



2 December 2013

Joseph Cook, Curator and  
Jonathan L. Dunnun, Senior Collection Manager  
Division of Mammals, Museum of Southwestern Biology  
University of New Mexico  
Albuquerque, NM 87131

**Re: Genetic Material Request for *Euderma maculatum***

Dear Joe and Jon,

The spotted bat (*Euderma maculatum*) is widely distributed across western North America from central Mexico to southern British Columbia, but is not commonly captured. Thus, much of the biology of this charismatic bat is unknown, making it an excellent candidate for application of genetic tools. In the past few months, I have developed 17 microsatellite loci for the species (Phase 1 in previous application to the Museum of Southwestern Biology), a process that relied heavily on MSB tissue samples, for which I am most grateful. This week we will be submitting a primer note describing the loci to Conservation Genetics Resources (we are waiting for GenBank accession numbers), which includes details of the MSB contribution and is available on request.

We now wish to evaluate regional and continent-wide genetic diversity and genetic structure. This phylogeographic information will illuminate population history, movement, and diversity. We have funding to carry out this work, and expect microsatellite and mtDNA screening of all available samples to be completed in 2014. The research is being carried out in The Center of Microbial Genetics and Genomics at NAU, which is an internationally recognized state-of-the-art genetics facility. I (Faith Walker) have extensive experience with these molecular methods and ancient DNA techniques (website with publications below), and will be carrying out this work. Carol Chambers has a collection of DNA samples from 36 mist-netted and 9 ancient individuals. Additionally, we netted 14 individuals this year from which we have buccal DNA. We request the following tissue samples from MSB for Phase 2:

**Phase 2. Genotyping.** We wish to genotype the remaining 33 spotted bats at MSB for microsatellite and mtDNA. Most of these involve skin samples. The last 6 are whole organisms, which I believe from previous emails are formalin-fixed. I will attempt to isolate DNA from any formalin-fixed tissue using recently-developed techniques; please alert me to whether formalin was used.

- |        |  |       |         |
|--------|--|-------|---------|
| ✓6235  | skin; skull; postcranial skeleton              | skin  | samples |
| ✓9606  | skin; skin sample; skull, carcass              | skin  |         |
| ✓9607  | skin; skull, carcass                           | liver |         |
| ✓9608  | skin; skin sample; skull, carcass              | skin  |         |
| ✓9609  | skin; skin sample; skull, carcass              | skin  |         |
| ✓9610  | skin; skin sample; skull, carcass              | skin  |         |
| ✓7285  | skin; skull; postcranial skeleton              | skin  |         |
| ✓17360 | <del>unknown</del> headless, skinless carcass, | liver |         |
| ✓23376 | skin; skin sample; skull, carcass              | skin  |         |
| ✓23377 | skin; skull, carcass                           | liver |         |
| ✓23378 | skin; skin sample; skull, carcass              | skin  |         |
| ✓24999 | skin; skin sample; skull                       | skin  |         |
| ✓25000 | skin; skin sample; skull                       | skin  |         |
| ✓25187 | skin; skull; postcranial skeleton              | skin  |         |

	MSB		MSB
JD	(831 23378 C) J	1454	9606
	1875 23377	1456	9608
	1874 23376	1458	9610
		1457	9609
		1455	9607

✓27715	skin; skull	skin
✓29400	<del>skin; skull</del> whole organism, <del>tissue</del>	MUSCLE
✓37688	skin; skin sample; skull; postcranial skeleton	skin
✓37724	skin; skull; postcranial skeleton	skin
41463	skin; skull; postcranial skeleton	
✓107557	skin; skin sample; skull; carcass (isopropanol, formalin-fixed)	skin
✓112056	skin; skull	skin
✓112057	skin; skin sample; skull	skin
✓114513	skin; skin sample; skull	skin
✓115304	skin; skin sample; skull	skin
✓115305	skin; skin sample; skull	skin
✓116740	skin; skin sample; skull; postcranial skeleton	skin
122645	unknown	
✓32081	whole organism (alcohol)	liver
✓32082	whole organism (alcohol)	liver
32594	whole organism (alcohol)	
✓24050	whole organism (alcohol)	liver
✓29467	whole organism (alcohol)	kidney
✓34284	whole organism (alcohol)	liver

Following this work, all remaining DNA will be returned to MSB, and the museum will be acknowledged in all resulting publications.

Please send samples to:

**Dr. Faith M. Walker**  
**Center for Microbial Genetics and Genomics**  
**Applied Research & Development Building**  
**Bldg 56, 3rd Floor**  
**1298 S Knoles Drive**  
**Flagstaff, Arizona 86011-4073**

Please send frozen if samples are currently frozen, and alert that samples have been mailed.

Yours sincerely,

Faith M. Walker, Ph. D.  
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 School of Forestry & Center for Microbial Genetics and Genomics  
 Northern Arizona University  
 Faith.Walker@nau.edu  
<https://sites.google.com/site/faithmwalkerphd/>

and

Carol Chambers, Ph. D.  
 Professor of Wildlife Ecology  
 School of Forestry,  
 Northern Arizona University  
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