

CRLC Workshop

Providing Resources to Rockhounds

Introduction

The newly acquired workshop and meeting facilities provides a great venue for all Club members to participate in hands-on activities related to their areas of interest, as well as opportunities for classes and training. Currently, the workshop is divided into five main areas:

- The entrance/foyer reception and display area.
- A front office/meeting/storage room area.
- A small library/office/rock and mineral display area (so called "Resource Room").
- The main floor shop area where lapidary equipment (i.e. rock saws, poly arbours, flat laps, etc.) has been set up and regular meetings are held.
- The upstairs jewelry shop area.

On March 16, 2016, a meeting was convened at the workshop by Francois Lavigne (Workshop Coordinator) and John Smith-Jones (CRLC Custodian) to begin the process for managing the use of the workshop facilities by the general membership. As currently set up, the workshop supports primarily the lapidary and jewelry making aspects of the hobby. A group of 5 individuals have volunteered to be on a Workshop Planning Committee that will look after the day to day running of the workshop facilities and the use of the lapidary and jewelry equipment. I was requested by Francois to prepare a plan to address how the workshop facilities could be used to support and promote the scientific aspects of the hobby to the general membership.

Anyone in the rockhound hobby, regardless of specific interests has to have some basic understanding of how to identify and recognize the materials they are collecting and working with. The physical properties of the materials are directly related to their geological history, mineralogy and crystal structure.

If the lapidary and jewelry-making arts can be considered as the "back-end" or final phase of the rockhounding production cycle, then the "front-end" would include everything associated with researching, prospecting, field trips and collecting, identifying, cleaning, trimming, preserving, enhancing, labelling cataloguing, curating, displaying and studying of geological materials. Collecting categories typically include, but are not limited to the following wide spectrum of subject areas:

- Collection and identification of rocks, minerals and fossils in general as individual specimens.
- Collection and identification of rough material and assessment for use as lapidary material.
- Collection of meteorites and materials associated with meteorite impacts.

- Cutting and grinding of rock and mineral specimens for petrological study of thin sections of rocks and polished sections of opaque ore minerals.
- Micromounting for study by microscope.

Based on the premise that all rockhounds will at some point need to identify their materials and understand their properties, the goal of the workshop space should be to support the diverse needs arising from the interests of the membership. The following is a draft outline of my recommendations intended for internal discussion by the Workshop Planning Committee.

Current Club Resources

Based on the planning discussions to date, the Resource Room will be managed separately from the shop areas. This is primarily due to the need for safety, training, vetting and supervision needed when equipment in the shop areas is used by the general membership. The Planning Committee is in the process of identifying and assigning shop stewards so that no one is ever working in the shop alone, when the facilities are open to the membership.

In contrast, the Resource Room contains no equipment or materials considered hazardous to the general membership. Currently, it contains the Club library, which members can access for reference while at the workshop, or sign out books on the honour system. The Club's mineral collection has been set up on open wooden shelves for display and there is an assortment of rock and mineral collections that have been acquired through donations to the Club or purchases.

Membership in the Club already provides a great deal of support for anyone interested in learning more about their geological materials (rocks, minerals, fossils, etc.). At the monthly regular meetings, anyone with a question about their material can usually be directed to a knowledgeable member for an answer. Until recently, the Club had a Pebble Pup program for the children, where some basic rock and mineral identification skills were taught. This program is currently not active due to the lack of an instructor.

Within the Club organization, there are already individuals responsible for organizing formal Club field trips and the library. Knowledgeable club members volunteer as instructors in workshops on mineral identification and introductory geology and mineralogy. In addition, the Club's monthly meeting program may include talks on scientific subjects such as geology, mineralogy and palaeontology. The Club's monthly Journal publication is another venue for dissemination of information to the membership. The Journal is always openly soliciting the membership to publish articles. At the annual show, a rock and mineral identification booth has provided further opportunities for both the membership and the visiting general public to have their material identified.

Vision and Potential Goals

Answering questions from the membership concerning the identification of geological materials is an ongoing need. Education and training gives individuals the tools to seek out this information independently. However, there will always be newer, less experienced

members to replace those that have become more advanced, and more challenging questions will be posed from those in the more advanced stages of knowledge and experience. Within the Club itself, dissemination of the knowledge held by the more experienced club members to those willing to learn ensures that the Club will continue to grow.

The ultimate goal for the new workshop facilities and Resource Room would be to provide an informal common meeting area for members to socialize and obtain information, have access to any resources necessary for mineral identification testing equipment, as well as knowledgeable club members. Instruction and classes can be given by various individuals depending on membership needs and the experience of available instructors.

A practical starting point is to integrate the existing roles and activities within the Club to support the “front-end” rockhound activities within the workshop setting. This would include field trips, programs and activities during the regular meetings, evening/daytime classes or workshops and preparation of journal articles.

Members having limited resources at home to process or work with their material will appreciate the workshop facilities provided by the Club.

The actual activities that might ultimately be carried out by individuals in the workshop setting are expected to include the following:

- Bringing in raw material from the field for initial cleaning and identification.
- Trimming of specimens, using hammer and chisels, rock trimmers, and rock saws.
- Special cleaning, preparation, repair and stabilization procedures, as required.
- Various tests for identification purposes.
- Examination by microscope.
- Labelling and cataloguing specimens.
- Mounting and display.

To support these kinds of activities on a more regular scheduled basis within the operational hours of the workshop facilities, a great deal of work needs to be initiated. I recommend that the Club solicit volunteers to form a sub-committee that will be part of the Workshop Planning Committee to coordinate and carry out the ongoing implementation. For the purposes of this discussion, I will call this sub-committee the “Resource Group”, since their prime function would be to support the general membership with regards to geological education and information regarding collected geologic materials.

Initial Tasks

Because the shop area and Resource Room are intended to be managed independently, there is a potential issue that needs to be resolved with the Workshop Planning Committee regarding coordination of access and operating hours. At the moment, a series of “Open Houses” have been held to encourage club members to come and use the facilities as well as drawing in new members to the club. Access and hours are dictated by the use of the

lapidary equipment and the availability of a shop steward. Opening the workshop under the auspices of the Resource Group at other times would mean that no equipment could be used, unless a steward was present. At the planning meeting, a suggestion was made to set up a central notice board, say on the Club's website, that members could access to see when the facility was open and to sign up for time on the equipment.

The following are some initial tasks that need to be undertaken to get things going.

- Determining the need for someone to be present in the Resource Room whenever the shop is open.
 - In my opinion, it would be in the Club's interest, at least during this initial startup phase while things are being organized, to have at least one Resource person present whenever the workshop is open.
 - Ideally, a list of volunteers, preferably Calgary-based, along the same lines as the shop steward arrangement should be solicited so that at least the open shop times are covered.
- The existing club mineral collection, currently on open wooden shelves in the Resource Room should be curated and stored in a locked display cabinet. These are not specimens intended for repeated handling by the general membership. These specimens may be "one-of-a-kind" and no longer available, donated from the private collections of Club members and should be respected accordingly.
- The names of the donors who provided the specimens should be identified, if possible. Information may be found in Club records or consulting with long-time Club members.
- The other collections stored in the Resource Room should be inventoried and curated. All specimens in all collections should be numbered and labelled with a Club label, indicating it is Club property.
- Obtaining study-grade rock and mineral specimens which are intended for instructional purposes, general study and handling. This may be composed of collected, donated or purchased materials, as necessary. The following are some examples:
 - A set of the Moh's hardness scale of minerals.
 - Sets of common rocks:
 - Igneous
 - Metamorphic
 - Sedimentary
 - Sets of minerals that exhibit various physical properties- cleavage, fracture, colour, luster, streak.
 - A set of common rock-forming minerals.
 - A set of common ore/economic minerals.
- Building the Club collection along various themes such as:
 - Rocks/minerals/fossils of Alberta
 - Canadian rocks/minerals/fossils
 - Rocks/minerals/fossils found during Club field trips

- Cutting rough versus polished product.
 - Fluorescent minerals.
- Making and/or obtaining testing equipment and materials for rock and mineral identification.
 - Various hardness points.
 - Specific gravity.
 - UV Lights
 - Geiger Counter
 - Binocular microscope
 - Crystal models
 - Goniometer
 - Note: I would not recommend getting, storing and using any chemicals in the workshop or doing any flame tests or chemical tests, due safety and first aid issues related to handling, storage and ventilation requirements. Conducting chemical tests requires another scale of safety equipment within the shop and would likely not be covered by our current insurance policy.
- Setting up a storage and display area for the club's mineral collections, to accommodate growth over time.
- Set up storage area for testing equipment and materials.
- Identify/setup area in shop with tables where members are able to process, clean, trim, identify and curate their specimens.
- Set up a schedule for relatively regular rock and mineral identification sessions, based on availability of knowledgeable members and facilities.
- Provide training in the use of available testing equipment and facilities for rock and mineral identification.
- Provide classroom style instruction on basic geology and mineralogy as well as more advanced/specialized subjects based on interests and availability of experienced instructors.
 - Any training and instructional activity may involve a huge time commitment by the instructor to prepare materials.
 - Consideration should be given to providing more "mini" sessions, rather than one extensive course. This may suit the membership who have a limited time and interest and are seeking specific information, and suit instructors who have specialized knowledge that can be disseminated with little advanced preparation time.

Conclusion

I am willing to volunteer my time and expertise to coordinate the so called "Resource Group", or whatever this sub-committee eventually becomes. Being out of town, I would rely on other members of the sub-committee to be responsible for any scheduled presence at the workshop space, depending on what the ultimate arrangement will be.

Please review this draft within the Workshop Planning Committee and let me know your thoughts or comments. I'm sure more ideas will come to mind as we progress, so consider this as a start only.

Holger Hartmaier

(Draft: March 19, 2016)

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