

To: RMBL Scientists
From: Ian Billick and Jennifer Reithel
RE: Spring update for scientists
Date: April 24, 2018

Research/Education

Federal Grants

Congratulations to Amy Iler and Paul CaraDonna (Chicago Botanic Garden) who received funding for their NSF grant, *Addressing the missing link: uniting demographic life history theory and pollination biology to understand the ecological consequences of pollinator declines*. Congratulations to three hydrology researchers who received funding from the Dept. of Energy: Daniella Rempe (UT Austin), *The weathered bedrock vadose zone: A hidden control on water availability in the western United States*, Kate Maher (Stanford Univ.) and collaborators Jennifer Druhan, Corey Lawrence, and Ken Williams, *Development of a molecularly informed biogeochemical framework for reactive transport modeling of subsurface carbon inventories, transformations and fluxes*, and Rick Colwell (Oregon State Univ), *Quantifying Subsurface Biogeochemical Variability in a High Altitude Watershed During Winter Isolation*.

REU Grant

The REU grant was renewed for another five years, 2018-2022. If you haven't mentored and are interested, contact Rosemary Smith rsmith@rmbll.org or Jennie Reithel sd@rmbll.org

Weather Station Data

The weather stations are being managed by Dave Gochis (University Corporation for Atmospheric Research - UCAR). Access to weather stations is here:

<https://weatherstations.rmbll.org/signin>

We ask people to register so we know how much the data are getting used.

Geospatial Modeling Platform

There are several datasets available for scientists. Ken Williams and collaborators have shared Lidar data with us. We have 6" resolution Lidar data for the East River Valley and Washington Gulch. Contact Shannon at gis@rmbll.org if you want slope, aspect, or elevation for your sites. In addition, Jennifer Rudgers has shared a climate model with us (and all RMBL scientists) that uses slope aspect, and elevation to predict growing degree days, mean annual temperature, mean summer temperature, mean annual precipitation, mean snow depth, and mean summer precipitation. For scientists who are interested, we can use this to provide that information for your research sites or other points of interest. If there are other parameters you are interested in RMBL developing models for, we encourage you to talk to Ian.

NEON overflight collaboration

As part of ongoing work by Berkeley Lab's Watershed Function Scientific Focus Area (SFA) and in collaboration with Stanford University, the National Ecological Observation Network's (NEON) Airborne Observation Platform (AOP) will be conducting data acquisition flights in the greater East River watershed during the last two weeks of June 2018. The AOP includes a visible-shortwave infrared spectrometer for hyperspectral imaging, LiDAR, and a high-resolution camera. These data will be collected in tandem with extensive ground-based measurements in order to support the mapping of foliar chemical composition, canopy water

thickness, vegetation height, plant community distributions, and select plant species distributions within the East River, Washington Gulch, Oh-be-Joyful / Slate River and Coal Creek drainages.

If you are interested in (1) assisting with ground-based measurements and (2) utilizing these data, please fill out the [google form](#) and / or contact Dana Chadwick kdc@stanford.edu or the Science Director for more information.

Tracer Contamination Update

There was concern about ^{13}C and ^{15}N tracer contamination in the Research Center sample processing room and forced air drying oven last summer. Samples from the drying oven were tested and no contamination was detected. Contact Jennie, sd@rmb.org, if you have any questions.

Research equipment

We will be installing the final piece of equipment associated with the GC-Mass Spec in June. There is a GC-MS class scheduled for August to train scientists and graduate students on the use of this machine for analyzing volatiles. Contact Jennie if you have an interest in being trained on the machine. This summer we have asked the scientists who will be using the GC-MS to come up with a fee structure for using the machine that will allow us to operate it on a sustainable basis, including cover the costs of disposable items as well as eventual equipment replacements/work. If you would like to be involved in these discussions and/or potentially use the machine in the future, please contact the Science Director.

Seminars

Thanks to Bobbi Peckarsky, who again organized the science seminar series. You can find the schedule online through the rmb website.

<http://www.rmb.org/Tuesday-talks/>

Graduate student and postdoc liaison

I will be asking the graduate student and postdoc community to establish a process for creating formal representatives. As the community has grown in size it seems that having a more formal process by which that community can designate its representatives will be useful.

Facilities and Operations

Feedback

We encourage feedback at any time. One of the best times to influence how we set priorities is in the fall. We take feedback throughout the year, on an informal basis, as well as through the summer survey and exit interviews. The staff pulls that information together and comes up with a series of priorities for changes to implement in the upcoming year. We then publish that for the research community to comment on. We then use those priorities when we set our budget in October, as well as when we make staffing adjustments.

To see the priorities we have established for this year, please visit:

http://www.rmb.org/wp-content/uploads/2017/10/SC_report-to-users-on-annual-assessment-2017.pdf

If something really important emerges after the fall, we can always adjust. But it is much easier to work priorities in before we finalize the budget.

Housing

Housing assignments for this summer are posted on this website.

<http://www.rmbl.org/field-station-info/housing/>



Lab space

Lab space assignments for this summer are posted on this website.

<http://www.rmbl.org/field-station-info/laboratory-and-office-rentals/>

ADA Cabin

We'll start construction on the ADA cabin this summer. We expect it will be complete in the fall of 2019. Because it's designed to be universally accessible, it will be a large structure approximately 3000 sq ft. It'll have 3 bedrooms downstairs and 4 bedrooms upstairs. Both the downstairs and the upstairs will have a kitchen and a bathroom. Crystal Cabin

will eventually be removed to put a leachfield in. Once the ADA cabin is in use, we'll be removing some other cabins as well as reducing occupancies in some of the cabins. The cabin will be fully winterized and used to support winter programs.

Lofts in Cabins

Because of discussions with Gunnison County and for safety reasons, we are in the process of removing lofts in some of the smaller cabins for use for sleeping. The issues are having stairs which are safe as well as the ability to exit a cabin through a window in case of a fire. This summer we will not allow lofts for sleeping in Lead King, North Pole, Snowmass, and Whiterock. Additionally, when the ADA cabin comes into use, we will remove some additional lofts from use for sleeping.

Future outhouses

We intend to add one of the new 2 seater outhouses close to the Visitors Center. Our sense has been there has not been enough capacity to serve everyone and this would help keep the public out of the townsite. At some point, we will probably install an outhouse in the Galena/Richards/Calder area to replace the outhouse that was removed next to Richards.

Long range plans for housing in Gothic Townsite

The plan is to provide housing for 180 people in the Gothic Townsite. The last several years, we've been housing close to 180 at peak capacity. With the new ADA cabin, we will not be increasing the number of people we house beyond 180. We will be removing cabins or reducing occupancies to do a better job of providing housing for 180 people. We do have plans for some more new cabins that would be fully winterized. These would provide more ADA housing spots and allow us to retire some more of the older housing spots. These cabins will be much smaller than the ADA cabin we're building this summer.

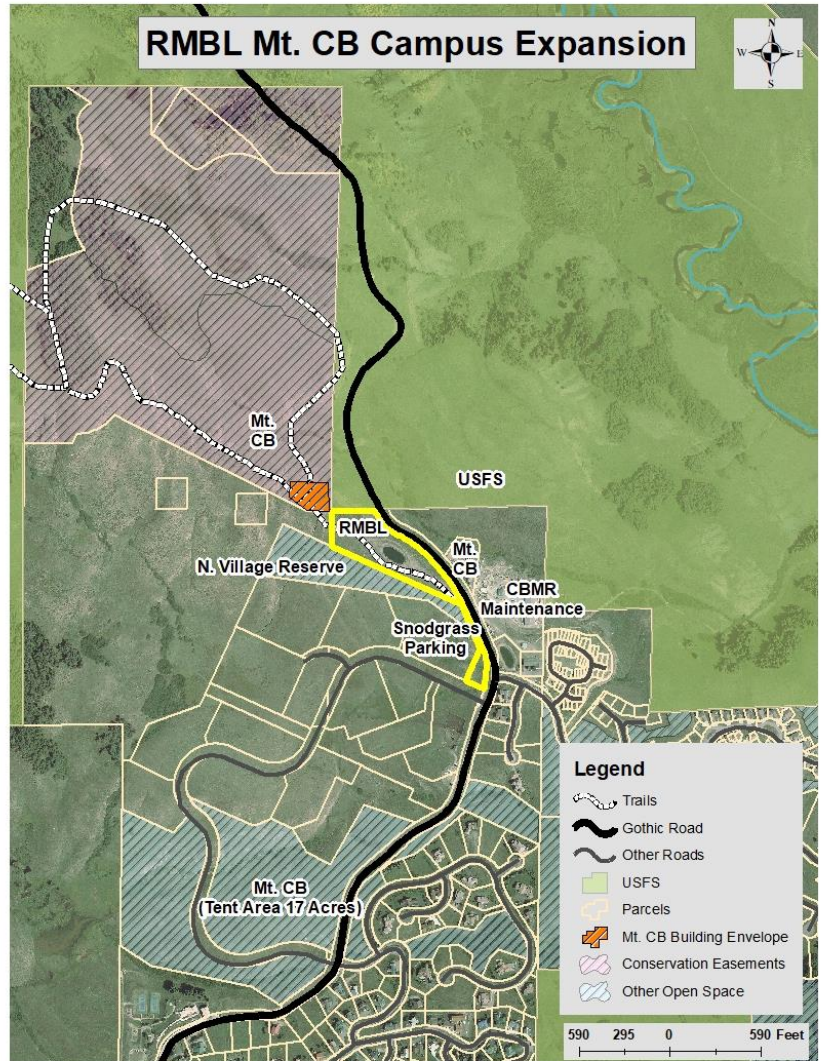
In terms of specific cabins, we will most likely remove Porcupine and Crystal once the ADA cabin is commissioned. We are also thinking about what to do with some of the older, smaller cabins such as Lead King, East River, Enders, Enders Annex, Bellview, Snowmass, and Paradise. They all have structural issues (some worse than others). The waste water systems are antiquated, and we want to move away from using lofts for sleeping. We may remove some of those cabins or convert them to dorms.

Mount Crested Butte Campus

We are still examining the viability of a Mt. Crested Butte campus. The campus would allow us to use Gothic more intentionally. Currently, we do almost everything in Gothic because we have no other facilities. The hope would be with facilities in Mt. Crested Butte, we could provide support for individuals who will most benefit from being in the Gothic townsite.

In recent years we've had to house more seasonal staff in Gothic because of the absence of affordable workforce housing in Crested Butte; it is becoming impractical to hire seasonal staff unless we offer housing in Gothic. Having seasonal housing in Mt. Crested Butte would allow us to hire seasonal staff at reasonable cost without reducing the number of students and scientists we can house in Gothic.

The campus would also potentially provide a location for long term housing for permanent staff. Additionally, we are considering putting the Visitors Center there with the idea of reducing public pressure on the Gothic townsite. Also, if we need additional laboratory space, locating it in Mt. Crested Butte would allow us to provide year round access to that space. Finally, RMBL has been operating its winter offices out of the old Town Hall in Crested Butte. The Town has provided that space at artificially low rates. We have outgrown this space it is unclear how long we will continue to have access to it. Creating year round office space would allow us to control office space costs. Creating housing, office, and laboratory space



in Mt. CB that can be used year round will allow us to reduce impacts on the Gothic townsite and allow us to be more financially sustainable since it can generate revenue year round.

Currently we're working with the Town of Mt. Crested Butte to evaluate what would be allowed on the parcel and under what conditions. That will allow us to set a budget. Then we will initiate a review process with Mt. Crested Butte to see if we can obtain approvals. Simultaneously, we will enter the fundraising stage. Acquisition of the property is dependent on creation of seventeen workforce housing units that are acceptable to Mt. Crested Butte, so creation of this housing would necessarily be part of the first stage. Ideally, we would also create a Visitors Center, office, and laboratory space at the same time.

Snowpack and Fire Danger

This is the second lowest snowfall we've in the 45+ years billy has been keeping records. There's been more moisture than usual, however, so the snowpack isn't quite as bad. We expect the road will open early to mid-May. It will be a dry summer. Gunnison County has already been implementing bans on open fires on windy days. We anticipate there to be fire bans on the public lands around Gothic this summer. If it gets bad enough, they will close the forest. It will probably not be a good year for wildflowers. Wildflowers will probably emerge earlier in the summer and numbers will likely be down.

Fall Conference and Workshops in 2018

RMBL is hosting the MtnClim meetings Sept. 17-21. The link to register is [here](#). The GC-MS class is August 12-18, 2018 and has a wait list. Jessica Forrest is bringing a Field class here August 11-25. There will be a fiddle camp at RMBL Aug. 21-25, with a square dance on the 24th. Weddings are scheduled for Sept.1-3, Sept.8, and Sept. 27.

Billing

We have changed our billing policy. Generally we have not issued bills until a research group is finished for the year. With more and more research groups staying through fall, our billing has been getting later. This has put a squeeze on RMBL's cash flow. Consequently we will send monthly invoices throughout the summer, starting on June 30. billy barr will continue to be your primary point of contact for all financial questions. If you need to make other invoicing arrangements, please get in touch with billy.

Summer Shipping

Please do not ship anything to us before May 5th. If the items are not time sensitive, we recommend they be shipped after May 15th. We will not have room to store it and may return it to you. If something is delivered to our Crested Butte office, you will only be able to get it during normal working hours.

An amazing amount of material gets shipped to us, just to be put in the trash and then hauled away. We recommend that you not have magazines or catalogues sent to us. They will not be forwarded when you leave. We will only forward regular mail for three weeks after you leave. If you are shipping an expensive or important item, we recommend that you coordinate with Samantha ahead of time.

You can get more info at: <http://www.rmbl.org/wp-content/uploads/2017/04/FS-2017-Mail-Policy.pdf>

Staff

There have been some changes in staff. We have added a Chief Operating Officer (COO), Kelly Sudderth. She will oversee operations. Jennie, Steve, and Gesa will all report to her. Ian's focus will be on science, strategic planning and fundraising. Scientists are encouraged to continue communicating with Ian about RMBL's operations and scientific direction. Sarah Oktay has left to work for UC Davis. Erin Fabbre is the Development Coordinator, overseeing development efforts and reporting directly to Ian. Jeremy Grieve will be assisting Erin. He'll assist with events and the donor database. We've overhauled RMBL's financial system moving to a new financial software platform. Jennifer Pierson is working full time in finances handling bookkeeping. Billy Barr will still be point person for scientists, checking people in and out. These changes will make it possible for RMBL to handle more federal grants, not all of which necessarily are directly related to RMBL research. The goal is for the overhead from handling grants to help us operate RMBL on a more cost-effective basis. Rosemary Smith is overseeing the Education program. She will be assisted by Rachel Steward to coordinate student research this summer.

IT Update.

The best internet access in the townsite is in the Billy Barr Community Center (bbcc) and the Gothic Research Center (GRC). Internet access within most cabins is good, but if you need to do large data transfers, please work in the bbcc or GRC. If you're still having problems with large data transfers, please reach out to helpdesk@rmbl.org as there may be additional configuration that we can do to ensure you have access to the resources you need.

All RMBL users should send internet issues to helpdesk@rmbl.org this summer. Be sure to indicate where you were having problems, what type of computer/device you are using, as well as the time you were having internet issues.

Board of Trustees/Planning

Strategic Planning and Fundraising

The Board will be finalizing the strategic plan in the next 6-12 months. They are looking at a range of opportunities including ways to directly support scientists, including creating financial fellowships and data resources, upgrading Gothic facilities, and identifying priorities on acquiring outlying properties. The Board is also thinking about appropriate ways to connect RMBL research to policy and decision making. A critical underlying theme of the strategic planning is to develop a financial model that allows us to maintain facilities, equipment, and personnel on a sustainable basis. One of the goals will be to build up the endowment in part through long term estate planning. We expect to be announcing a fund-raising campaign in the next one to two years.

Board

The RMBL scientists currently on the Board are Jill Anderson, Diane Campbell, Aimee Classen, Kailen Mooney and Ken Williams. If you have questions about strategic planning, we encourage you to talk with them.

Land and Land Management

Conservation of Trampe Ranch

This conservation project is complete. It will be managed as in the past – access continues to be by permission only and is coordinated through the Science Director.

Permitting in Wilderness.

We're working with the wilderness society to streamline permitting for research in USFS Wilderness Areas.

Conservation Easement on Gothic Townsite

There have been issues in how tax credits for easements are administered at the state level. We're still considering placing an easement on the RMBL townsite, but we're waiting for those issues to be resolved.



Cebolla Creek

RMBL scientists are welcome to conduct research at the Cebolla Creek property, located about 45 minutes south of Gunnison in the drainage to the east of Lake City. This 160 parcel has a cabin, irrigated and grazed meadow, some sage meadow habitat, and quite a bit of conifer forest (on a steep slope). It also has about a mile of private stream. It has a cabin and we are expecting to get the water turned on this summer. Scientists may stay at the cabin if prior arrangements are made. Contact Jennie if you are interested in working there or checking out the property.