

**BIGHORN SHEEP:
ECOLOGY & MANAGEMENT**

JULY 25, 2020

**COURSE LEVEL: III COURSE #: S3033
FEE: \$80 PER ADULT AGES 16 AND OLDER**



INSTRUCTOR: JEFF CONNOR

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**LOCATION: Rocky Mountain Conservancy - Field Institute & Conference Center
1895 Fall River Road, Estes Park, Colorado**

TIME: 8:00 AM - 4:30 PM

COURSE DESCRIPTION: The bighorn sheep is the rightful symbol of Rocky Mountain National Park and the state of Colorado. It is one of the most highly esteemed mammals in North America, representing the majestic rugged mountains of the park. There are few people, if any, who are not impressed by the sight of a large bighorn ram bearing its crown of massive horns. Spend a day with wildlife biologist Jeff Connor learning about the ecology, population dynamics, behavior, food habitats, and mortality causes of bighorn sheep. Learn how to identify a ram from an ewe, a yearling from a lamb, and how to age rams by the rings on their horns. You will also learn how to identify the scat of sheep, elk, deer and moose. Discuss the importance of escape terrain and where ewes have their lambs. Learn what sheep eat and visit two mineral licks, learning why they are so important to the survival of the sheep. Jeff will also discuss important park management issues related to bighorn sheep.

COURSE LEVEL: III

Participants may engage in a one-mile moderate-to-strenuous hike to an ancient game drive site, view sheep near Sheep Rock at Milner Pass, and take short hikes out onto the tundra. Short-distance walks throughout the rest of the day are primarily on level terrain.

Note: A portion of this course will occur at or above tree line, exceeding 11,500 ft. elevation.

BRIEF INSTRUCTOR BIOGRAPHY (additional information available at www.RMConservancy.org):

Jeff is a retired natural resources specialist who worked for 35 years in the federal government. He worked for 25 years in Rocky Mountain National Park where he was involved with wildlife and vegetation management. In 2012, Jeff and other park staff started a Citizen Science Program that has an ecological relationship with the Estes Park and St. Vrain school systems, and a school in Monteverde, Costa Rica, which is part of the Agua y Paz Biosphere Reserve.

EXPECTATIONS: Professional conduct will be expected from participants at all times. Respect for individual ideas will be observed. Except during course breaks, cellular phones, pagers, and personal entertainment devices are strictly prohibited in the classroom and during field sessions.

CAR-POOLING: Rocky Mountain Conservancy - Field Institute courses utilize car-pooling to limit vehicles traveling into the park. Car-pooling makes it easier to keep the group together, reduces transit time, and allows courses greater access because fewer parking spaces are required at destinations. In addition, it provides an opportunity for participants to discuss course material in small groups during transit. Typically, a few participants from each course volunteer the use of their vehicles for car-pooling to course locations.

TENTATIVE SCHEDULE:

- 8:00 AM – 9:30 AM Welcome/Introductions
PowerPoint discussion on bighorn sheep (taxonomy, early descriptions of bighorn sheep, chemical composition of mineral licks, descriptions of different herds in the park, and management issues)
Historical background: Food for Native Americans and market hunters, sensitivity to environmental changes and diseases
Horn growth – aging sheep by counting rings on the horns
Diet/soil nutrients
Rut breeding season – Rams advertise their dominance.
Lambing season/summer brood herds
Migration patterns of different herds in the park
Forest fires – good thing or bad for bighorn sheep?
- 9:30 AM – 10:30 AM Car-pool along Fall River Road to Sheep Lakes stopping to discuss visitor management, bighorn sheep protection and the importance of the Sheep Lakes mineral licks.
- 10:30 AM – 3:30 PM Drive Trail Ridge Road to Milner Pass, stopping at several places to look for sheep. View a high-elevation mineral lick and visit an ancient game drive site used by Native Americans to hunt bighorn sheep and elk. At Milner Pass, hike to Sheep Rock to look for sheep and scan the upper slopes of Specimen Mountain.
- 3:30 PM – 4:30 PM Wrap-up session at the Rocky Mountain Conservancy – Field Institute

Video: *Mutual of Omaha’s Wild Kingdom* - Capturing bighorn sheep in Canyonlands National Park, plus footage of capturing bighorn sheep using tangle nets. (29 minutes edited version)

Credits: *Big Game of North America, Ecology and Management 1978*. Schmidt and Gilbert *Rocky Mountain Mammals*, 2008 Third Edition. David Armstrong. Rocky Mountain Conservancy.
- 4:30 PM Depart

WHAT TO BRING:

- Sack lunch, snacks, energy bars, **WATER**
- Your favorite wildlife guide
- Binocular
- Camera

REMEMBER TO BRING THE 10 ESSENTIALS:

Rocky Mountain National Park recommends that hikers always carry the 10 essentials in their daypacks.

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| ▪ Raingear | ▪ Map and compass | ▪ Flashlight or headlamp |
| ▪ Sunglasses and sunscreen | ▪ Candles | ▪ Matches or other fire starter |
| ▪ Pocketknife | ▪ First-aid kit | |
| ▪ Sack lunch, snacks, water | ▪ Extra layers of clothing | |

Note: Rocky Mountain Conservancy – Field Institute recommends that participants for all courses dress in layers and wear comfortable, sturdy hiking boots/shoes. Participants should be prepared for sudden changes in temperature and weather conditions.

REFUND POLICY:

Cancellations received at least 14 days prior to the start of a class will qualify for a refund minus a cancellation fee of \$25 per participant for a one-day class, \$50 for a multi-day class, \$5 per kid's class and \$15 per half-day class or bus tour seat. Registration money transferred to another class will be subject to a \$10 switch fee.

Cancellations received less than 14 days prior to the start of a class or bus tour will not generate a refund. If the Field Institute cancels a class, every effort will be made to place the participant in another class; otherwise, a full refund will be given.

TEACHER RECERTIFICATION CREDIT:

Most courses are eligible for teacher recertification credit through the Centennial Board of Cooperative Education Services (BOCES). The fee is \$25 per class (.5 unit) or \$25 per series of threaded courses (1.0 - 3.0 units). A list of threaded courses can be found online at www.RMConservancy.org. Participants must enroll in all courses of a threaded series in order to qualify for the \$25 multi-unit fee. Please be prepared to pay for this credit with a check, made payable to BOCES, on the first day of a class or on the final day of a threaded series of courses.