding it through Congress, involving himself in each of the bill's sixty-

¹⁴⁷ Fox, American Conservation Movement, 292.

¹⁴⁸ Fox, American Conservation Movement, 267.

¹⁴⁹ The Wilderness Society, "Howard Zahniser: Author of the Wilderness Act of 1964," http://www.wilderness.org/AboutUs/Zahniser_Bio.cfm.

six revisions and various negotiations. Moreover, his daily responsibilities included the administrative activity of the society and editorship of the organization's publication, *The Living Wilderness*.

Although a memorial sign commemorating Howard Zahniser has been erected near his home of Tionesta, Pennsylvania, there appears to be no extant building associated with his life or career.

Robert Marshall

Robert Marshall as much as anyone, was probably the guiding spirit of The Wilderness Society in its formation and early years. Another urbanite, Marshall though was trained as a forester and received a Ph.D. in plant physiology, and was an associate of Gifford Pinchot, although he quickly moved well beyond the vision of efficient forests nurtured by the elder forester. He also led a strenuous life in the forests themselves and worked for the Forest Service and subsequently a forester for the Bureau of Indian Affairs, and was one of the key individuals who organized The Wilderness Society in 1935, with the universal expectation that he would be the first president, a duty that would have placed him in conflict with his immediate superior, Harold Ickes, Secretary of the Interior and with whom Marshall had a close working relationship. Still, as a leader in the organization, he continued to work for the government and transferred to the Forest Service again. Marshall provided not only a vision for The Wilderness Society but also financial support too as well. Although he died at age thirty-eight and combined with the death of Robert Sterling Yard soon afterwards, it produced a situation that forced The Wilderness Society to rethink its mission, structure, and personnel, and hire Olaus Murie and Howard Zahniser as directors. Olaus Murie disagreed with some of Marshall's ideas, especially his opposition to the Jackson Hole National Monument in 1943, but voiced huge respect for his contribution to the broader common cause and his leadership of the organization they both served.

The obvious place associated with Robert Marshall is the Bob Marshall Wilderness Area in northwest Montana. It does not appear, however, that a building associated with Marshall's life and career has been identified and preserved.

Summary

Representing a range of comparable individuals associated with either Natural Resource Management and Biological Science or the American conservation movement, the people discussed above include men and women with claims to national significance for their contributions as varied as their backgrounds, experiences, and legacies. The Muries are singular in this group because of their formulation of a perspective that included all species, not just culturally and economically favored fauna in resource management and conservation activities; their sustained efforts in this regard over a period of more than half a century in the twentieth century, thereby bridging the inchoate efforts of scientists and activists who were productive in the late nineteenth century like George Grinnell and W. L. McAtee and those of the new generation of environmentalists and scientists in the last third of the century like Rachel Carson, and (3) their role in the transformation of the conservation movement in its institutional manifestation from a small group of scientists and public leaders to a broad-based large-membership group of environmental organizations. The buildings associated with those other comparative individuals, as so often is the case in modern America, do not generally rise to the level of association to meet Criterion 2 of the National Historic Landmark requirements. There are two exceptions to this, the Maryland home of Rachel Carson, where she wrote her widely influential book, The Silent Spring, that is already a National Historic Landmark, and the Aldo Leopold "shack" in central Wisconsin. That building can be tied to biological science and conservation for its important association with Leopold and his important intellectual contribution. It is different, however, from the Murie Ranch which became a hub or

even in the words of one expert, a "Mecca" for the conservation movement at large during the years of its historic significance.

Conclusion

The Murie Ranch Historic District is the one property that best represents the nationally significant contributions of Olaus Murie, Adolph Murie, and Margaret (Mardy) Murie and that also outstandingly represents the themes of Biological Science and Resource Management and Conservation of entire ecosystems in the United States.

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Previous documentation on file (NPS):

_ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.

- <u>X</u> Previously Listed in the National Register.
- ___ Previously Determined Eligible by the National Register.
- ___ Designated a National Historic Landmark.
- ___ Recorded by Historic American Buildings Survey: #
- ___ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

_ State Historic Preservation Office

- ___Other State Agency
- ___ Federal Agency

__ Local Government

X University

<u>X</u>Other (Specify Repository): American Heritage Center at University of Wyoming, Laramie; Western History and Genealogy Department, Denver Public Library; Murie Center at Murie Ranch, Moose, Wyoming.

10. GEOGRAPHICAL DATA

Acreage of Property: 73.16 acres

| UTM References: | Zone | Easting | Northing |
|-----------------|------|---------|----------|
| 1 | 12 | 521653 | 4833641 |
| 2 | 12 | 522114 | 4833641 |
| 3 | 12 | 522114 | 4832834 |
| 4 | 12 | 521653 | 4832834 |

Verbal Boundary Description:

Lot 1, and the NE of Section 35, T43N, R116W, 6th P, M.

Boundary Justification:

This land base conforms to that purchased by Olaus and Margaret Murie and Adolph and Louise Murie between 1945 and 1949. (Estes patented 76.16 acres. The changing course of the Snake River appears to account for the 3-acre difference between the GLO survey and the NPS purchase.)

11. FORM PREPARED BY

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- Date: October 15, 2003
- Edited by: Susan Escherich National Park Service National Historic Landmarks Program 1849 C St., N.W. (2280) Washington, DC 20240
- Telephone: (202) 354-2211

DESIGNATED A NATIONAL HISTORIC LANDMARK February 17, 2006

Photographs

Information that is the same for every photograph included:

- 1. Murie Ranch Historic District
- 2. Teton County
- 2. Photographer: Richard Collier
- 3. Date of Photograph: 8/15/2003

Negatives are on file in the Wyoming SHPO office.

- 1. Homestead Cabin, looking south
- 2. Homestead Cabin, looking north
- 3. Homestead Cabin and Engine House, looking southwest
- 4. Homestead Cabin, looking southeast
- 5. Murie Home, looking southeast
- 6. Murie Home and Studio Cabin, looking northeast
- 7. Studio Cabin, looking northwest
- 8. Estes Cabin on left and Robin's Nest Cabin on right, looking east
- 9. Polaris Cabin on left, Belvedere Cabin in center, and Alatna Cabin on right, looking northeast
- 10. Belvedere Cabin on left and Alatna Cabin on right, looking southwest
- 11. Moviewood Cabin on left, Robin's Nest Cabin in center, and Garage (office) on the right, looking north
- 12. Estes Cabin on left, Garage in center rear, Robin's Nest on right in center, and Moviewood on far right, looking north northeast.
- 13. Moviewood Cabin, looking south
- 14. Robin's Nest, Cabin looking east
- 15. Estes Cabin, looking northeast
- 16. Alatna Cabin, looking north
- 17. Estes Cabin, looking southeast
- 18. Belvedere Cabin, looking southwest
- 19. Montana Cabin, looking northwest
- 20. Chena Cabin, looking north
- 21. Polaris Cabin, looking west northwest
- 22. New Bath House, looking south
- 23. Wild Lone Cabin, looking northeast
- 24. Enginehouse, looking northeast
- 25. Frame Cabin, looking south
- 26. Garage (office) looking southwest
- 27. Capron Cabin, looking north

Please see accompanying map showing camera angles.