Diversity = Stability: The Mount San Antonio College Wildlife Sanctuary Biodiversity Project

Final Report

Submitted to partially satisfy the requirements for the completion of Sabbatical.

Spring 2016
Tim K. Revell, Ph.D.

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List of Photographs and Tables

Abstract: The purpose of this sabbatical project was to investigate and document the biodiversity of the Mt. San Antonio Wildlife Sanctuary. A total of 69 field hours were spent over the course of 45 days photographing specimens and catching insects. Two majors products were produced from the work of this sabbatical that will be used by future Mt. SAC faculty, students, and visitors. The first is an insect collection representing 55 of the more common insects found in the Wildlife Sanctuary. The second is a website that displays 132 of the common plants and animals found in the sanctuary. This website contains 679 photographs of these specimens with information about the ecology and natural history of these specimens and is available online at instruction2.mtsac.edu/trevell/default3.html

Statement of Purpose: The purpose of this sabbatical was to investigate and document the biodiversity within the Wildlife Sanctuary and to present this data in a manner that would be useful to students, faculty, and to all those who visit the Mt. San Antonio College Wildlife Sanctuary. This sabbatical product was developed to showcase the plants, animals, and ecosystems that we have in our local Wildlife Sanctuary and promote interest in wildlife, biology, and biodiversity. Also, the purpose of this sabbatical was to measure or demonstrate the value of the sanctuary as a college asset. The planetarium and an anatomy laboratory, as examples, might have a monetary value based on the number of students that use the resource and/or the cost of the equipment. I believe the Wildlife Sanctuary is an asset valued in the multi-million dollar range based on its biodiversity, relatively low cost to maintain, and the number of students it serves as a function of time. Thus, one purpose of this sabbatical was to highlight the sanctuary as Mt. SAC asset. The organization presented in this report follows the grading rubric presented in the "Salary and Leaves Committee 2014-2015" document, page 18.

INTRODUCTION

The Mt. San Antonio College Wildlife Sanctuary is an incredible resource for students, faculty, and the community and is visited by over 10,000 people per year (Craig Petersen, personal communication). As a biology professor, words are not enough to express how awesome it is to have access to a teaching resource like the sanctuary. In this sabbatical, I examined the biodiversity of the Wildlife Sanctuary and created an insect collection and website to enhance the learning experience of those who use it.

This sabbatical can be divided into two sections. The first section of this project involves the fieldwork. I spent a total of 69 hours in the sanctuary photographing plants and animals. This time was also spent setting traps, black-lighting for insects at night, and pinning specimens in the field. I hiked a total of 110 miles during this portion of the sabbatical over the 45 days in the sanctuary. The fieldwork (which comprised about 10% of the entire project) was incredibly fun, hard, physical work. In the first month of field work, I noticed an massive increase in my appetite and I also lost 12 pounds.

The second portion of this sabbatical involved organizing and editing photographs and designing the website that would ultimately end up being my final major component of my sabbatical. The second portion also involved organizing and identifying the insects I had collected and photographed. Developing the insect collection and building the web pages took approximately 85% of the time.

The remaining 5% of the project involved almost daily writing in my field notebook (submitted and housed in the museum along with the insect collection) and writing this final report.

MAJOR FINDINGS & RESULTS

A total of 132 different species were documented during this sabbatical project. The new Wildlife Sanctuary website will provide students, faculty, and the community with information on these 132 species as well as a total of 679 photographs of the specimens and supporting habitats.

Fifty-five (55) specimens were collected and pinned as part of this project. This represents only a fraction of the total insects observed, however. I released duplicate specimens and many of the very small insects that were too small to pin were also released. Some of the small specimens too small to be pinned were preserved in 95% ethanol glass vials to be identified at a later date. These insects are in a standard insect box from BioQuip and will be housed in the Mt. SAC Museum

or similar facility as decided by the district and/or the Department Biology. A photograph of the insect collection is provided (Figure 1).

The most useful collecting technique was direct observation. I think this was true for two reasons. First, it allowed me to go after fairly large insects; they tend to capture your attention easily. Secondly, once a specimen was collected, you could ignore that species and focus your attention in other habitats to go after species that were missed. This is important because the goal of the insect collection was to capture a diversity over abundance. I could have easily collected 100 cabbage white butterflies and 100 ladybird beetles but that would have been far less beneficial.

I was somewhat surprised by how ineffective the pitfall traps were. In my previous study in the Mojave Desert, pitfall traps worked very, very well. In that study, however, I also used ethylene glycol as a preservative. Ethylene glycol is a major component of antifreeze compounds and is consider toxic to wildlife. Under the new regulations set forth by the California Department of Fish and Wildlife, the use of ethylene glycol is prohibited. Without a preservative, many of the insects might have simply hopped out resulting in a less effective capture method. Other preservatives are now used in pit fall traps but I did not investigate those as of yet.

I was very impressed by the number of butterflies I found in the Wildlife Sanctuary. I was able to collect eight different species of butterfly. I also observed 4 additional species that I just could not catch. So there are at least twelve different species of butterflies in the sanctuary and perhaps more. The different butterfly species is impressive to me for an area the size of the sanctuary. Also, one must consider that this is the number I observed this Spring; there are potentially many more that are either not common or perhaps only found in the Fall. I hope to keep an ongoing document of the species we observe. A sample of some of these butterflies is included (Figure 3)

The website that I created resulted in a total of 679 photographs of the insects, birds, mammals, and habitats within the wildlife sanctuary. I think the website will be the most valuable resource of this sabbatical project because it has the potential to influence the most number of individuals. As I had previously mentioned, about 10,000 people visit the sanctuary each year. This website will allow those people to review what they have learned and will allow others to have digital access to the sanctuary from outside. I am really looking forward to seeing the data on how often the sanctuary site is visited over the next several years.

The website address at the time of the conclusion of my sabbatical was instruction2.mtsac.edu/trevell/default3.html. I will be working with IT over the fall to transition the content of my webpages from a Lightroom and Dreamweaver format to that of Omniupdate. I verified the proposed movement and further development of the future Mt. SAC Wildlife Sanctuary Webpage with the members of

the Sabbatical and Leaves Committee. Sample photographs of the main page and other pages are shown (Figure 2).

Summary Statement & Value to College and Unit Member

College:

A common question I hear from students is, "what's in the sanctuary?" The insect collection and website developed during this sabbatical will help answer that question. The Wildlife Sanctuary is a tremendous resource for the college. It is utilized by thousands of Mt. SAC students, local school children, and faculty members every year. I hope that one huge benefit of my sabbatical to the college is that it advertises and showcases this incredible resource that we have that other community colleges do not. The sanctuary is definitely a college asset and should be thought of in that manner.

Fellow Colleagues: Many of our faculty, I believe, will find the information in this sabbatical to be very helpful. The website and insect collection will allow faculty to better identify species they find in the sanctuary. They will also be able to provide more information to the students about those species while teaching. I also hope it promotes new ideas and conversations from my department and other departments on how we can use this resource.

Personal (Unit Member):

I became interested in biology because I really love to be in the field studying nature. I love the discovery and exploration of what you will find if you travel a little further, stay a little later, or turn over a few more logs or rocks. This sabbatical project allowed me to spend a great deal of time exploring and learning about the nature that is in our sanctuary and that is fundamental for my teaching and well-being. Having the opportunity to be out in the sanctuary and focusing on my love of biology was very therapeutic! I felt a sense of "peace" that I have not experienced in many, many years.

But then things changed. On April 23, my father had a pretty severe stroke that landed him in ICU for 11 days and then in rehab for another 21 days. Being on sabbatical, I was able to bend my schedule and work on my laptop on this report, website design, photo editing, and writing in my field notebook in three different counties and at various times of the day. I was very fortunate to be doing this type of work at the time of my dad's stroke; if I were teaching, it would have been much, much more difficult to keep my life balanced so I am very thankful that I had the opportunity to help my family. Also, since I was around so many different health care workers, I would often engage them in conversation about their jobs and what

they liked and did not like. Being able to "shadow" these individuals was something I have always wanted to do so that I could better understand and evaluate the types of careers many of my students would like to go into. So it was a big learning experience for me as well (but I do say that with a great deal of reservation; I also was forced to learn about "life" in ways that I would rather not have had to learned about).

Although this was not at all an intended portion of my sabbatical, the information I learned "accidentally" will be useful in advising students so I include it hear. Also, since much of my report writing and webpage development was done in a hospital or stroke rehabilitation setting, I feel it is appropriate to comment on it.

Students:

I really spent a great deal of time thinking about how the students would use this site and I built and designed the pages and content around that. I decided to develop a mostly visual website so that the information could be easily accessed in the sanctuary using a cell phone or tablet. I believe the students will find this mode of access very useful and I am excited to see the data on website use over the next couple of years. I suspect students using the sanctuary will find this to be a very valuable resource. Of the three forms of benefit (Personal, College, and Student), I think the students will clearly benefit the most from this sabbatical project. I believe my students and the students of my colleagues will find the website and insect collection to be extremely valuable and relevant to their coursework.

Collective Benefit for the Unit Member, College, and Students:

At the time of the writing of this sabbatical report, a portion of the Mt. San Antonio College mission statements states "The College will carry out this commitment by providing an engaging and supportive teaching and learning environment for students of diverse origins, experiences, needs, abilities, and goals." Furthermore, "equity and diversity" are also listed as core values to the college.

As I worked on this sabbatical, I was often reminded of my ecological training and how "diversity = stability" in ecosystem ecology (Vogl, 1999 among many). Biological diversity has always been a foundation of my training and this was nothing new.

On April 23, as I mentioned, my father suffered from a pretty severe stroke. At that time, I was quickly thrown out of a world of "bliss" chasing butterflies and flying drones and into a world of pure chaos. I suddenly had a huge amount of learning to do. I needed to know about stroke patients, treatment options, and recovery methods. I needed to help navigate my parent's finances and the health care system and insurance providers. In all honesty, it was one of the worst times in my life.

But I was able to rely on the help of a diverse group of people. I met social workers and insurance representatives that were very helpful at answering questions. I met about twenty different doctors with diverse culture backgrounds as well as diverse medical training. My two adopted Korean sisters (who have always just been "my sisters" to me), instantly connected me to numerous doctors, nurses, speech therapists, occupational therapist, and physical therapist because they were all so curious about my multi-cultural family (at least a dozen people asked "was your dad married before?").

Also, we had tremendous help from our "extended" family; My mom use to babysit a family of three children (among many others over the years) that we have known since they were born. They are all grown now and work for legal firms that were able to help us secure power of attorney so that we could protect my parents assets.

As I began to conclude my sabbatical and reflect on everything that had happened, I started realizing that the importance of "biodiversity" can be extended to the term "diversity" as well. I began to realize that most of the time, diversity is applied in a social context because it is politically or morally popular (or unpopular, I suppose, depending on your view point). Personally, however, I now realize that "diversity" is important for the same reason that biodiversity is important: diversity = stability. Ecosystems, like life, are quite often complex and it is the interactions of the diverse components (whether they be insects, trees, or social workers) that will maintain stability when things go wrong or break (like your father having a massive stroke). If we approach our "diversity" in life with this scientific understanding, it is very, very difficult to argue that it is based on "opinion". When we examine diversity scientifically, we should be able to actually measure this outcome. Personally, I found this new revelation to be extremely beneficial to the "Unit Member" (Me). And I hope this understanding will help both the college and our students.

Constraints:

Weather is always a factor in field studies. In this case, high winds often made aerial photography difficult. Also, I had big plans for creating a time-lapse video of the stream during a massive El Nino storm; but the big rains never came!

Equipment failure is also a major downside of research that I had forgotten about. The two drones I used for taking aerial photos and making maps of the sanctuary both malfunctioned and eventually completely broke. Probably due to pilot (me!) error but still frustrating nonetheless. My Phantom 1 crashed into a tall pine tree. My Phantom 3 worked very well for most of the sabbatical but it completely shut down on May 28th at a height of about 20m and crashed on to the remote parking lot behind the hill and busted into several pieces. It was fun while it lasted.

Computer programs also make life difficult every now and then. I was very wise in listening to Jeff George from IT who was extremely helpful in helping me think of an overall organization plan. I also continually backed up my work on a separate drive which was helpful. However, during a single day or editing session, programs would shut down and I occasionally lose an hour or two of work. On June 2, for example, I had spent an hour working on editing my Dreamweaver code when the program just shut down unexpectedly.

The lighting in much of the sanctuary is quite beautiful as it is filtered through the trees in the early morning and late afternoon and evening. However, this creates for some challenging photography; particularly with my larger telephoto lenses. I found my Canon 40D to be almost useless for photographing beneath the trees with a large lens. My 6D handled much better but it had autofocus issues. My new 5D Mark III, however, appears to be practically perfect (but I did not get this camera until about 2/3 of the way through my project.

In many parts of the sanctuary (such as parts of the Mt. SAC hill and the lowest portion of snow creek on the campus property), the terrain is quite rough. It often has steep slopes, loose terrain, and dense brush. When caring a butterfly net and camera equipment you are setting yourself up for disaster. I fell 7 times during this sabbatical (I did keep track and I counted a true "fall" as either my back or chest coming into reasonably hard contact with the substrate). Overall, the hiking and exploring in the sanctuary was pure fun. I should note that the Sanctuary is extremely safe! I never fell when sticking to the well-maintained trails (which is what we do with our students). My falls were all related to climbing, swinging, or jumping off a trail or log while carrying equipment, and trying to take a picture or catch an insect. Falling was completely a "user error"!

Focusing on a particular goal or accomplishment for the day was also something I struggled with. I would plan to focus on taking pictures of plants, for example, and I would set out with a very clear plan and I would have an idea of what I could get done in one day. Occasionally I would end up chasing a Mourning Cloak or Cloudless Sulfur Butterfly for 2 or 3 hours and loose track of time. So I found myself "off target" because I was distracted by something kind of rare or amazing. Sometime that worked well, but usually I ended up wasting time that could have been more effectively managed. That being said, having a clearly defined sabbatical project helped me get back on track.

Collecting challenges: My original thought was to just focus on one taxa (for example, beetles) and collect as many of those as possible. Instead, many colleagues suggested I focus on a "general" website of common plants and animals. This was wise advice and it helped create a much more useful product. I focused on collecting a diverse set of specimens that I thought students were most likely to see. Butterflies and Dragonflies, for example, are often quite obvious to students so I really attempted and spent a great deal of time collecting specimens like that. I could have 5,000 ants in about 15 minutes, but most of our students really only need to see one ant. So I sacrificed quantity for quality. This is not a typical way of thinking for a field biologist so it took a decent amount of discipline to stay on that path.

I discovered that insects that are the most conspicuous are also the hardest to catch. Many of the butterflies and dragonflies that are easy to see are quite difficult to actually capture for an insect collection. When I began, I felt bad collecting and killing butterflies. After many hours of attempting the process, however, I came to realize that the butterflies are deceptively agile. Most were very difficult to catch. One butterfly in particular, the beautiful Cloudless Sulfur, was so wary that I never got closer than 10 feet to it before it flew off. Needless to say, my collection does not contain a Cloudless Sulfur (yet).

New laws have been developed that make basic scientific field research more and more difficult to do in the State of California. When I began doing field research in the 1990's, it was commonly known that you might need a fishing license or to fill out a simple form and mail it in with a $20 fee. However, according to the California Department of Fish and Wildlife, insect collecting for this project (even on our own campus), required quite an extensive permit. Thankfully, I started the process early because it took me almost 8 months to get my scientifically collecting permit and it cost approximately $350. A copy of the permit is included in my final report.

Towards the end of my Sabbatical, I had the idea of making a map from the Drone photographs I had taken. I underestimated how difficult that was going to be. Due to flying at different heights and different levels of light and different

levels of curvature of the earth at different heights, it was very difficult to compile one nice detailed picture. I will be working with Jeff George soon to figure how to solve this problem. Since the map was an "add on", it is not really critical to my sabbatical mission to finish. It is just an extra item that I was hoping to add but was not able to.

Words of Wisdom & Advice

The Sabbatical Leaves Committee, at the time I had completed this sabbatical, had just recently updated their application form. The form is very informative, clear, thorough, yet concise. Following the directions carefully might make more work during the application process, but it helps clearly develop your sabbatical so that you are able to complete a final project in a timely manner. In particular, I found it very helpful to submit early drafts of my application for input from the panel. Emily Woolery, from Library Sciences, was extremely helpful and thorough and helped to make my final draft much more clear.

Also, I think it is wise to get advice from your department. I have a large department (Biology) and I was able to get a great deal of feedback from them on what would be useful to our group as a whole. In particular, Sherry Schmidt was very helpful in designing a project that would be of use to our students and faculty.

Finally, certain areas of my project involved using equipment and programs that I only occasionally use. I found it very helpful to consult with IT and web designers before I began starting my project. In particular, Jeff George from IT web design gave me great advice on how to organize and develop my webpages and data files. That was a tremendous asset moving forward.

Acknowledgements

First, I would like to think the Board of Trustees and administrators of Mt San Antonio College who ultimately approved by sabbatical. I would also like thank the Salary and Leaves Committee who obviously spent a great deal of time developing the new application and process that makes the sabbatical experience a beneficial tool to both the college and professors of Mt. SAC. In particular, I would like to thank Emily Woolery for her thoroughness and meticulousness in reading and providing feedback on my proposal as well as answering questions throughout the process. She was a huge help.

I would also like to thank the Mt. SAC Biology department for there support. In particular, Craig Petersen, Sherry Schmidt, Karyn Kakiba, Mark Cooper, Cindy Shannon, Chris Briggs, and Deidre Vail. They were very helpful at suggesting how to structure the biological research portions of this sabbatical.

Also, I found many Mt. SAC employees to be huge assets as I developed my project. In particular, Jeff George provided a tremendous amount of help with suggesting methods of organizing my photographs and developing my webpages in a way that would be useful down the road. Also, Dave Lannom (my botany hero!) was always providing me input on plant identification; I will miss him dearly. I would also like to think Karelyn Hoover, Associate Dean of Natural Sciences; our many conversations ultimately lead to my deeper thinking on the topic of "diversity"

Last but not least, I would like to thank my family. My wife Mandy and my two sons (Noah and Evan) who always supported me. In particular, my youngest son Evan (only 6 years old at the time) accompanied me on many of my field days and took many of the photographs in which I am portrayed. He was also the main "pilot" for the Phantom 3 drone photos and videos seen throughout my websites.

Sources for Specimen Identification

Belzer, T. 1984. *Roadside Plants of Southern California.* Mountain Press Publishing Company. Missoula, MO. 157 pages.

Bryant, P.J. Arthropods (Insects, Spiders, Crustaceans and their Relatives). Website: http://nathistoc.bio.uci.edu/Arthropods.htm

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Hogue, C. and J. Hogue. 2015. *Insects of the Los Angeles Basin. 3rd Edition.* Natural History Museum of Los Angeles County. Los Angeles, CA. 474 pages.

Tekiela, S. 2003. *Birds of California.* Adventure Publishing. Cambridge, MN. 411 pages.

Vogl, R. 1999. An Ecological Premier. Pyro Unlimited. Cypress, CA. 204 pages.

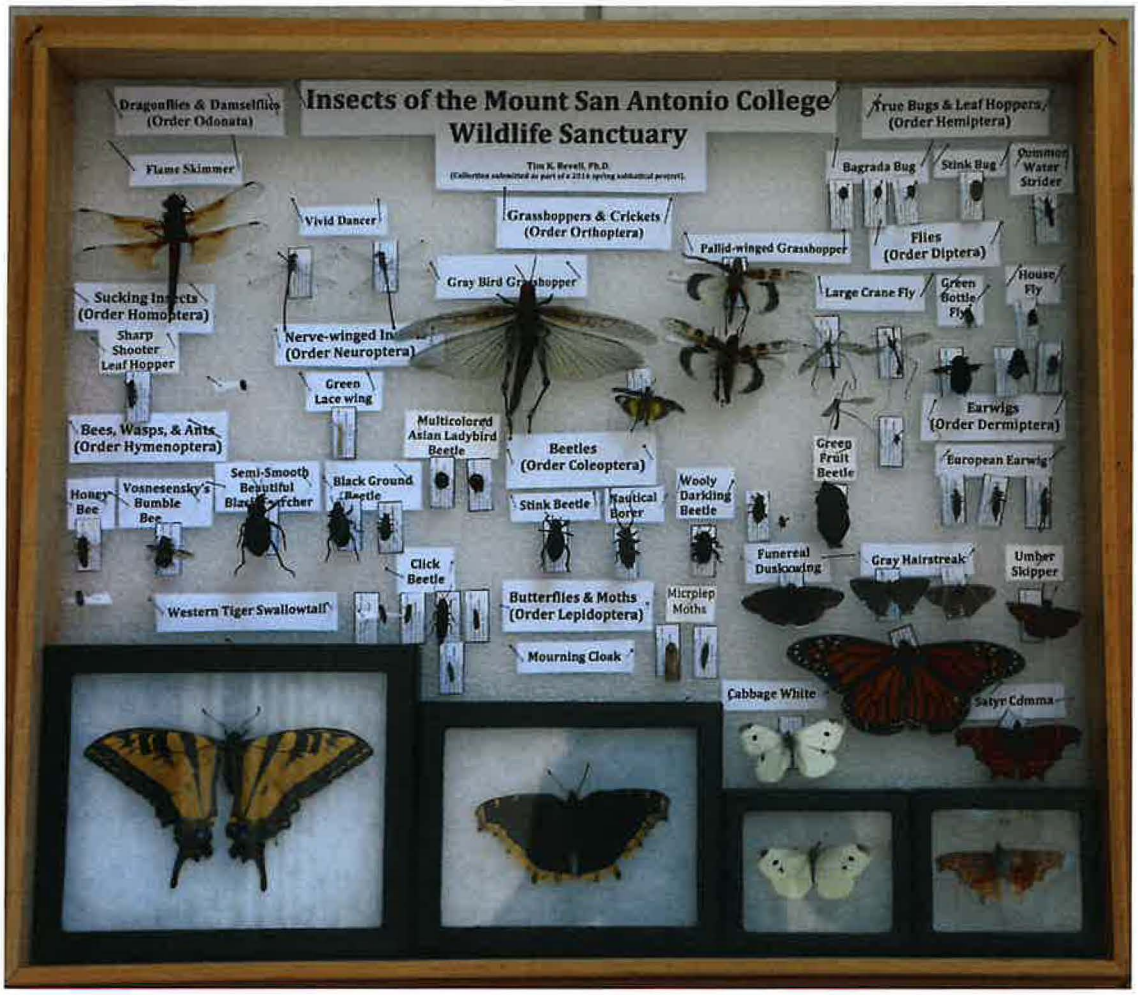

Figure 1 – Insect collection of fifty-five (55) insects collected and pinned as part of this sabbatical project completed in Spring 2016.

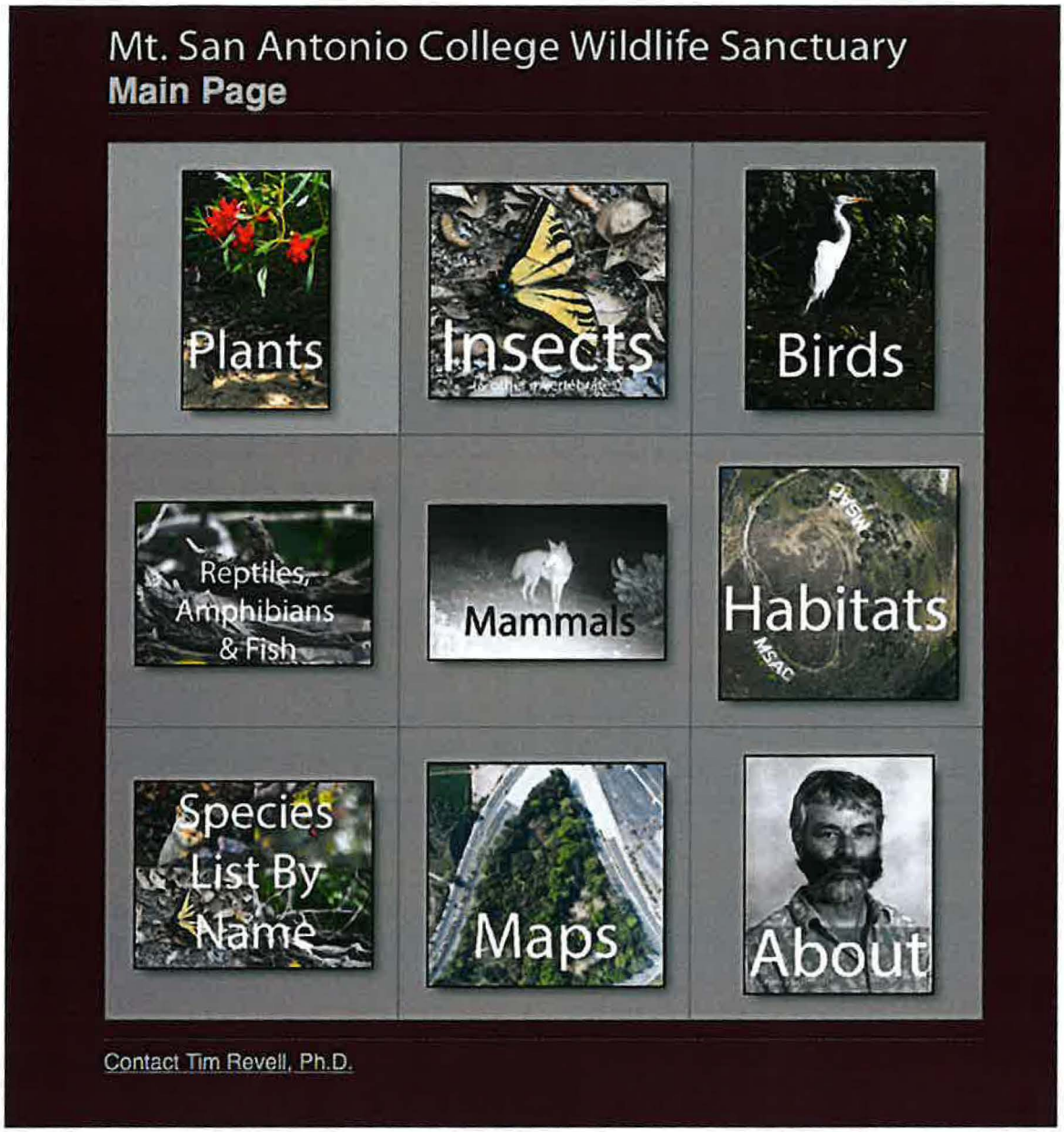

Figure 2 – The Mount San Antonio College Wildlife Sanctuary Main Page. This page is currently located at instruction2.mtsac.edu/trevell/default3.html

Figure 3. Photograph of California Gray Hairstreak taken in April near Petersen Amphitheater.

Figure 4. Photograph of Mourning Cloak taken in May near south portion of the stream.

Figure 5. Photograph of Western Tiger Swallowtail butterfly. Photograph was taken in February near Gate 3.

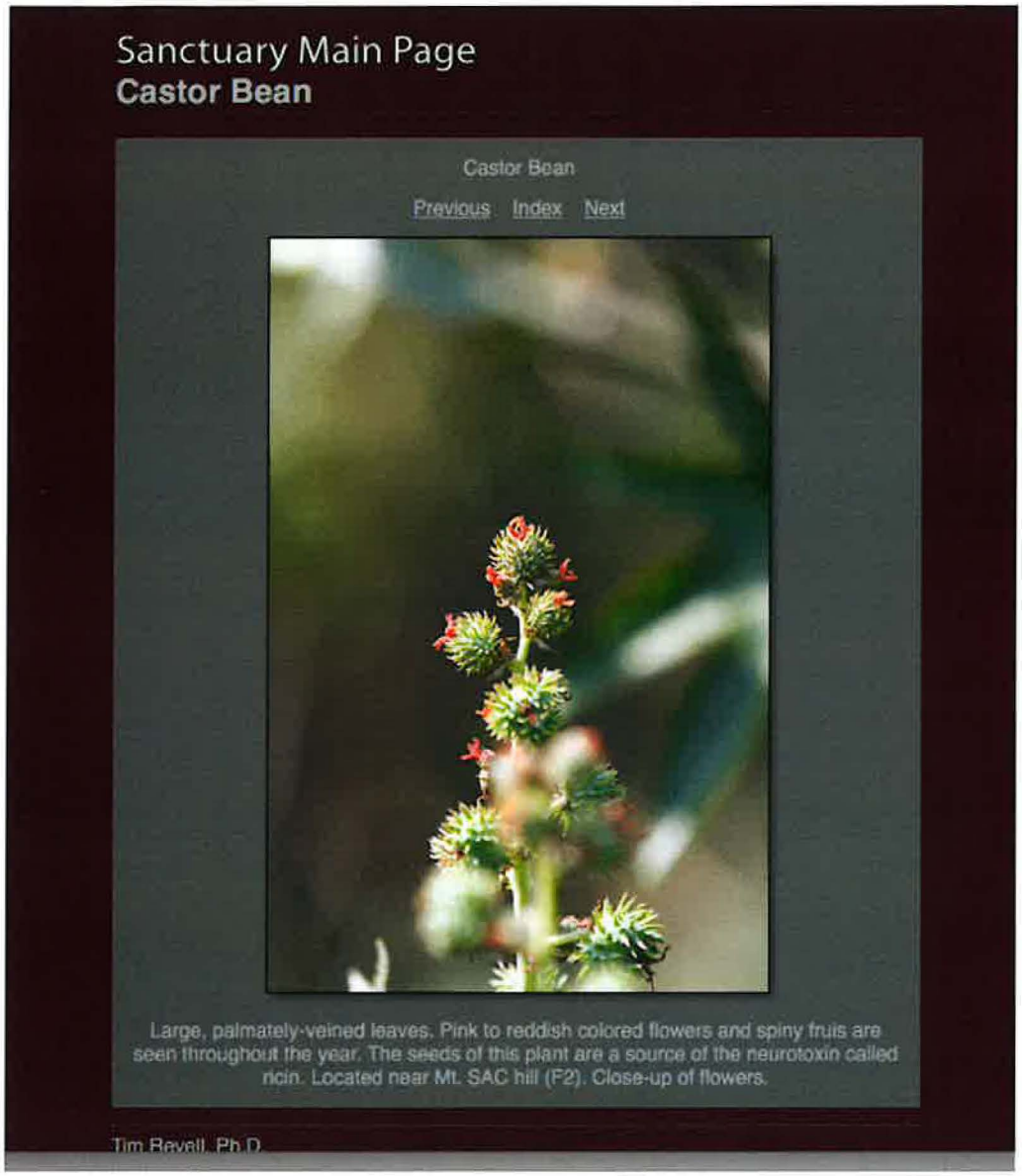

Figure 6 – Sample photograph and webpage material from the plant Castor Bean.

Figure 7 – Sample webpage of Mt. SAC hill taken using a phantom 3 drone.

Please note, the narrative journal (field notebook in this case) and the insect collection for this project were placed in the Mt. San Antonio College Museum on September 1, 2016. The website can be located at instruction2.mtsac.edu/trevell/default3.html.

MT. SAC
Mt. San Antonio College

SALARY AND LEAVES COMMITTEE 2014-15

APPLICATION FOR SABBATICAL LEAVE

Name of Applicant: Tim K. Revell Date: 11-7-14

Department: Biology Division: Natural Sciences

Email: trevell@mtsac.edu Ext.: 4231 Phone (cell/home): 909-631-7172

Address: 1720 Harbor Way

City: Seal Beach, CA Zip: 90740

Dates of Adjunct Employment at Mt. SAC: Overload Accumulated LHE: 100% banked

Dates of Full Time Employment at Mt. SAC: 8/1999 Dates of last sabbatical: From None To

Any Previous Sabbatical Leave(s)? No/Yes If yes, dates: From NO To

Previous Leave(s) of Absence or breaks in service in the past 10 years?

Yes/No Dates: Paid? Yes/No

Length of sabbatical leave requested:

10 Month: One semester ☑ Two semesters ☐ **11/12 Month:** Half Year ☐ Full Year ☐

Effective dates for proposed sabbatical leave:

10 Month: Fall (year) Spring (year)

11/12 Month: Start Date End Date

☐ Formal Study ☑ Independent Study ☐ Work Experience

☐ Combination (specify)

I plan to use banked leave to supplement my sabbatical leave. ☐ No ☑ Yes*

*(*If yes, you must submit a separate "Use Banked Leave" form to your Division office, be approved by your Dean, and received by Human Resources by the third week of the semester preceding your leave.)*

ATTACHMENTS NEEDED

- ☑ A THREE TO FOUR SENTENCE ABSTRACT OF YOUR PLAN FOR PREPARATION OF THE BOARD OF TRUSTEES AGENDA.
- ☑ A COMPREHENSIVE, WRITTEN STATEMENT OF THE PROPOSED SABBATICAL ACTIVITY(IES) INCLUDING:
  - DESCRIPTION OF THE NATURE OF THE ACTIVITY(IES)
  - TIMELINE OF THE ACTIVITY(IES)
  - PROPOSED RESEARCH DESIGN AND METHOD(S) OF INVESTIGATION, IF APPLICABLE
- ☑ A STATEMENT OF THE ANTICIPATED VALUE AND BENEFIT OF THE PROPOSED SABBATICAL ACTIVITY(IES) TO THE APPLICANT, HIS/HER DEPARTMENT OR SERVICE AREA, AND THE COLLEGE.
- ☑ LETTERS OF RECOMMENDATION (ENCOURAGED).
- ☑ ACADEMIC REFERENCE LIST

Any change or modification of the proposed sabbatical activity(ies) as evaluated and approved by the Salary and Leaves Committee must be submitted (in writing) to the Committee for reconsideration.

Applicant's Signature: Tim Revell Date: 27 November 2014

Applicant: Tim K. Revell

ACKNOWLEDGMENT BY THE DEPARTMENT/DIVISION

- The acknowledgment signatures reflect awareness of the sabbatical plan for the purpose of personnel replacement.
- Department chairs and appropriate administrators are required to submit a statement regarding the value of the sabbatical plan to the College, division/department, and individual, directly to the Office of Instruction.
- Applicants must obtain the signatures of acknowledgment prior to submitting application to the Salary and Leaves committee.

Department Chairperson:

Name: David Mirman Signature: [signature] Date: 11-19-14

☑ I certify that this leave will not be detrimental to the department. (16.K.7)

Division Dean:

Name: Kaalyn Hvamy Signature: [signature] Date: 11/19/2014

☑ I certify that this leave will not be detrimental to the department. (16.K.7)

ACKNOWLEDGMENT OF THE APPROPRIATE VICE PRESIDENT (INSTRUCTION OR STUDENT SERVICES)

Signature: _____ Date: _____

Received in Instruction by: _____ Date: _____

APPLICATION FOR SABBATICAL LEAVE – CONT'D

Applicant: Tom Revell

For Salary and Leaves Committee use:

	Date:	By:
Received by Office of Instruction		

Application - Complete/Incomplete? ☐ Complete ☐ Incomplete
(If Incomplete applicant is given 5 working days to resubmit)

Date returned to applicant: _____

Due date for resubmission: _____

Date resubmission received: _____

	Date:	By:
Complete application sent to individual Committee Members for review:		

Reviewed by Committee as a whole:

Action:

☐ Acceptable

☐ Conditionally Acceptable with Additional Information

- Additional information requested. Due back by: _____

☐ Not acceptable – Not recommended to the Board of Trustees

Review of Conditionally Accepted Applications:

☐ Acceptable

☐ Not Acceptable – Not recommended to the Board of Trustees

Recommendation:

☐ Recommended to Board of Trustees

Ranked as # _____ of _____ (# of applications)

Notification:	Date:	By:
☐ Applicant notified of Committee Action		
☐ Applicant notified of Board of Trustees Action		

Signature: _____ Date: _____

Chairperson, Salary and Leaves Committee

MT. SAC
Mt. San Antonio College

SALARY AND LEAVES COMMITTEE 2014-15

PROCEDURES FOR PROCESSING SABBATICAL LEAVE APPLICATIONS

(Please refer to the attached calendar for the detailed timeline)

1. All applications will be reviewed for completeness by the Office of Instruction. If an application is determined to be incomplete (required components not included with the proposal), the applicant shall be notified and will have an additional five (5) working days to submit any additionally requested information.
2. Complete applications are copied and distributed to all Committee members.
3. Committee members review and rate each complete application according to the appropriate criteria.
4. Committee members turn in a copy of the rating sheets for each applicant to the Committee chair for tabulation on the Summary Rating Sheets. Copies are to be returned to Committee members after tabulation. Chair provides each Committee member with a copy of the tabulated data on the Summary Rating Sheets. All rating sheets are confidential.
5. The Committee meets and confidentially discusses differences or variations in individual Committee member ratings, and each Committee member makes changes in his/her ratings, as deemed necessary.
6. The Committee identifies applications that are acceptable and those that are unacceptable.
7. Committee members shall rank only those proposals determined to be acceptable.
8. A confidential copy of the Summary Rating Sheets and the Summary Ranking Sheet will be placed on file in the Office of the Vice President of Instruction.
9. A list of acceptable applications, in ranked order, will be forwarded to the Board of Trustees.
10. The Committee shall send written notification to all applicants regarding the committee's recommendations.
11. The Board of Trustees shall take action on the ranked list of acceptable applications for sabbatical leaves no later than the second regular Board meeting following the submission of the list.
12. The Committee shall send written notification to each applicant regarding the action taken by the Board of Trustees.
13. The Committee takes necessary action for any changes in granted sabbaticals, i.e., cancellations, time or proposed activity changes, etc., with any substitutions to be made only before commencement of the leave period.
14. If coursework taken during the sabbatical leave will be used for salary schedule advancement, a Petition for Course Approval for all coursework must be submitted to the Salary and Leaves Committee in addition to the sabbatical leave application.

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SALARY AND LEAVES COMMITTEE 2014-15

SABBATICAL LEAVE APPLICATION RATING SHEET

Name of Applicant: Tim Revell Date: _____

Employment Date: _____ # Previous Sabbaticals: _____

Rating Criteria:	Rating: (1 – 10)		Weight Factor		Total
1. Merit and value of the proposed activity to the instructional program or service areas of the College		X	4.0	=	
2. Merit and value of the proposed activity to the applicant's professional growth and enrichment		X	4.0	=	
3. Statement from division dean, department chairperson or associate dean, and/or colleagues		X	3.0	=	
4. Evidence of planning, preparation, and clarity in the proposal		X	4.0	=	
5. Appropriateness of time requested		X	2.0	=	
6. Recency of last sabbatical leave (1 point for each year since last leave)		X	1.0	=	
7. Number of years of service to the College as an academic employee (1 point for each year beyond the 7 year requirement)		X	1.0	=	
8. Number of previous sabbatical leaves (10 points – deduct 1.5 points for each previous semester of leave)		X	1.0	=	
				TOTAL POINTS:	

Directions to Committee member:

- Points shall not be rounded off.
- Regarding criteria 6:
  The equivalence of seven (7) full-time consecutive years of service may be accumulated by summing consecutive years of part-time (30 LHE is equivalent to 1 year) with full-time assignments, if any.
- Regarding criteria 6, 7 & 8:
  The Office of Instruction will predetermine this information.

Committee Member: _____ Date: _____

SALARY AND LEAVES COMMITTEE 2014-15

SAMPLE SABBATICAL LEAVE OF ABSENCE AGREEMENT

(To be compiled by Human Resources and sent to applicant after approval of Sabbatical Leave)

This is an agreement between the Mt. San Antonio Community College District (hereinafter referred to as District) and Tim Revell (hereinafter referred to as Employee).

The District and Employee agree as follows:

1. Employee occupies a position requiring certification qualifications.
2. Employee has rendered not less than seven (7) consecutive years of service to the District immediately preceding the granting of the sabbatical leave of absence. _____
3. Employee has made application for a: ☐ Formal study ☐ Independent study ☐ Work Experience ☐ Combination sabbatical leave of absence.
4. Such leave to take place from _____ to _____. **SABBATICAL CREDIT WILL BE GIVEN ONLY FOR WORK DURING PRIMARY TERMS.**
5. The provisions of Education Code Sections 87767 through 87775 govern the sabbatical leave of absence.
6. The District shall pay Employee **80% of the employee's current salary** for the period of the leave of absence to be paid in equal monthly payments in the same manner as regular instructors are paid.
7. Employee plans to use banked leave to supplement my sabbatical leave. ☐ No ☐ Yes

   (Note: If yes, a separate "Use Banked Leave" form must be submitted to your Division office, be approved and received by Human Resources by the third week of the semester preceding your leave.)
8. Employee shall render at least _____ years of service therein, equal to twice the length of the sabbatical leave, following Employee's return from leave.
9. The District waives all requirements of furnishing a bond.
10. Employee shall perform service of a professional nature as delineated in the employee's sabbatical leave application as approved.
11. Upon return from the leave, employee shall submit, through the Salary and Leaves Committee, evidence in the form of a written report satisfactory to the Board of Trustees that such service was performed as agreed. This report is due the first working day of the second academic month of the term following the sabbatical leave.
12. Employee shall make no change in the approved sabbatical plan without advance approval of the Salary and Leaves Committee.
13. Employee agrees failure to return to duty or failure to submit a written report satisfactory to the Board of Trustees shall require the employee to reimburse the Mt. San Antonio Community College District any and all monies paid while on sabbatical leave.

Mt. San Antonio CCD

_____ By: _____

Employee's Signature Date Date

Vice President of Instruction

MT. SAC
Mt. San Antonio College

SALARY AND LEAVES COMMITTEE
2014-15

COMMITTEE MEMBERS CHECKLIST FOR REVIEWING SABBATICAL LEAVE REPORTS

Sabbatical Recipient: Tim Revell Date Received: _____

Rating:
1 – Exceeds the Standard
2 – Meets the standard
3 – Improvement Recommended
4 – Does not meet the standard
5 – Not applicable/Insufficient data

	1	2	3	4	5	
A.						Abstract of Sabbatical Project for Board Report
B.						Statement of purpose
C.						Table of contents (headings, listing, data, illustrations, etc.)
D.						Presentation of Sabbatical project
*E.						Detailed list, narrative (journal) of activities
**F.						Summary statement includes value to the College and unit member
G.						Contains pertinent appendices
H.						Footnotes (if applicable)
I.						Quality typed
J.						Submitted by deadline date
K.						Two copies received, 3-hole punched

	1	2	3	4	5	
L.						Comprehensiveness
M.						Examples of pertinent materials
N.						Clear description of research design and methods of investigation (if applicable)
O.						Verification of course work units completed
P.						Substantiates conclusions, cites research or other sources of data
Q.						Distinguishes between personal opinion, empirical results, research, theory
R.						Uses scholarly approach with attention to detail
S.						Pages numbered consecutively
T.						Copy of sabbatical application proposal

Notes:

* The narrative (journal) of activities describes the development and completion of your formal study, independent project, or work experience accounts for how you have spent the contracted time during your sabbatical. While not a personal essay, it fleshes out your time line with details from your actual experience. It is wise to write the report as you are working on specific parts of your study, project, or experience or, at minimum, to take very specific notes of your activities in order to write the report later.

** The summary statement explains how your insights came together and/or were modified in the course of your sabbatical work. It explains the Sabbatical Project's benefits to the College, yourself and your students.

Comments by Committee Member:

Recommendations by Committee Member:

☐ Accept as submitted ☐ Accept with modifications noted ☐ Not acceptable (Needs full Committee review)

_____ _____

Signature of Committee Member Date

Vice President of Instruction

SALARY AND LEAVES COMMITTEE 2014-15

APPLICATION TO USE BANKED OVERLOAD HOURS

Faculty Name: Tim Revell Date: Nov 27, 2014

A#: _____ Department: Biology

☐ **REQUEST FOR LEAVE OF ABSENCE**

(Must be received in HR by Monday of 3rd week of semester preceding the semester of leave.)

➔ **Pending the approval of my request to take a sabbatical leave**
I request to take Banked Leave for the following: Session ☐ Fall ☒ Spring Year 2016 #LHE 3

I certify that I have banked enough time to qualify for leave as requested.

Faculty Signature: Tim Revell Date: November 27, 2014

ADMINISTRATION APPROVAL:

☐ I certify that this leave will not be detrimental to the department.

Leave approved:

Dean: _____ ☐ Approved ☐ Denied **Date:** _____

Vice President: _____ ☐ Approved ☐ Denied **Date:** _____

[Forward signed form to Human Resources]

Board of Trustees: ☐ Approved ☐ Denied **Date:** _____

Human Resources Certification:

Current banked hours: **Approved LHE to use:** **Banked LHE Balance:**

☐ **REQUEST FOR PAY FOR BANKED HOURS**

I am separating from Mt. San Antonio College due to: ☐ Resignation ☐ Retirement

I wish to be paid for banked hours as indicated below at the part-time rate in effect at the time of separation from the District. (See Banking Leave section in current contract.)

Human Resources Certification:

Banked hours: _____ **LHE** **X** $ _____ **Current Rate** = $ _____ **Total**

Faculty Signature: _____ Date: _____

☐ Human Resources ☐ Division Dean
☐ Payroll ☐ Employee

Sabbatical Proposal
Spring 2016
Tim K. Revell, Ph.D.

Abstract - The Wildlife Sanctuary is one of the most useful and unique resources at Mt. San Antonio College. This resource has been utilized by thousands of people over the years, yet our knowledge of what is actually in the sanctuary is quite limited. This sabbatical will serve as a type of "appraisal" for the biodiversity within the sanctuary and will help us make better use of this incredible and unique resource. This project will result in the production of a field notebook, a new website of some of the common animals and plants found within the Wildlife Sanctuary, and a collection of some of the common insects found in the sanctuary.

Introduction

When I arrived on campus almost 16 years ago, I was perhaps most amazed by the Mt. San Antonio College Wildlife Sanctuary. This 25-acre wildlife preserve, located on the southwest corner of the college, continues to be one of my favorite spots on campus.

The Wildlife Sanctuary is filled with an incredible array of plants, frogs, birds, insects, and microbes. The Sanctuary is part of the curriculum for approximately half of the class sections we teach in the biology department. Personally, I use the Wildlife Sanctuary for all of the classes I currently teach during the regular year. In addition to being used by a wide range of Mt. SAC classes both in and outside of our department, it also has become a popular field trip destination for many of the local school programs in conjunction with the Orange County Department of Education's "Inside the Outdoors" program. The number of people visiting the wildlife sanctuary has grown tremendously over the years. Currently, an estimated 10,000 people visit the sanctuary every year (Petersen, pers. Comm.). The wildlife sanctuary's current director, Craig Petersen (pers. comm.), estimates that approximately 250,000 people have toured the sanctuary since it's opening in 1965.

One question that I am often asked of students, family, and friends, is "What's in the Wildlife Sanctuary"? Although we know many of the plant species and some of the more common animals we see, there has never been a biological survey conducted to answer that very important question. Measuring biodiversity requires a tremendous amount of time and resources but it can reveal a wealth of knowledge about an ecosystem. The sabbatical I am proposing will give us great insight about the biodiversity we have in our sanctuary at Mt. SAC.

Current estimates suggest that there are approximately 10 million species on the planet (Schmidt *et. al.* 2014; Johnson 2013; Wilson 2000). Based on my sixteen years of experience leading fieldtrips throughout the sanctuary and my previous research on desert insects (Revell 1998), I estimate that the number of species in an

area with the size and diversity of the sanctuary could easily be in the tens of thousands. Several similar studies on insects in varying habitats have yielded comparable numbers of organisms (Khadijah 2013; Fonesca 2009; McCullough 1998; Longcore 1999).

A complete biodiversity survey of all of the organisms in the Wildlife Sanctuary would takes dozens of scientists and staff and many years of full-time work. The magnitude of a project like that would be too large for a single sabbatical. Therefore, the focus for this sabbatical project will be to create resources that can be used by students, faculty, and the community to learn about some of the common plants and animals within the sanctuary. The project will result in the following: 1) A field notebook recording the date and times of observations throughout the sabbatical period, 2) An insect collection showcasing some of the common insects within the sanctuary (particularly beetles), and 3) A new website with photographs of some of the common plants and animals within the sanctuary[1].

Merit of Sabbatical to Instructional Programs & College

The Wildlife Sanctuary is a resource utilized by a wide range of groups including biology classes, elementary school field trips, scouts and campus clubs. As of now, this incredible "resource" has not been formally evaluated. This sabbatical will serve as a type of "appraisal" of the Sanctuary. The project and its results can be shared among the faculty and community to demonstrate the incredible diversity and value of the Wildlife Sanctuary to the college. The website in particular can be used by faculty, students, Inside the Outdoors, and other community members interested in learning about the biodiversity in our Wildlife Sanctuary.

Also, as the current Bio 1 coordinator, we often hire new part-time professors that need significant training in how to find and identify common plants and animals within the sanctuary. The field notebook, insect collection, and website, I believe, will be extremely helpful as part of this training procedure.

1 – A sanctuary website already exists but the information is very incomplete and outdated. Although many of the photos and insects will be collected during the sabbatical period, insects and photos taken at other times of the year may be used.

This sabbatical project can specifically be used to teach or reinforce concepts students learn in the following courses:

Course	Approximate # of students/year	Name of Lab
Biology 2 Lab	220	Lab #5 (Wildlife Sanctuary Plant Taxonomy)
Biology 4 Lab	260	Lab #11(Ecology – Plant transects), Lab #15 (Ecosystems)
Botany Lab	24	Approximately 4 labs per semester.

Merit and Value to Professional Growth and Enrichment.

Nearly every class I teach involves one or more visits to the sanctuary. The proposed sabbatical will enhance my knowledge of what exists in the sanctuary and will increase my ability to find, identify, and teach students about the biodiversity in the Wildlife Sanctuary. As previously mentioned, field trips to the Wildlife Sanctuary and the identification of plants and animals are an integral part of the curriculum of the courses I teach. I believe this sabbatical will strengthen my ability to do this portion of my job.

Also, pinning insects and designing and building websites are skills that I seldom practice. I have taken introductory courses in these subjects, but I expect a tremendous amount of personal growth and enrichment in these areas that will hopefully be applicable to other academic projects in the future.

Methods

Many methods can be used to sample wildlife. In a previous study I conducted in desert ecosystem, I found that direct observation, pit fall traps* and bush-beating* resulted in the largest collection of organisms (Revell 1998). Other studies have found these effective as well (Helden *et. al.* 2012; Marshall *et. al.* 1994). For this study, I will use direct observation, pit-fall traps, and bush beating, for samples. Other methods, such as black lighting*, mercury vapor lighting*, and bush sweeping* have also proven effective (Sobek *et. al.* 2009) and may also be used if time permits. Specimens will be identified either in the field or back in the laboratory. Plants and most animals will be identified to common name. Insects will be classified to the level of order* or family* according to Triplehorn *et. al.* 2007.

(*please read the glossary section for explanation of techniques and terms)

A grid will be established to determine the location of each pitfall trap within the sanctuary. A total of 25 pitfall traps will be placed approximately 100m from the next (Figure 1). In cases where traps cannot be placed (ie, within the swamp or at the root base of a large tree), the trap will be placed at the nearest possible location. Traps will be left opened over night and will be checked the following day. At that time, all of the specimens will either be released or placed in a zip lock bag and frozen for later identification. Vertebrate species (such as mice and lizards) will be noted but will be released.

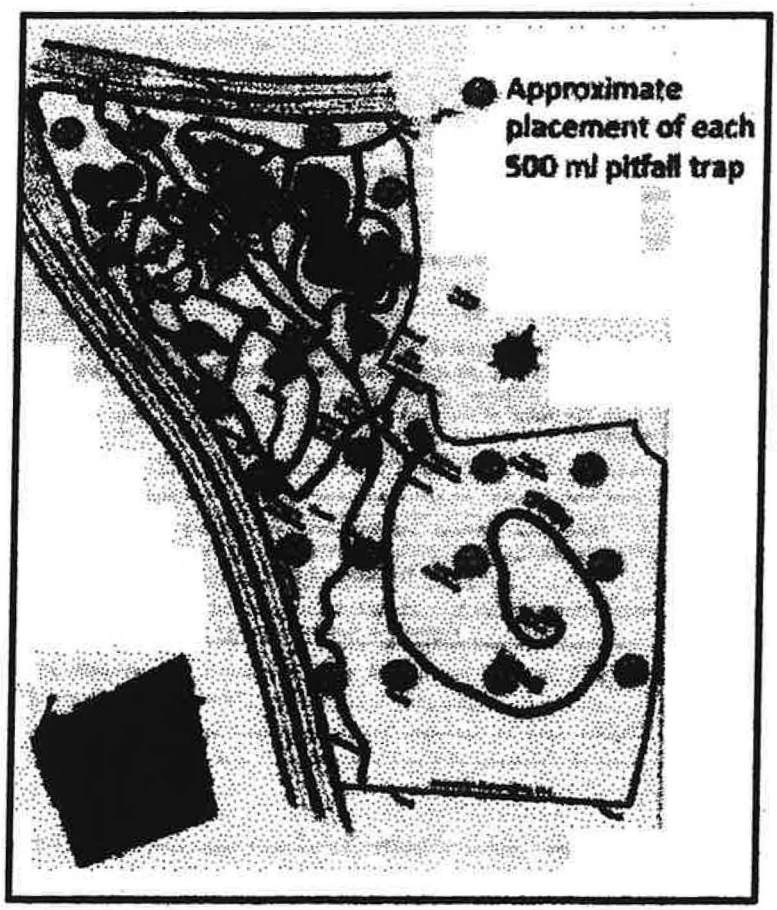

Figure 1. – Approximate placement of pitfall traps within the wildlife sanctuary.

Direct Observation – While setting up and collecting specimens from the pitfall traps and bush beating, I will make note and take pictures of some of the common plants and animals seen within the sanctuary. These observations will be recorded in a standard field notebook which will include the location, the date, the time and the

specimens observed. The field notebook will serve as my journal for the sabbatical and will be submitted to the Salary and Leaves Committee upon completion of the project.

Identification – Most animals and plants will be identified by common name using common field guides (Triplehorn *et. al* 2007; White 1983). For this particular sabbatical, I will focus my efforts on the collection and identification of insects because they are generally indicators of high biodiversity (Triplehorn *et al.* 2007). Other species may be collected and noted throughout the study but their identification may or may not be determined.

Once samples are collected in zip lock bags and frozen, I will then go through each bag and identify the type and number of specimens. This will primarily be done using a dissection microscope. Insects will be classified down to the level of order* if possible. Specimens will be preserved in jars and several will be "pinned"* so that they can become part of the Mt. San Antonio College Museum collection.

Frequency - Sampling will be done at least two different times (once in February and once in March). The time in between sampling will be used to identify and categorize the various specimens collected. The majority of time will be spent identifying insects under the microscope, pinning specimens, and developing a new website. I conducted a similar study for my master's degree and going through each sample could take anywhere from 2-3 weeks assuming a 40 hour work week[2]

Project Final

At the end of the project, three specific items (as well as a final report) will be produced:

1) A field notebook documenting the date, time, and observations made will be turned in with my final project. With permission of the salary and leaves committee, this field notebook will be ultimately housed in the Mt. San Antonio College Museum (currently in building 7-1212) and can be used as a reference by faculty and students.

2 – Although the methodologies of collecting and identifying insects are similar to my graduate work, this study is significantly different in that involves different habitats, plants and animals than my previous research.

2) A sample of some of the common insects found within the sanctuary will be created. These specimens will be pinned* and identified to the order* in which they belong (Figure 2). Specimens in the collection may be collected during the sabbatical or at various other times throughout the year. A minimum of 25 insects will be pinned and identified. This insect collection will be housed in the Mt. San Antonio College Museum (located in building 7-1212).

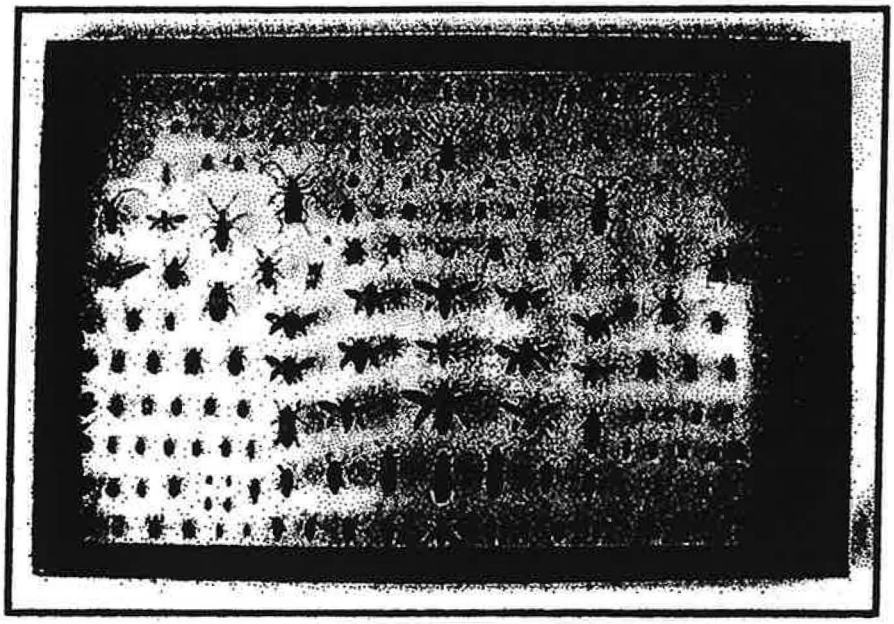

Figure 2 – Example of an insect collection. A similar collection will be made from a sample of those collected from this sabbatical.

3) A new website will be created to showcase some of the common plants and animals located within the sanctuary. The website will be hosted on the instruction2 server (or similar Mt. SAC server) depending on availability. Photographs used in the website will be taken during the sabbatical period but photographs of specimens taken in previous years and by other photographers may be used (with the permission of the photographer). The goal will be to use the best photograph for the project. The website will contain a minimum of 10 photographs of common plants and 20 photographs of common animals. The website will be accessible to all faculty, students, and members of the community (it will not be password protected).

4) A final project write-up will be submitted to the Salary and Leaves Committee. This write-up will follow the requirements and format requested by the committee and will include a description of the work and the major discoveries made throughout the sabbatical.

Approximate Timeline Schedule:

Week/Date:	Goals & Expectations	Options/Changes
2 Feb 29 '16	Identifying sample 1	Review website design materials (watch youtube videos or www.lynda.com)
4 Mar 14	Begin website design	
6 Mar 28	Set-up pit-traps; take 2nd sample	Possible mercury vapor/UV light trapping
8 Apr 11	Insect pinning of sample 2	
10 Apr 25	Work on mammal portion of website	
12 May 9	Work on insect portion of website	3rd sample taken if the number of specimens collected is unexpectedly low.
14 May 23	Finalize and launch website	
16 June 6	Complete report, turn in notebook, and deliver insect collection.	

Justification of time

As previously stated, a tremendous number of insects can be collected in a sabbatical such as this. It is difficult to know exactly how much time will be needed for identification. The amount of time spent varies based on how many specimens are collected and the rate of turn-over*. Based on research that I conducted for my master's degree, however, I expect that the turn-over rate will be high and that the amount of time required to identify the specimens is appropriate. If I find this not to be the case, I will spend more time in the sanctuary attempting to identify other specimens such as birds, reptiles, mammals, and plants.

Identifying some specimens might remain impossible. It is possible that new species will be discovered and, even by consulting with other local experts, identification might be tough. In these cases, I will do my best to at least attempt to identify specimens to order*.

Sabbatical Length

A study of this nature could be conducted year round and over many consecutive years. The variation between fall and spring and the difference from year to year could be significant. Due to time constraints, I am proposing a single Spring semester sabbatical. My previous research has shown that spring is often the best time for documenting plants and animals (Revell 1998) so I believe I will be able to collect a tremendous volume of information in this time frame. Although my previous research helped me develop the skills to capture and identify insects, I should add that this sabbatical will be conducted in a very different environment and I therefore expect very different results.

Permission

I have discussed this sabbatical with many members of my department and they all seem genuinely excited about the usefulness of this project. Along with this proposal, I am submitting several letters of support for this sabbatical project.

This project has also been approved by the current Director of the Wildlife Sanctuary (Professor Craig Petersen). Furthermore, I have contacted Rick Nguyen from IT and it he seems confident that we can house a project such as this on one of the Mt. SAC servers.

Glossary:

Black-Lighting – A specialized light that releases a fluorescent colored light that is typically shined onto the surface of a white sheet. Insects are drawn to the light and land on the sheet and can be collected by hand or aspirator.

Bush beating –Using a stick, golf club, or similar device to strike several branches on the tree or bush. This activity tends to dislodge insects and they fall to the ground. Usually a white sheet or some similar material is placed below the tree or bush so that insects are easily visible. Insects are then collected either by hand or by aspirator (a device similar to a small vacuum cleaner). Animals collected will be placed in a zip lock bag for later identification.

Bush sweeping – A technique generally used to sample for insects in soft brush plants such as grasses. A butterfly night is swept in and out of the grass to collect sample insects.

Family – In classic classification systems, organisms are identified in a hierarchy of relatedness ranging from (most general to most specific): Kingdom, Phylum, Class, Order, Family, Genus, Species.

Mercury Vapor Lighting – A special extremely bright light typically shined on a white sheet on a moonless night. The bright light attracts insects which typically land on the sheet and can be collected by hand or aspirator.

Order - In classic classification systems, organisms are identified in a hierarchy of relatedness ranging from (most general to most specific): Kingdom, Phylum, Class, Order, Family, Genus, Species

Pinning – A process commonly used in entomology in which an insect, once it has been killed, has a metal pin placed through its body. Then, depending on the type of insect, it's legs and wings are often placed in certain specific locations and then left to dry so that the specimen can be added to a collection (as shown in Figure 2).

Pitfall trips – Twenty pitfall traps will be installed within the sanctuary. Each will consist of 500 ml plastic container that is buried in the ground such that the opening is approximately flush with the surface. Insects crawling on the ground fall into the container and become trapped.

Turn-over – As used in this case, is the number of species of insects found during one sample period but not the next. Thus, in an ecosystem with a high turn-over rate, new specimens tend to be found each sampling period. In an ecosystem with low turn-over rate, the specimens remain somewhat constant throughout each sampling period.

Taxnomic Key – A tool commonly used to identify living specimens based on physical characteristics. A taxonomic key is similar to a "choose your own adventure" book in which decisions are made about the presents or absence of certain features which then lead to another set of questions. The end result of identifying these structures is the reader is then guided to a specific taxonomic grouping (a name of a species or group of species).

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MT. SAC
Mt. San Antonio College

NOVEMBER 24, 2014

Subject: Tim Revell – Sabbatical Spring 2016

Dear Selection Committee:

I am writing this letter of support for Tim Revell who is applying for a Sabbatical in the Spring of 2016. I have read Tim's proposal and I and my students would be direct beneficiaries of the results that come out of this project. I teach Biology 2 – Plant and Animal Biology (along with Tim) and documentation of the insects (particularly beetles) in the Wildlife Sanctuary along with an insect collection and web pages documenting the species with descriptions and natural history information would be a valuable study tool for the students in this class. Other classes (including Biology 1 – General Biology, Biology 3 – Field Biology and Ecology, Biology 4 – Biology for Majors, Biology 6 – Humans and the Environment, and Biology 17 – Animal Behavior) can also benefit from the collection and the corresponding website when studying biodiversity.

I am also a member of our Wildlife Sanctuary Committee in the biology department. Over the years, the Wildlife Sanctuary has been a valuable tool, first in my own education as a student here, and it has continued as I have been an instructor here in 1997. One thing that has been lacking is baseline data on what wildlife actually does utilize this amazing outdoor teaching lab. Over the years, we have knowledge of many species that have been seen in and around the sanctuary but no formal data collections have been made. In community ecology, it is important to have an understanding of what species are present and the changes that occur over time. Since the early 1980's when I was a student at Mt. SAC up to today there has been many changes to Walnut and the surrounding area. These changes must have had an impact on the sanctuary but there has been no formal data collections taken over these years. Currently we as a department are trying to change this. I am going to offer a Biology 99 this winter for a student to start formal bird counts in the sanctuary. I am hoping to continue this study with future students to establish base line data for the bird community using the sanctuary and hoping to detect any changes seen in these populations over the years to come. Biology 4 collects plant data on Mt. SAC hill and has been doing so for the last 8 years. I know Biology 3 has been doing mammal trapping over the last few years. These projects are a great start to a database but the insect studies have been lacking. Tim's project would be a great start on an insect database.

Tim is my office mate and co-instructor is a couple of courses. We co-teach Biology 17 together and we are the two instructors teaching Biology 2 which is designed to give our students a strong biology background and prepare them with the skills necessary to excel when they transfer to a four year university. I know Tim's dedication to these courses and to the school (Tim is on the Faculty Association Executive Board) will be matched on his work on this project. If you have any questions, do not hesitate to call at (909) 594-5611 ext. 4548 or e-mail be at mcooper@mtsac.edu.

Sincerely,

Mark J. Cooper
Professor of Biological Sciences
Mt. San Antonio College

MT. SAC
Mt. San Antonio College

To: The Sabbatical Committee Nov. 24, 2014
From: Karyn Kakiba-Russell, Biol. Dept.
Re: Dr. Tim Revell's Sabbatical Project in the Wildlife Sanctuary

Dear Sabbatical Committee,

Dr. Tim Revell's Sabbatical Project in the Wildlife Sanctuary is not only necessary, but long, long overdue. When I first came to Mt. SAC over 24 years ago, I was very surprised...rather I was shocked that there was no inventory of the organisms in the Wildlife Sanctuary. Just before coming to Mt.SAC, I helped lead a Biological team who completed a biological inventory of the (now called) Carrizo Plains National Monument, California. Just prior to that project, I was part of a team who inventoried the Southern San Joaquin Valley biota and established the Southern San Joaquin Ecosystems Protection Program. Out of that program, which won Presidential recognition, the Greater Lokern Preserve was established. Having been heavily involved in Biological inventories, I could not believe that Mt. SAC Wildlife Sanctuary, established in 1965, did not have a comprehensive Biological inventory.

No comprehensive list of insects living in the Wildlife Sanctuary exist today. There were some bird lists of Wildlife Sanctuary species, an animal book and a brief plant book of the Sanctuary. Other instructors and their classes have completed a mammal list and some insects. I established a plant list with the assistance of other Biol. Professors and students, however, there is no comprehensive insect list of the Wildlife Sanctuary. Insects play such a vital role in our lives (such as in agriculture) and in ecosystems that it is a huge information gap that we have without an Insect inventory.

After spending a short time here at Mt. SAC, I quickly realized why no comprehensive Biological inventory exists ... no time. Majority of our time is spent in the classroom, on developing lectures, exams, quizzes, exercises to engage students, etc. plus, committees, meetings ....So, there is no spare time to inventory the Sanctuary.

It would be excellent if Tim were could take time off from teaching and conduct an Insect inventory! We would have found the huge missing piece of information if an insect inventory could be conducted. This information could be shared with students in Biol 1 (non-majors Bio: 38+ sections), Bio 4 (majors Biol), Bio 6 and Bio 6L (Humans and the Environment), Botany 3, Horticulture, Integrated Pest Management, Art and Photography (Insects are great subjects to photograph, paint, draw!), the community who tour and other programs (such as "Inside the Outdoors" and Debbie Boroch's Science Discovery Day, etc.).

Please feel free to contact me if you have any questions and thank you for your time.

K. Kakiba-Russell

Karyn Kakiba-Russell kkakiba@mtsac.edu Ext. 4577 office: 60-2105
Biological and Environmental Professor

MT. SAC
Mt. San Antonio College

Friday, November 14, 2014

Dear Sabbatical Committee,

I am writing this letter to support for Tim Revell's sabbatical proposal. I have been a member of the Biology Department's Wildlife Sanctuary Committee and know that we need to get baseline data on the biodiversity of the MTSAC Wildlife Sanctuary. Recently two species of endangered birds have been seen in the sanctuary, and there is potential for a third. Mark Cooper is going to work with some students taking an independent study course to do some bird surveys. I know the common plants and vertebrates that are found in the sanctuary but I have no knowledge about the insects in the sanctuary. Tim is the only department member with expertise in insects and it would be very valuable to have data on insect diversity in the sanctuary.

A collection of pinned beetles and a photographs would be valuable for my students. I teach Biology 25 (Conservation Biology) and take that class into the sanctuary twice during a semester. The course has a section of biodiversity. Tim's project would be a great example of "real world" local biodiversity and the importance of nature reserves such as the wildlife sanctuary in the preservation of biodiversity. I would also use information from his sabbatical in my biology 1 courses. All sections of biology 1 have two labs that are conducted inside the MTSAC Wildlife Sanctuary. One of the labs specifically addresses the topic of biodiversity.

Tim Revell's proposed sabbatical would be of value to both me and my students. I strongly urge you to approve his sabbatical so the Biology Department could get baseline data on insect diversity in the MTSAC Wildlife Sanctuary that could be used in teaching my students about biodiversity. His sabbatical would be of great benefit to the Biology Department.

Sincerely,

Sherry Schmidt
Professor, Biological Department.

MT. SAC
Mt. San Antonio College

November 24, 2014

To Salary and Leaves Committee:

I am writing this letter of support for Dr. Tim Revell's Wildlife Sanctuary Sabbatical Project. I have been the Director of the College's Wildlife Sanctuary for thirty-four years. I also serve as the Chairperson of the Biology Departments Wildlife Sanctuary Committee. The amount of time and effort placed into the operation of our sanctuary is significant. I have always known that surveys of the biodiversity of the sanctuary have been a missing component of our program. There simply is not enough time to accomplish this task during the normal school year while teaching a full load of courses.

I am so pleased that Tim has proposed to take a semester to dedicate his research toward focusing on the biodiversity of beetles found in our sanctuary. This will be no easy task! The magnitude of different types of just beetles can be overwhelming in a given habitat. Since the Wildlife Sanctuary has expanded to 25 acres we have increased not only the size but also the variety of ecosystems.

Even the maintenance of a Wildlife Sanctuary Web site is very time consuming. I will be of great benefit to the college to have Tim update the sanctuary web site. As Director of the Mt. SAC Wildlife Sanctuary, Tim has my full support to progress with his biodiversity study.

Sincerely,

Craig A Petersen

Craig A. Petersen

Professor of Biological and Environmental Sciences

Wildlife Sanctuary Director

cpetersen@mtasc.edu

MT. SAC
Mt. San Antonio College

November 24, 2014

Dear Salary and Leaves Committee:

I strongly support Dr. Tim Revell's sabbatical proposal of determining the biodiversity of our amazing Mt. San Antonio Wildlife Sanctuary.

As an ecologist who has developed and completed many field research projects, I understand the value of base-line biodiversity studies like Tim's. Without such studies, comparisons of and changes within ecosystems cannot be determined. This information is crucial in understanding the ecological value and productivity of an area. Furthermore, this data is needed in order to determine the extent of loss and remediation in the event of any environmental catastrophe.

As a Mt. SAC biology professor who has taught general biology students for over ten years, I understand the unique opportunity that a study like Tim's offers our students. Out of all of the biology lab activities that are offered to our non-majors general biology students during a semester, the activities that involve the students exploring and learning about the organisms in the Wildlife Sanctuary are the ones that the students find most engaging. The biodiversity website that Tim has proposed to develop would be an extremely useful tool to the biology faculty in presenting the unique life forms that inhabit the sanctuary to our general biology students. The students themselves can also use this website as a reference tool while in the sanctuary and for post lab discussions and write ups. I also envision the inventory data that Tim will collect as a jumping off point that could lead into long term monitoring projects done by students with the goals of tracking changes that occur in the sanctuary over time and providing invaluable field research experience to budding scientists.

Thank you for your time and consideration,

Janine S. Kido

Janine S. Kido
Instructor of Biological Science
Phone: 909.274. 4219
Email: jkido@mt.sac.edu

MT. SAC
Mt. San Antonio College

November 23, 2014,

Dear Salary and Leaves Committee,

I am writing this letter of support for my Biology Department colleague, Tim Revell. As I read his sabbatical proposal, I was struck by the realization of what a valuable, currently unmet need his research would fulfill. No one, to my knowledge, has actually conducted a biodiversity survey of the type he proposes. As the Wildlife Sanctuary approaches its 50th year of serving Mt SAC students, faculty and the community as a valuable educational tool, an assessment of its rich biodiversity is long overdue.

His research would give us a much better understanding of the organisms found in the sanctuary that interconnect in important ecological relationships. The Wildlife Sanctuary is used as an outdoor lab by literally thousands of students every year. The data collected from his research would greatly enhance the information the faculty can share with their students. By placing photos and information gathered from his research on the website, his data will be easily accessible to all interested parties. This is particularly important to new faculty hired in the Biology Department who need to become familiar with what organisms are found in our sanctuary. In addition, biology students can use the website to review the kinds of organisms they observed when they visited the sanctuary. The website will also allow faculty and students to be aware of additional organisms found in the sanctuary they may have been unable to observe due to night labs or inclement weather conditions.

I strongly urge your approval of Tim Revell's sabbatical proposal. It is one of those cases of "Why didn't someone think of this sooner?". Data gathered from his work will provide us with valuable information to enhance learning for years to come.

Sincerely,

Deidre Vail

Deidre Vail
Biology Professor

Mt. SAC Photography/Video Waiver

I hereby authorize Tim Revell, Ph.D. and Mt. San Antonio College to use photographs and videos that I took in the Mt. San Antonio College Wildlife Sanctuary. I understand that these photographs and videos may be placed on The Mt. SAC web page (or other media delivery device) for educational purposes.

Print Name: Thu Tran

Sign Name: [signature]

Date: 5/6/15

FIRST NAME	M.I.	LAST NAME OR ENTITY NAME (IF QUALIFIED ENTITY)	PERMANENT ID NUMBER
Timothy	K	Revell	SC 006095

SECTION 3 – PERMIT INFORMATION

USE OF PERMIT: CHECK ALL APPLICABLE BOXES

☐ Biological Consulting (generally, catch and release only) ☐ Research ■ Museum Collection ☐ Biological Collection Service
☐ State, Federal or Other Agency Biologist ■ Education ☐ Other-

Wildlife and Activity: Reminder - You must provide justification in Section 5 for each wildlife taxa and activity checked here. Check the type of wildlife taxa to be taken **AND** circle the type of activity requested: S=sacrifice; R=capture and release; C=take into captivity; SL=salvage; M=mark.

Wildlife Branch authorizations and conditions are attached

☐ MAMMALS	S R C SL M	☐ FRESHWATER FISHES	S R C M
☐ BIRDS* Other a	S R C SL M	☐ FRESHWATER INVERTEBRATES	S R C M
☐ REPTILES	S R C SL M	☐ ANADROMOUS FISHES	S R C M
☐ AMPHIBIANS	S R C SL M	☐ MARINE FISHES	S R C SL M
☐ VERNAL POOL/TERRESTRIAL INVERTEBRATES	S R C SL M	☐ MARINE AQUATIC PLANTS	S C SL
*See Standard Condition "K"		☐ MARINE/TIDAL INVERTEBRATES	S R C SL M

REVIEWED
By Justin D. Garcia at 3:21 pm, Jan 04, 2016

CHECK ONE: Other SCP permittees are involved in activity proposed YES ☐ NO ■ *(If yes, list the permittees below. Attach separate list if needed.)*

FIRST NAME	LAST NAME	SCIN NUMBER
		SC
		SC
		SC

SECTION 4 – SPONSOR INFORMATION

Students, teachers and individuals collecting on behalf of an organization must all have one member of the organization sponsor them. Sponsors must fully complete this section of the application. Students must have one faculty member with affiliation to the student's college or university sponsor the student. Elementary and secondary school teachers must be sponsored by their principal. In some other cases, the Department may review an application and determine that a sponsor is needed and will request this information directly from the applicant or organization.

SPONSOR'S FIRST NAME	M.I.	LAST NAME	DAY TELEPHONE

TITLE	ORGANIZATION	E-MAIL ADDRESS

MAILING ADDRESS	CITY	STATE	ZIP CODE

SPONSOR'S CERTIFICATION/SIGNATURE: I verify the take described in this application is required by this organization	DATE

APPLICATION CERTIFICATION

BY CHECKING ALL BOXES, I HEREBY DECLARE THAT THE FOLLOWING INFORMATION IS PROVIDED IN THE JUSTIFICATION SECTION OF THIS APPLICATION

■ Purpose ■ Species + Numbers to be collected ■ Locations + Timeframes for Collecting ■ Species Disposition
■ Methods/Activity ■ Literature Cited ☐ Attached Federal/State Permit(s) (Applicable/Not Applicable – Circle appropriate one)

I understand that if I fail to provide all information, circle items or check the boxes, my permit may be denied. I certify that I have read, understand, and agree to abide by, all conditions of this permit and attachments, the applicable provisions of the FGC, and the regulations promulgated thereto (Title 14, Section 650). I certify that I am not currently under any Fish and Wildlife license or permit revocation or suspension, and that there are no other legal or administrative proceedings pending that would disqualify me from obtaining this permit. I agree that if I make any false statement as to any fact required as a prerequisite to the issuance of this permit, the permit is void and will be surrendered where purchased, and I understand that I may be subject to prosecution pursuant to FGC Section 1054 or to other administrative actions pursuant to Section 746, Title 14, of the CCR.

APPLICANT SIGNATURE	DATE
X Timothy Revell [signature]	12/13/15

6. Plants

A Scientific Collecting Permit does not authorize collection of or incidental harm to a listed plant. To obtain a voucher permit for the incidental collection of a listed plant species for identification purposes, or to apply for a plant research permit, please go to http://www.dfg.ca.gov/habcon/plant/permits.html or contact Cherilyn Burton, Cherilyn.Burton@wildlife.ca.gov, 916-651-6508, Habitat Conservation Planning Branch. You shall obtain the property owner's permission to collect plant species. You may need a plant permit to work in the vicinity of listed plants even if you are not collecting them.

7. Reporting[2]

Abstracts, reports, and other publications may be submitted to the Wildlife Branch SCP Coordinator (Justin.Garcia@wildlife.ca.gov) and the Department contact(s) noted below, in an electronic format (such as a pdf file), which is the preferred format.

Report of Specimens Captured or Salvaged (RSCS):
Report all take, including incidental take (e.g., capture) of non-target species, on the RSCS form. In cases where large quantities of incidental capture cannot be avoided, such as with dip nets, you may estimate numbers to the best of your ability, or use a general description of the quantity.

Other Reports:
You shall also provide copies of abstracts you may prepare for any papers you present, or copies of any papers you prepare for popular articles or scientific journals, or copies of any periodic, annual, or final report that you prepare or assist in preparing for a client or other third party.

California Natural Diversity Database (CNDDB):
Submit occurrence/point location data, at least annually, for all special status species (e.g., monarch butterfly (*Danaus plexippus*)) encountered and correctly identified to the CNDDB at the following link: http://www.dfg.ca.gov/biogeodata/cnddb.

2 If no activities were conducted with any or all species authorized under the SCP during the previous term of your permit, you shall state this in writing in your RSCS form.

California Department of Fish and Wildlife

Scientific Collecting Permits

A permit is required to take, collect, capture, mark, or salvage, for scientific, educational, and non-commercial propagation purposes, mammals, birds and their nests and eggs, reptiles, amphibians, fishes, and invertebrates (Fish and Game Code Section 1002 and Title 14 Sections 650 (https://www.dfg.ca.gov/wildlife/nongame/regcode.html) and 670.7). These activities require a Scientific Collecting Permit (SCP), and you need to pay a fee for it. The take of some animals may also require a Memorandum of Understanding or other additional written authorization from CDFW.

The collection, possession, transplantation or propagation of rare, threatened or endangered plants or manipulation of their habitat requires a Rare, Threatened or Endangered Plant Collecting Permit or Plant Research Permit. These permits are free and are required for activities conducted on both private and public land.

Take of threatened or endangered species incidental to an otherwise lawful activity requires a Section 2081(b) permit (https://www.wildlife.ca.gov/Conservation/CESA).

All species may be taken for scientific purposes but not all may be taken for educational, non-commercial propagation, or management purposes. This is determined by whether a species is classified as a fully protected species, candidate, threatened, or endangered species, species of special concern, a standard exception species, an endangered or rare plant species, or other native species.

Species Category	Species Category Definition	Allowable Purpose for Take

Upcoming Departmental Rulemaking affecting Scientific Collecting Permits: In 2015, CDFW is revising Title 14, Section 650 of the California Code of Regulations affecting Scientific Collecting Permits, which were last updated in 1996. The proposed rulemaking is intended to update with changes made to Fish & Game Code Sections 1002 and 1002.5, clarify scope of entity permits and adequate supervision, update outdated language, and improve permit structure for an online application to facilitate improved reporting of data and information by permit holders. The Department invites comments and suggestions prior to initiating the formal rulemaking process under the Administrative Procedure Act (APA). This pre-notice period provides opportunity for input as the draft regulations are written; additional opportunity for comments on the proposed regulations will occur during the formal APA process (45 day written comment period), anticipated to occur in July 2015.

Pre-notice ideas and suggestions for the rulemaking be emailed to SCPermits@wildlife.ca.gov (mailto:SCPermits@wildlife.ca.gov) no later than **April 17, 2015**. To facilitate input from SCP permittees and the public, the Department is hosting three public outreach meetings from February to April 2015 - please check out our news release (https://cdfgnews.wordpress.com/2015/02/03/cdfw-to-hold-public-meetings-on-draft-regulations-changes-for-scientific-collecting-permits/) for more information, including other opportunities to comment.

- Pre-notice public outreach meeting presentation (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=95060&inline)

Information

- Laws and Regulations (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=35494&inline)
- Permit / Amendment Issuance Letter (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=35497&inline)

The Scientific Collecting Permit Process

- Application (https://www.dfg.ca.gov/wildlife/nongame/research_permit/scp/scp_aplic_procs.html)
- Approval (https://www.dfg.ca.gov/wildlife/nongame/research_permit/scp/scp_aprvl_procs.html)
- Renewal (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=35451&inline)
- Amendment (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=35457&inline)
- While in the Field (https://www.dfg.ca.gov/wildlife/nongame/research_permit/scp/field_and_reporting.html)
- Reporting Requirements (https://www.dfg.ca.gov/wildlife/nongame/research_permit/scp/field_and_reporting.html)
- Laws and Regulation (https://www.dfg.ca.gov/wildlife/nongame/regcode.html)

Scientific Collecting Permit	$315.00	Issued to any resident or nonresident to take or possess, in any part of the state, for scientific, educational, or propagation purposes, mammals, birds and the nests and eggs thereof, fish, amphibians, reptiles, or any other form of plant or animal life.
Scientific Collecting Permit, Student	$52.79	Issued to any resident or nonresident student in a school of collegiate level who is required by an instructor in wildlife research in the school to collect specimens used in laboratory work in the school under supervision and in connection with a course in wildlife research or in the conduct of wild.
Application Fee	$105.58	Except students, required with any application and to amend an existing Scientific Collecting Permit. Application and Additional Information (PDF) (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=35457&inline=true).
Student Application Fee	$26.27	Required by students with any application and to amend an existing Student Scientific Collecting Permit.

State of California – Department of Fish and Wildlife

2015 SCIENTIFIC COLLECTING PERMIT APPLICATION - INSTRUCTIONS

DFW 1379 (REV. 09/02/14) Previously FG 1379 Page 1

BEFORE COMPLETING THE APPLICATION

Please read all instructions before completing the application. It is also important that you read the SCP Laws and Regulations (DFW 1379d) regarding scientific collecting, so that you have a thorough understanding of the requirements. The SCP laws and regulations are available at www.wildlife.ca.gov/licensing/specialpermits/. Additional State and federal permits may be required and your application may be deemed incomplete and returned if copies of these permits are not submitted with the Scientific Collecting Permit Application.

A SCP is required for the take of wildlife and marine plants for bona fide scientific, educational or propagation purposes. For purposes of SCPs, "wildlife" includes mammals, birds, fish, amphibians, and reptiles (per Fish and Game Code section 711.2 (a) and aquatic mollusks, crustaceans and invertebrates per Fish and Game Code section 45).A SCP does **not** authorize animal relocation for non-scientific purposes or as part of California Environmental Quality Act (CEQA) mitigation or movement of animals "out-of-harm's way".

Wildlife or plants listed under the California Endangered Species Act or as Fully Protected, require a permit or Memorandum of Understanding for take for research purposes. A SCP is not the appropriate permit for this activity. However, a SCP may be required for incidental take of non-target species. Additional information on plant permits is available at www.wildlife.ca.gov/habcon/plant/ or by contacting the Department of Fish and Wildlife's (Department) Habitat Conservation Branch at (916) 653-4875. A SCP is not required to collect freshwater aquatic plants.

COMPLETING THE APPLICATION

AN INCOMPLETE APPLICATION MAY BE RETURNED AND WILL DELAY THE ISSUANCE OF YOUR SCP. YOU MUST NOT BEGIN COLLECTION ACTIVITY UNTIL YOU HAVE RECEIVED A VALID SCP FROM THE DEPARTMENT.

PERMIT TYPE DESCRIPTIONS:

Individual – Any person who is either an employee of a local, state, and federal agency who takes specimens in connection with their official duties; faculty, professional staff, college level students of, or individuals hired by public or private companies, educational institutions, zoological gardens or aquariums, or individuals who take wildlife or marine plants for other permittees or pursuant to environmental protection documents required by law. SCPs are valid for three years from the date of issuance.

Entity – Any California certified small business, aquarium or zoo accredited by the Association of Zoos and Aquariums, museum, California Special District, public agency, non-profit non-governmental organization, college, university or instructor at an accredited college or university, or other entity determined by the Department. SCPs are valid for three years after issuance.

Student – Any resident or nonresident student of a college or university for required coursework in wildlife research and sponsored by one faculty member at the student's college or university. Student SCPs are valid for one year from the date of issuance.

IMPORTANT! Please allow a **minimum of 26 weeks** for processing any application. Applications are processed in the order received. The application will become your SCP when validated and returned to you. **SCPs are not transferable.**

CHECK LIST FOR NEW AND RENEWAL APPLICANTS New applicants are those individuals or entities who **have not** previously been assigned by the Department a scientific collecting identification number. Renewal applicants are those individuals who **have** a scientific collecting identification number and their SCP has expired or will soon expire.

Please remember to...

- Complete **all pages** of the Scientific Collecting Permit Form (DFW 1379). Only complete Section 1 (individual) **or** Section 2 (qualified entity). **Do not complete both.**
- Sign and date **Page Two** of the application.
- Complete **Page Three** by providing a detailed justification (i.e., purpose(s), method(s), species and numbers, location(s), and disposition of all species), even if it is the same as the previous SCP. Please be specific.
- Provide a complete copy of current federal and State permit(s) and any other written State authorizations such as a current Memorandum of Understanding (MOU) if applicable.
- Provide your GO ID#, a copy of your individual or business identification or a copy of a previously issued Automated License Data System (ALDS) license.
- Submit a cashier's check, money order, or personal or business check*, or a completed credit card authorization form**.

APPLICANTS RENEWING A SCP MUST ALSO: Enclose or submit via e-mail a completed Report of Specimens Captured or Salvaged (DFW1379a) and any additional reports required by in a previous SCP.

Mail **ALL PAGES** of your completed Scientific Collecting Permit Application, complete copies of current federal and State permit(s) if required, a copy of your identification, and the appropriate application fee to the Department of Fish and Wildlife, License and Revenue Branch, 1740 N. Market Blvd., Sacramento, CA 95834. Contact the License and Revenue Branch's Special Permits Unit by telephone at (916) 928-5849 or e-mail at spu@wildlife.ca.gov if you need additional information.

REPORTING REQUIREMENTS

The Report of Specimens Captured or Salvaged (DFW 1379a) must be filled out immediately upon completion of each collecting trip. The disposition portion of the report may be filled out when final disposition of the animals is known. Section 650(i), Title 14, of the CCR requires that permittees submit a report within 30 days after the expiration of the permit or upon submitting an application to renew a SCP if the application is submitted prior to the expiration of a SCP. The report and instructions for completing it are available at www.wildlife.ca.gov/licensing/forms/ in a fill and save format. Upon completion of this electronic report, print a copy and attach it to your Scientific Collecting Permit Application or you may send an electronic copy to the License and Revenue Branch at spu@wildlife.ca.gov. **Each individual to whom a SCP is issued must provide his or her own Report of Specimens Captured or Salvaged unless otherwise specified in the SCP. If you are not renewing your permit, you are still required to submit a final report within 30 days after the expiration of your SCP. Any Special Report required in the conditions of your SCP must also be submitted.** If you did not collect any specimens or collected the same individuals as another permittee, you are still required to submit a report. Enter a single line indicating that no specimens were collected or indicate the permittee's name and SCP number for the specimens already reported. **DO NOT DUPLICATE DATA.**

The Department also requires that you record and submit your field observations of Threatened, Endangered, or Special Concern species for addition to the California Natural Diversity Database (CNDDB). The California Native Species Field Survey Form, instructions, and other accepted formats, including digital, are available at www.dfg.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp.

AMENDMENT

You are required to complete and submit a Scientific Collecting Permit Amendment Form (FG1379e) and fee when requesting a change to an existing SCP, your affiliation changes, or when adding or removing employees or volunteers from the original list. The amendment form and instructions are available at www.wildlife.ca.gov/licensing/forms/. **YOU MUST NOT BEGIN ANY NEW COLLECTION ACTIVITY UNTIL YOU HAVE RECEIVED A VALIDATED SCP AMENDMENT FROM THE DEPARTMENT.**

PERMANENT IDENTIFICATION NUMBERS FOR SCIENTIFIC COLLECTING PERMITTEES

Each permittee will be assigned a permanent Scientific Collecting Identification Number (SCIN). The SCIN is prefaced with SC followed by six digits and can be found at the top of the SCP. Use your SCIN on all SCP forms and documents submitted to the Department. You must mark all traps used under the authority of your SCP with your SCIN.

NOTICE

Disclosure Statement - Under Section 650, Title 14, of the CCR, the Department is authorized to collect information from applicants to maintain a record of licensure. All information requested on this application is mandatory unless otherwise indicated. Under FGC Section 391, other personal information submitted on this application may be released for law enforcement purposes, pursuant to court order, or for official natural resources management purposes or as may otherwise be required under the California Public Records Act.

A licensee may obtain a copy of his/her license records maintained by the Department by submitting a written request to the Custodian of Records, Department of Fish and Wildlife, License and Revenue Branch, 1740 N. Market Blvd., Sacramento, CA 95834 or lrb@wildlife.ca.gov. All requests must include the requestor's name, address, and telephone number.

State of California – Department of Fish and Wildlife
2015 SCIENTIFIC COLLECTING PERMIT APPLICATION
DFW 1379 (REV. 09/02/14) Previously FG 1379 Page 2

/RST NAME	M.I.	LAST NAME OR ENTITY NAME (IF QUALIFIED ENTITY)	PERMANENT ID NUMBER
			SC

SECTION 3 – PERMIT INFORMATION

USE OF PERMIT: CHECK ALL APPLICABLE BOXES

☐ Biological Consulting (generally, catch and release only) ☐ Research ☐ Museum Collection ☐ Biological Collection Service
☐ State, Federal or Other Agency Biologist ☐ Education ☐ Other-

Wildlife and Activity: Reminder - You must provide justification in Section 5 for each wildlife taxa and activity checked here. Check the type of wildlife taxa to be taken **AND** circle the type of activity requested: S=sacrifice; R=capture and release; C=take into captivity; SL=salvage; M=mark.

☐ MAMMALS	S	R	C	SL	M	☐ FRESHWATER FISHES	S	R	C		M
☐ BIRDS* *Other activity -*	S	R	C	SL	M	☐ FRESHWATER INVERTEBRATES	S	R	C		M
☐ REPTILES	S	R	C	SL	M	☐ ANADROMOUS FISHES	S	R	C		M
☐ AMPHIBIANS	S	R	C	SL	M	☐ MARINE FISHES	S	R	C	SL	M
☐ VERNAL POOL/TERRESTRIAL INVERTEBRATES	S	R	C	SL	M	☐ MARINE AQUATIC PLANTS	S		C	SL	
***See Standard Condition "K"**						☐ MARINE/TIDAL INVERTEBRATES	S	R	C	SL	M

CHECK ONE: Other SCP permittees are involved in activity or project. YES ☐ NO ☐ *(If yes, list the permittees below. Attach separate list if needed.)*

FIRST NAME	LAST NAME	SCIN NUMBER
		SC
		SC
		SC

SECTION 4 – SPONSOR INFORMATION

..udents, teachers and individuals collecting on behalf of an organization must all have one member of the organization sponsor them. Sponsors ..lust fully complete this section of the application. Students must have one faculty member with affiliation to the student's college or university sponsor the student. Elementary and secondary school teachers must be sponsored by their principal. In some other cases, the Department may review an application and determine that a sponsor is needed and will request this information directly from the applicant or organization.

SPONSOR'S FIRST NAME	M.I.	LAST NAME		DAY TELEPHONE
TITLE	ORGANIZATION		E-MAIL ADDRESS	
MAILING ADDRESS	CITY		STATE	ZIP CODE
SPONSOR'S CERTIFICATION/SIGNATURE: I verify the take described in this application is required by this organization				DATE

APPLICATION CERTIFICATION

BY CHECKING ALL BOXES, I HEREBY DECLARE THAT THE FOLLOWING INFORMATION IS PROVIDED IN THIS AMENDMENT AND IN THE JUSTIFICATION SECTION

☐ Purpose ☐ Species + Numbers to be collected ☐ Locations + Timeframes for Collecting ☐ Species Disposition
☐ Methods/Activity ☐ Literature Cited ☐ Attached Federal/State Permit(s) (Applicable/Not Applicable – Circle appropriate one)

I understand that if I fail to provide all information, circle items or check the boxes, my permit may be denied. I certify that I have read, understand, and agree to abide by, all conditions of this permit and attachments, the applicable provisions of the FGC, and the regulations promulgated thereto. I certify that I am not currently under any Fish and Wildlife license or permit revocation or suspension, and that there are no other legal or administrative proceedings pending that would disqualify me from obtaining this permit. I agree that if I make any false statement as to any fact required as a prerequisite to the issuance of this permit, the permit is void and will be surrendered where purchased, and I understand that I may be subject to prosecution pursuant to FGC Section 1054 or to other administrative actions pursuant to Section 746, Title 14, of the CCR.

APPLICANT SIGNATURE	**DATE**
X	

State of California – Department of Fish and Wildlife
2015 SCIENTIFIC COLLECTING PERMIT APPLICATION
DFW 1379 (REV. 09/02/14) Previously FG 1379 Page 4

ST NAME	M.I.	LAST NAME OR ENTITY NAME (If qualified entity)	PERMANENT ID NUMBER **SC**

FOR DEPARTMENT OF FISH AND WILDLIFE USE ONLY

☐ ____ PAGES OF ATTACHEMENTS NOTED IN THIS PERMIT SHALL REMAIN WITH THIS PERMIT AT ALL TIMES. CONDITIONS. AUTHORIZATIONS, AND APPROVALS ARE AS FOLLOWS:	ISSUED BY/DATE

DEPARTMENT REVIEWER(S) SIGNATURE 1.	2.	3.

YOU MUST PRINT AND SUBMIT AUTHORIZATIONS AND CONDITIONS PAGES 1 AND 2 WITH YOUR APPLICATION

STANDARD CONDITIONS FOR ALL SCIENTIFIC COLLECTING PERMIT (SCP) HOLDERS

A. No collections may be made in any Marine Protected Area (www.wildlife.ca.gov/mlpa/mpa_summary.asp) (i.e. State Marine Reserve, State Marine Conservation Area, State Marine Park, State Marine Recreational Management Area), State Reserve, Marine Life Refuge, Fish Refuge, Wildlife Area, Ecological Reserve, Rockfish Conservation Area, or Cowcod Conservation Area without approval from both the Department through an SCP with specific concurrence from the Department manager for that area.

B. Pursuant to California Fish and Game Code (FGC), Sections 1002 and 1003, and Section 650, Title 14, of the California Code of Regulations (CCR) the permittee is authorized to collect specimens of fish and wildlife according to the conditions listed on this permit. **The permittee must be present and carry this Scientific Collecting Permit, any amendments to the permit and additional authorizations (letters or MOUs) at all times when collecting. These forms must be in possession when collecting and must be shown upon request to any person authorized to enforce Fish and Game laws and regulations.**

C. **You must carry the Report of Specimens Captured or Salvaged (DFW 1379a) with your Scientific Collecting Permit and any amendments while collecting.** The report must be filled out immediately upon completion of each collecting trip. The disposition portion of the report may be filled out when final disposition of the animals is known. **Pursuant to Section 650(i), Title 14, of the CCR, permittees are required to submit a report, unless otherwise specified in the SCP, within 30 days after the expiration of the permit or sooner if submitting an application to renew a SCP, whichever comes first.**

D. **You must notify the local Department office of the event and location of your activities prior to collecting. Notification must be made during normal business hours, at least 24 hours prior to collecting and can be made using the Notification of Intent to Collect for Scientific Purposes form (DFW 1379f) available at www.dfg.ca.gov/licensing/specialpermits/. You may use your own template or format as long as the required information shown on the form is provided.**

E. This permit does not relieve the permittee of the responsibility to obtain any other permits, or comply with any other Federal, State, or local laws or regulations. It is the responsibility of the permittee to know the boundaries and managing authority of specially designated protected areas or sanctuaries.

F. No other sport or commercial fishing activities or collection of unauthorized species is allowed on the same trips or time periods as scientific collection activities.

G. You must submit data to the California Natural Diversity Database (CNDDB) in an acceptable format or complete California Native Species Field Survey (CNSFS) form for any Threatened, Endangered, or Special Concern Species captured. Mail to the address listed on the CNSFS form. The CNSFS form and other accepted formats are at www.dfg.ca.gov/biogeodata/cnddb/submitting_data_to_cnddb.asp.

H. Once removed from the wild, animals may not be returned to the wild without prior written permission from the Department.

I. Marking or tagging of any kind is not authorized by this permit unless it is specifically requested by the permittee and authorized in writing by the Department.

J. Use of pitfall traps is not authorized by this permit unless it is specifically requested by the permittee and authorized in writing by the Department.

K. To band or to take birds protected by the Migratory Bird Treaty Act, **you must attach a copy of all current federal permit(s) authorizing this activity with your SCP application.**

L. You must mark each trap set to capture mammals with your Scientific Collecting Identification Number (SCIN) before placing the trap in the field. Marking traps with an identification number is a requirement of FGC Section 4004. The SCIN shall be stamped clearly on the trap or on a metal tag attached directly to any part of the trap (Section 465.5(g), Title 14, of the CCR). Tagging the trap allows the person to remove the tag before another permittee uses the same trap and attaches his/her own tag.

Mt. SAC Photography/Video Waiver

I hereby authorize Tim Revell, Ph.D. and Mt. San Antonio College to use photographs and videos that I took in the Mt. San Antonio College Wildlife Sanctuary. I understand that these photographs and videos may be placed on The Mt. SAC web page (or other media delivery device) for educational purposes.

Print Name: Ahmed Alshalkarchi

Sign Name: Ahmed Ri

Date: 5/6/15