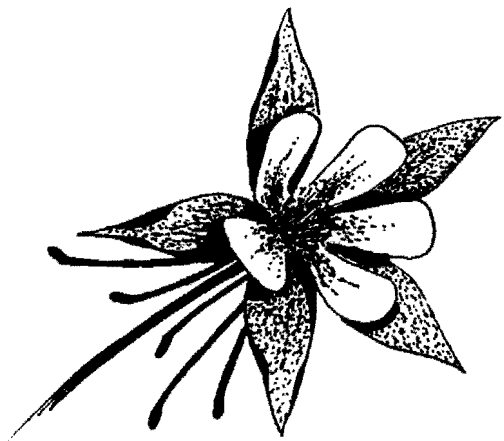


# Aquilegia

Newsletter of the Colorado Native Plant Society



"... dedicated to the appreciation and conservation of the Colorado native flora"

Volume 11, Number 4

July 1987

## CALENDAR

- July 17-19 - North Park and the  
Park Range  
Field Trip: Dr. Dieter  
Wilkin and Sue  
Galatowitsch
- August 22-23 - Mesa de Maya  
Field Trip: Dr. Ivo Lin-  
dauer
- Sept. 12 - Rampart Range  
Field Trip: Frank  
Hawksworth
- October 17 - ANNUAL MEETING  
Arapaho Community College  
Littleton  
Theme: Our Public Lands

## Xerophytic Fern Workshop

On May 2, a group of CONPS members met at the Foothills Nature Center in Boulder for Peter Root's workshop on xerophytic ferns and fern allies. The workshop began with a review of the fern life cycle and some of the adaptations ferns have made to live in dry habitats. Colorado as a fern habitat and present distribution of ferns in relation to past climates were also discussed.

Primary emphasis was on Cheilanthes, Notholaena, Pellaea, and Selaginella, all genera that

are common in dry habitats. Many of the participants were surprised at the variety of leaf shapes and the scales and waxy coatings which ferns have developed in dry environments. We found that Selaginella is one of those groups whose members really do all look alike, but were fascinated by S. lepidophylla, the resurrection plant, which unrolls from a dry ball to a flat green rosette when it becomes moist.

While we hadn't been very aware of the ferns and similar plants that live in dry environments, the workshop showed us some of the forms that can be found and aroused our interest in looking for some of them in the future.

Ruth Eaton and  
Elaine Krakover



## FIELD TRIPS

### Mesa de Maya

Sat. to Sun., August 22 and 23

Leader: Dr. Ivo Lindauer  
Meet: at 8:30 am at the Willard  
Lauden Ranch House, 63+ miles SE of  
Trinidad (see map).  
Limit: 18  
Cost: \$50 to be paid two weeks  
prior to the trip. If you plan to  
arrive Friday night for dinner,  
please include an additional \$10.00  
to cover dinner.

This region is a classical  
example of ecotonal vegetation be-  
tween the upper and lower Sonoran  
vegetation zone. Colorado's Pro-  
sopis sp. (mesquite) and Nolina sp.  
(bear grass) will be seen on this  
trip. Archeological and geological  
points of interest will also be

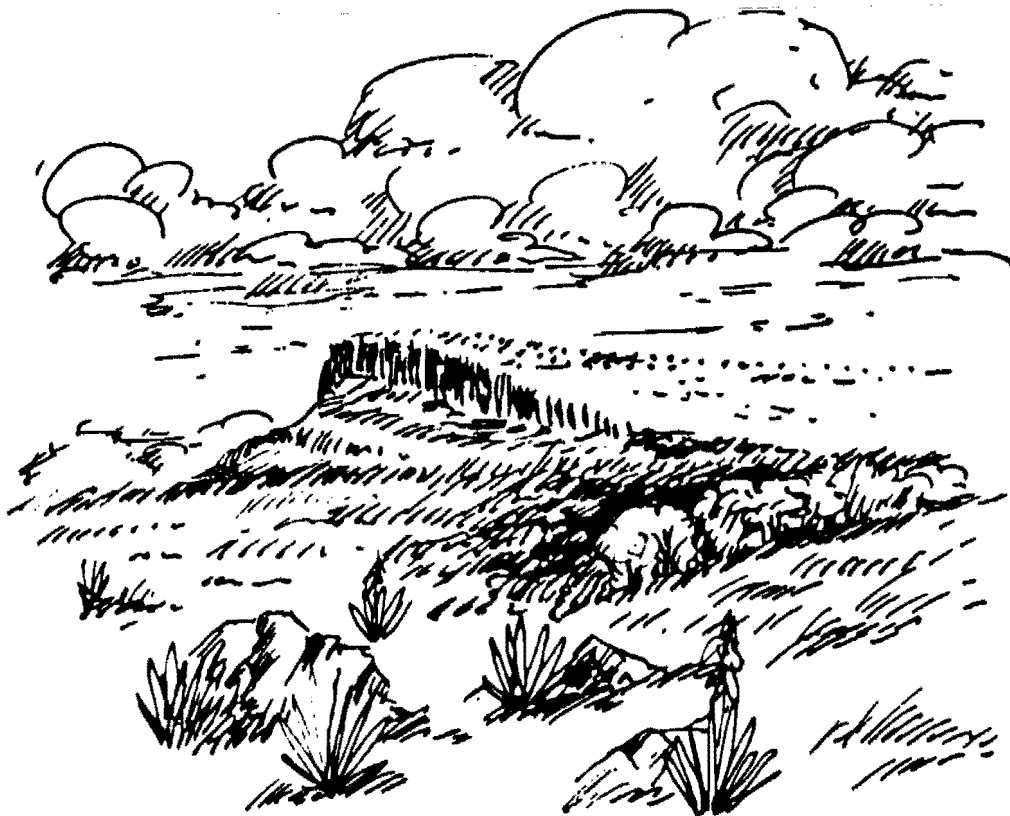
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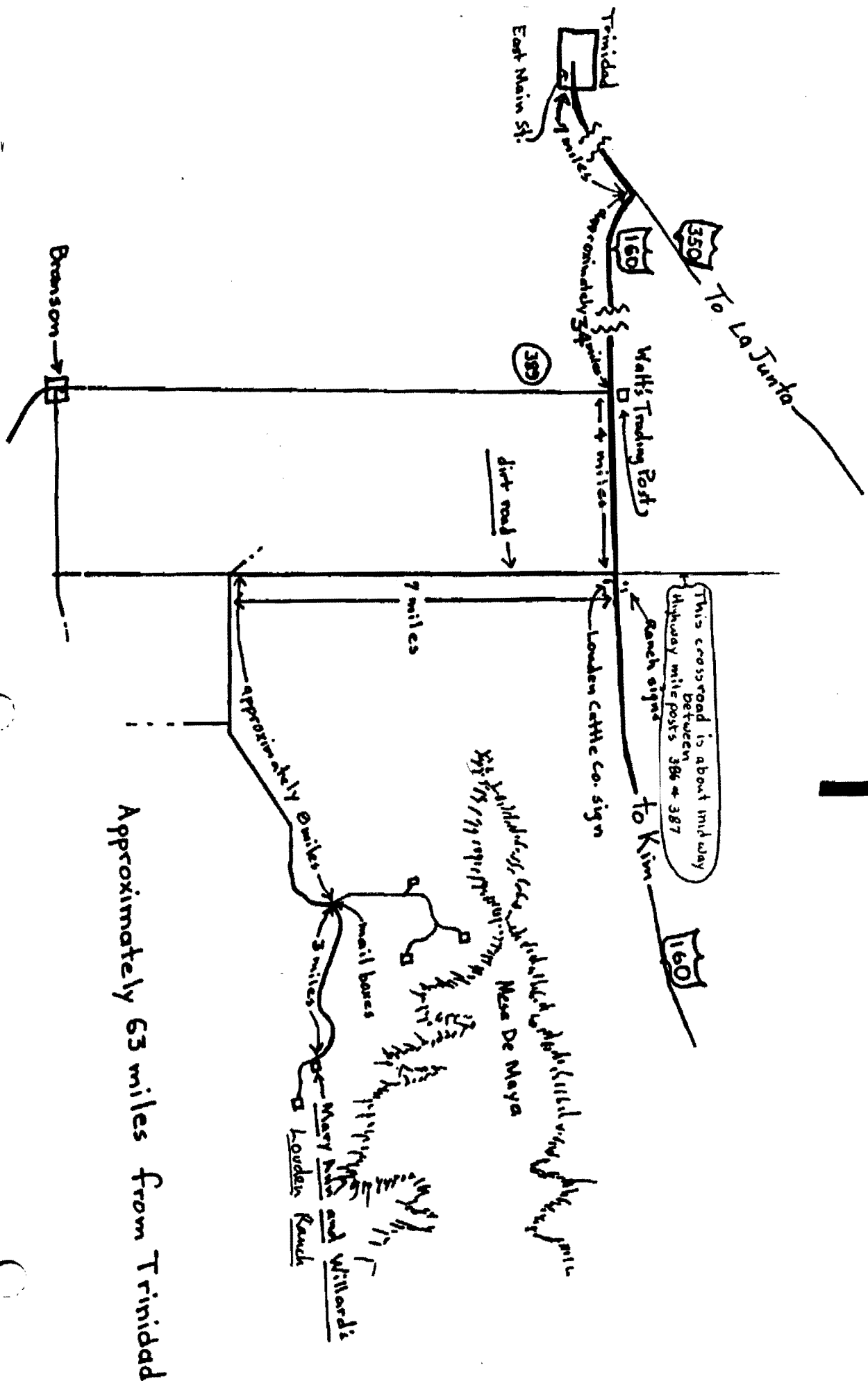
Travel will be by ranch vehi-  
cles over some 50 miles with per-  
iodic stops at areas of interest.  
We will camp Saturday evening on  
top of Mesa de Maya for a ranch  
bar-b-que. Those wishing to hike  
off the Mesa down a pristine canyon  
(3 hours and difficult terrain) may  
do so; others will return by vehi-  
cle to ranch for Sunday lunch and  
final wrap-up.

Come prepared for sunny days  
and cool evenings. Bring a good  
jacket and raingear. Water will be  
available at camp site.

**REMEMBER:** Registration fee  
must be received no later than two  
weeks before trip. No registra-  
tions without payment.

Register with Nevin BeBee,  
733-1038.



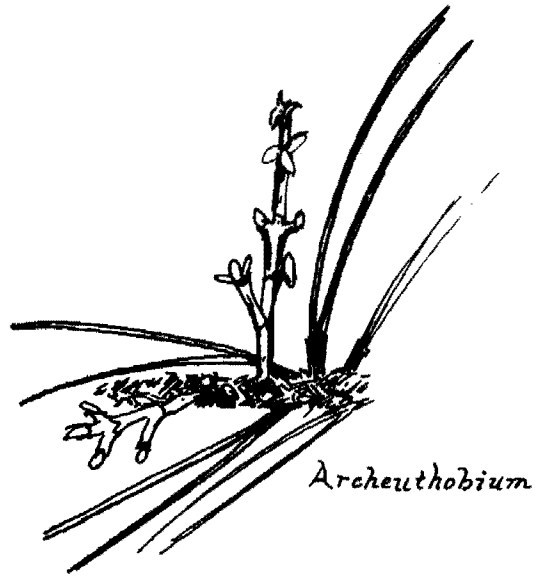


Rampart Range  
Saturday, Sept. 12

Leader: Frank Hawksworth  
Meet: at 10:00 am in Colorado  
Springs (call Nevin BeBee for final  
location)

The tour will go up the old Gold Camp Road for a short distance, back to the Springs, then up the Rampart Range Road to Woodland Park and return again to the Springs. This trip will enable us to see 4 species of dwarf mistletoe and at least 11 conifers (lodgepole, limber, bristlecone, ponderosa, and pinyon pine; blue and Englemann spruce; white and subalpine firs; Douglas-fir; and Rocky Mountain juniper.

Register with Nevin BeBee, 733-1038.



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Editor's Note: We have included the CONPS Field Trip Policies again in this issue because of a concern we have about collecting plant specimens on CONPS field trips. Often our field trips are to visit rare or endangered plants. Please re-read the policy on collecting. Only the field trip leader or persons with collecting permits should collect plant specimens. This collecting should be done discreetly so that others on the field trip do not feel it is alright to pick plants.

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**FIELD TRIP PLANT LISTS WILL BE  
AVAILABLE AFTER THE FIELD TRIP  
SEASON**

Requests should include self-addressed, stamped envelop (appropriate for size and weight of requested lists). Send requests for plant lists to Meg Van Ness, Secretary, 124 Arapahoe St., Golden 80401.

## COLORADO NATIVE PLANT SOCIETY FIELD TRIP POLICIES

The Society wishes to remind field trip participants of the guidelines for participation in Society trips. By joining a CONPS field trip you indicate acceptance of these policies.

1. Plant collecting is forbidden on CONPS field trips, with two exceptions:

(1) Collecting is permissible for scientific study (with the appropriate collecting permit, if one is required for the area in question). "Scientific study" means, for the purposes of this policy, study by a trained botanical scientist with an expectation that the study results will lead to published information; collected specimens will be deposited in a recognized, publicly-accessible herbarium.

(2) A trip leader or other person whose responsibility is to instruct trip participants may collect plants for immediate demonstration, explanation, or keying for full identification. Such collecting should be done inconspicuously (so that persons not with the trip group are not offended or motivated to do likewise) and with reasoned regard for any possible effect on the plant population. However, collecting of rare, threatened, endangered, or sensitive species should never be done for instructional purposes.

2. Rides and Cost-Sharing Policy: Car-pooling and ride-sharing is encouraged on CONPS trips. All drivers who provide rides to others will graciously accept payment from passengers according to the following scale:

1 passenger (in addition to driver)	5 <del>¢</del> mile
2 passengers	4
3 "	3
4 "	2

Passengers should pay the driver at the trip's conclusion, without being asked.

3. No pets are permitted on CONPS field trips. Pets trample plants, disturb wildlife, and annoy other trip participants. If pets must be brought along (although this is strongly discouraged), they must remain in or restrained to the owner's vehicle (i.e., walking about on a leash is not acceptable).
4. Field trips are designed primarily for adults, unless the trip description specifically states otherwise. Parents should consider the appropriateness of a given trip to a child. If a child is brought, the parent assumes full responsibility for keeping the child under strict control to prevent his/her damaging or disturbing the flora or fauna, or becoming a burden to the group. No child unaccompanied by a parent is permitted.
5. CONPS's expressed purpose is to promote appreciation and preservation of our flora. Use it lightly. Take care not to damage the very features you have come to see and enjoy. Take photographs, sketches, or other means of recording the plants you see, and do not pick plants or plant parts.

## EPHEDRA VIRIDIS

Making a dramatically different but colorful landscape statement from a virtually leafless shrub may sound like a bit of hyperbole from a mail order catalog, but this is entirely possible if the genus Ephedra is considered.

Over 25 species of the genus are spread over South America, Europe and Asia, with 15 or more species native to the southwestern US. Similar to all the other Ephedras, Green Mormon tea (E. viridis) bears paired or whorled leaves only a few millimeters long which, under droughty conditions, either fall from the plant or shrivel and dry becoming nearly invisible.

Even when in full leaf, the green stems carry on the major task of making food from sunlight, not unlike many other desert plants of the world.

A typical height is from 3 to 4 feet with a similar spread, with many examples of individuals attaining heights over 10 feet in areas where, apparently, environmental conditions permit. The olive green stems are held stiffly upright and in spring are completely covered with either curious male or female blossoms. The primitive female cone is surrounded with bright yellow, regularly spaced bracts, while the male cone is similarly surrounded with yellow calyx-like parts.

Its natural habitat includes dry rocky places in western Colorado, throughout Utah, Nevada, Oregon and southwestern Wyoming at elevations of 4,000 to 7,500 feet. Temperature hardiness has been proven to at least -20oF. Reports of winter death in the low elevations of eastern Colorado are probably due to some factor(s) other than temperature.

Soils of its native habitat generally range well above pH 7.5, typical for desert soils worldwide, but this alkalinity in no way restricts its growth to soils similar in reaction. Excellent growth can be attained in pots or containers filled with any number of soil types and pH as low as 5.8.

The propagation of all Ephedras is accomplished by seed since its rooting ability is very low using traditional methods. Ephedra viridis seed germinates somewhat erratically at day temperatures of 60o to 75oF alternated with nighttime temperatures 15o to 20o cooler.

Intolerant of much shade in the landscape, it is probably best displayed in full sunlight as an accent plant. Only well-aerated soils should be considered as growth in oxygen-poor, water impermeable clays will undoubtedly inhibit good root growth. Poorly situated or established plants are probably the cause of reports of winter death. After supplying establishment irrigation for a year or two, only 6 to 10 inches of annual precipitation are necessary to maintain healthy growth. Although additional water appropriately applied may result in extra annual growth, particular attention must be paid to insuring adequate soil aeration.

Be the first on your block to display a 'leafless' evergreen and blooming plant. That hot, dry, sunny and desolate spot need not be covered with only junipers.

Jim Borland

## Limestone Ridge, Vermillion Bluffs, and Raven Ridge Fieldtrip

Whatever happened to Ed Horn? Where is Bonanza, Utah? Although everyone on Steve O'Kane's field trip to northwest Colorado may not be able to answer these questions, everyone knows the rock garden of wildflowers Steve showed us on Lookout Mountain in the Vermillion Bluffs. Lookout Mountain proposed Area of Critical Environmental Concern (ACEC) in places was nearly a complete carpet of Astragalus spatulatus in full bloom. Cryptantha caespitosa, rare in Colorado, was seen here plus many other species, including Astragalus purshii, A. megacarpa, Balsamorhiza hookeri v. hispidula, Penstemon pachyphyllus, Phlox bryoides, P. austromontana, etc. Unfortunately, Cryptantha caespitosa and other rare plants on Lookout Mountain are threatened by both a four-wheel drive and motorcycle race the Bureau of Land Management (BLM) may permit directly over the rare plants in the proposed ACEC. (Editor's note: The BLM has just approved this race. Environmental groups throughout the state are planning to try to stop it. Stay tuned.)

At the Limestone Ridge - Irish Canyon proposed ACEC, we found the rare Penstemon yampaensis blooming and more specimens of Cryptantha caespitosa. We also saw Astragalus convallarius, Penstemon humilus, Petrophytum caespitosum, and others.

Although all the areas we visited were in bloom with wildflowers new to first time visitors like myself, the Raven Ridge ACEC west of Rangely had the greatest concentration of rare plants. We found Eriogonum ephedroides beginning to bloom; Penstemon grahamii in full bloom; Parthenium ligulatum, and Cryptantha rollinsii. Other interesting plants included Caulanthus crassicaulis, Elymus cinereus, Mirabilis alipes, Stanleya integrifolia, and Lygodesmia grandifolia.

Steve's field trip was a great introduction to the flora of northwest Colorado. Unfortunately, CONPS and the Colorado Natural Areas Program are losing this hard-working, well-informed botanist to graduate school in Missouri this fall.

Rick Brune



## BOOK REVIEW

Wild Orchids of the Middle Atlantic States by Oscar W. Gupton and Fred C. Swope, both professors of biology at Virginia Military Institute in Lexington, was recently released by the University of Tennessee Press. Covering the states of Delaware, Kentucky, Maryland, North and South Carolina, Tennessee, Virginia, and West Virginia, the authors take the reader on a nature walk through the forest, describing fifty-two species of the rarest of wildflowers usually detected only by botanists and amateur naturalists.

Gupton and Swope describe the plants in non-technical language and provide an alphabetical list of both common and scientific names of each species. Each orchid described is illustrated by a color photograph taken in the field under natural light.

The book is available from local bookstores or directly from the University of Tennessee Press, 293 Communications Building, Knoxville, TN 37996-0325 for \$12.50.

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Life	\$250.00	Family or Dual	\$12.00
Supporting	50.00	Individual	8.00
Organization	25.00	Student or Senior	4.00

**NEWSLETTER CONTRIBUTIONS**

Please direct all contributions to the newsletter to

Peter Root  
4915 West 31st Avenue  
Denver, CO 80212

Deadlines for newsletter materials are February 15, April 15, June 15, August 15, October 15 and December 15.

There is a special need for short items such as some unusual information about a plant, a little known botanical term, etc. Please include author's name and address, but items will be printed anonymously if requested.

**MEMBERSHIP RENEWALS AND INFORMATION**

Please direct all membership applications, renewals and address changes to the MEMBERSHIP chairperson, in care of the Society's mailing address.

Please direct all other inquiries regarding the Society to the SECRETARY in care of the Society's mailing address.

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