

From: dwthreadgill
To: [Dan Grout](mailto:Dan_Grout)
Cc: [Gerry McChesney@fws.gov](mailto:Gerry_McChesney@fws.gov); [Heather Patisaul](mailto:Heather_Patisaul); [David Threadgill](mailto:David_Threadgill); [Fred Gould](mailto:Fred_Gould); [John Godwin](mailto:John_Godwin); [Aurora Alifano](mailto:Aurora_Alifano); [Richard Griffiths](mailto:Richard_Griffiths)
Subject: Re: Farallones mouse sampling
Date: 11/04/2011 05:26 PM

Hi Dan, it would be interesting to know what ECOGene tests. If they ran a panel of markers, we now know that unless these markers were carefully selected, it probably isn't sufficient to determine origin (at least for *Mus musculus*) as there are many markers that have been mis-assigned by subspecies origin because of incorrect reference samples. It is only in the last 18 months that this has been clarified with the resequencing of many *M. musculus* genomes. It also can't determine if there has been admixture of from more than one population, which might be of some concern wrt to introduction of warfarin resistance. We should be able to get a good idea even with just a dozen samples from what you plan to collect.
david

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On Nov 4, 2011, at 6:51 PM, Dan Grout wrote:

John, David:

We have already collected over 50 mouse tail samples in buffer for storage and genetic typing by ECOGene in New Zealand, and we will be collecting 50 more samples for our needs next week. We have already had ECOGene run a half-dozen of the samples, so I believe we know the origin of the mice already. But we can collect a few extra frozen tail snips for you and get some entire body samples and fecal samples back to the mainland on ice and try to ship them to you on dry ice, but field conditions and timing may not allow much more than that right now. You should coordinate with Gerry McChesney the USFWS Refuge Manager for the Farallon Refuge for permission for any additional sample requests in the future, but of course our staff would be happy to assist if we can in any future sampling efforts if USFWS approves.

Dan Grout
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<image001.jpg>

*"Island Conservation is the world's most effective organization
in terms of species saved from extinction per dollar spent."*

- Michael Soule, Cofounder, the Society for Conservation Biology

From: David Threadgill [mailto:threadgill@ncsu.edu]
Sent: Friday, November 04, 2011 3:11 PM
To: Dan Grout
Cc: Heather Patisaul; David Threadgill; Fred Gould; John Godwin
Subject: Re: Farallones mouse sampling

Hi Dan, following on on John's email. For DNA to definitively determine the origin and genetic makeup of the mice we only need a small piece like a part of a tail. It can be frozen if with a body or otherwise chilled. Alternative, just dropped in EtOH works well too.

David

On Nov 4, 2011, at 5:25 PM, John Godwin wrote:

Hi Dan,

Fred Gould forwarded your email noting your group was headed out to the Farallones and asking about the possibility of gathering samples. I'm not sure what is doable out there, but even just frozen samples that would allow definitively identifying the origin of the mice and possibly a little parasitology would be useful. Other sorts of samples that would be good if possible would be mice frozen shortly after capture on dry ice and/or fecal samples if you get them in live traps. Those sorts of samples would be good for gene expression studies and the fecal samples can be useful for measuring stress hormone levels. Stress hormone levels in turn appear to be a good proxy in many cases for general exposure to stressors as well as potentially vulnerability to food deprivation and parasites. We realize that that sort of sampling is probably a tall order under the working conditions out on the island there, but thought it worth mentioning.

Please do feel free to give me a call if that is useful. My cell is [919-612-5583](tel:919-612-5583).

Thanks, John

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