FRIENDS OF THE PLEISTOCENE

SONGBOOK

October 2025 Issue

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At The Fop

By Marith Reheis and Scott Stine

Written as an all-FOP song [add new verses if desired] at the 1987 Pacific FOP trip to the northern Lahontan desert

To the tune of At the Hop

Chorus lead-in of chords, ending with "At the FOP!"

1.

You can dig it, you can squeeze it, you can sample it and freeze it at the FOP When the night comes down, there's a fire to stand around at the FOP. It's a place where we can be crazy and free at the FOP.

Chorus

Let's go to the FOP, you can argue till you drop, Then to the ground you flop, but the drinking doesn't stop. Well come on, let's go to the FOP!

2.

You can core it, you can bake it, you can demagnetize and shake it at the FOP. You can microprobe the ashes and get electric flashes at the FOP. You can run a seismic line and measure all the fines at the FOP

3a. (1987 Pacific FOP, Lake Lahontan)

It's a shitter, it's a puker, it's a pisser, it's a doozer at the FOP. When the porta-potty passes, it's emitting killing gases at the FOP. If it weren't for the beer, we'd never come near it at the FOP.

3b. (1987 Rocky Mountain FOP, Sangre de Cristos and Espanola Basin) You can sample carbonate for a hypothetic date at the FOP. And compare it to the rate that the stuff accumulates at the FOP. Use it all for calibration of the desert-varnish ratio at the FOP. (alternate last line)

Use it all to calibrate the tectonic uplift rate at the FOP.

3c. (1989 Rocky Mountain FOP, Wind River Range)

You can look at all the till, till you've more than had your fill at the FOP. The stratigraphy's so plain you can see it through the rain, don't complain at the FOP. But you'll pass up all the crops 'cause there's never time to stop at the FOP.

4.

As the leader of the FOP, you can tell 'em 'bout the crop that was there ten years ago. In the middle of haranguing, you can tell 'em 'bout yardanging at the FOP. You can armwave, bullshit, you can goll-gee-whizzit at the FOP.

Chorus of chords, ending with "At the FOP"

(additional verses from Pacific NW cell):

You can pit it, you can tent it, you can climb it, you can cave it, Enchantment Rock. You can break it, you can blast it, or edynamite its axes on Balanced Rock! Uptown it isn't there, can you find it anywhere, Luckenbock.

Is it eluvial, illuvial, alluvial, colluvial at the FOP? What's the age, what's the stage, is it on the next page at the FOP? Is it pedogenic calcite or groundwater calcite at the FOP?

Is it lus, is it Loess, is it less, is it more, at the FOP? Is it 3, is it 4, is it five, are there more at the FOP? Was Neil really stuck in that goldern muck at the FOP?

You can grind it, you can screen it, you can keep it, you can toss it at the FOP. You can wash it, you can sift it, you can mark it with a pen at the FOP. We saw Paleoloma, don't laugh it's Jomama at the FOP.

Is it ash, is it ash, is it ash, is it ash at the FOP?
Did it fill a buffalo wallow, did it cap the Ogallala at the FOP?
Is it pedogenic carbonate or just something that Phil ate at the FOP?

Go Glacier Go

By John Pitlick
To the tune of *Johnny B. Goode*

1.

Way in Canada where it sure gets cold
The glaciers started up and began to grow
They grew so big they started moving along
And you can see where they've been even though they're gone
They grew so big that they couldn't stay
So they flowed right down to the USA

Chorus

Go, go, go glacier go, etc. Glacier be cold.

2.

Well the Indians saw them coming straight out of the hills
And they knew if that old man glacier he would give 'em the chills
So they hightailed down to where it never snows
And you can see 'em on the beaches down in Mexico
So old man glacier was all alone and blue
And carving up the hillsides was the best he could do.

Chorus

3.

Now the customs at the border didn't treat him nice They didn't like him smugglin' rocks down in his ice They took him in the back and they made him strip And they looked up his crevasse but they didn't find shit So he took off for Olympia as fast as he could go But he missed the noon ferry to Winslow

Wonderful World

By Marith Reheis, Jennifer Harden, Bob Hale, and Alan Gillespie Written for the 1985 Penrose conference on paleoclimactic indicators Inspired by Peter Patton
To the tune of *Wonderful World*

1.

Don't know much about geology, don't know much about climatology, Don't know much about the talks I heard, don't know much about a woodrat's turd. But I do know that I am right, and you'll believe me if you're not uptight. What a wonderful world this will be.

2.

Don't know much about paper shale, don't know much about a delta halo. Don't know much about nothin' at all, must have been all the alcohol. But I do know that I am right, and if you think that my story's tight, What a wonderful world this will be.

Break:

Now I don't claim to be a real expert, but I'm tryin' to be, 'Cause maybe by bein' a real expert, baby, NSF will give its grants to me.

Repeat 1.

Saprolite

By Marith Reheis and Dorinda Gilmore Written for Dr. Hurst's class in saprolite mapping, University of Georgia, 1972 To the tune of *Baby Face*

1.

Saprolite, you've got the cutest little saprolite
The freshest rock could never take your place, diabase,
Looking at your anatexis gets me in the solar plexus.
Saprolite, I get a thrill when I see your pegmatite.
I didn't need a shove 'cause I just fell in love with your pretty little saprolite.

2.

Biotite gneiss has float that's different from amphibolite.

There's not a fresh outcrop that you can trust, let it rust,

Mapping schist at speeds of thirty keeps your clothes from getting dirty.

Hornblende gneiss, how can you tell it from a pseudodiorite?

Pretty little sapra, how I love to map ya', pretty little saprolite!

FOP Digging Song

By E.J. Cushing and C.L. Match, University of Minnesota Presented at field trip for 1972 GSA Annual Meeting in Minneapolis) Tune is obvious

We're Friends of the Pleistocene Damn little ice we've seen; Listen and we'll tell you why: The glaciers retreated The lakes are depleted The temperature's risen too high!

We've till and we've gravel
Our problems unravel
When stones oriented we see.
We've eskers and kames
And various names
To apply to glacial debris.

We've loess and we've spoils
Which add to our toils,
We've lakes and we've peat bogs to bore.
With *Quercus* and *Fagus*And *Pinus* to plague us
The pollen we cannot ignore.

So, we're Friends of the Pleistocene Where geology's nice and clean Granites and faults we decry Instead of petrology On carbon chronology And climactic change we rely.

Meetings

By Jennifer Harden, Alan Gillespie, and Bob Hale Sung to the tune of *My Favorite Things*

1.

Sitting in chairs and picking our noses, Cracking our knuckles and wiggling our toes-es, Flapping our arms when it's our turn to speak, My argument seems so pitifully weak.

Sleeping through sessions and crossing out knees, Waking up only to backstab colleagues, Slandering friends and flattering foes, There are a few things that make my heart glow.

Chorus

When I'm shown up, when I'm put down, when I look like a fool, I simply remember my favorite things, and then I just feel so COOL.

2. Ripping off rivals and publishing quickly, Others' ideas I package so sickly, Only my deans and my publishers know This is the way that my stature grows.

Feigning great interest in others' equations Without understanding the whole situation Missing the point and feeling quite glum Frankly I'd rather be sucking my thumb.

Call Me Doctor

Written about John Reed in an old D.C. Pick and Hammer Show

Everybody loves a doctor, that's why I'm in love with me,

Call me doctor, call me doctor,

And when ever you address me, don't forget the Ph.D.,

Call me doctor, call me doctor.

'Cause I'm just a little better than the average man could ever hope to be.

So in grateful recognition all you lesser mortals can

Call me doctor, that's me!

1.

Though I'm hardly any smarter than I was when I was ten,

Call me doctor, call me doctor,

I have organized my ignorance with pencil and with pen,

Call me doctor, call me doctor.

Now my dissertation's finished and they've granted my degree, it's there for all to see.

I feel so ever so important since I have my Ph.D.,

Call me doctor, that's me.

2

Had a philosophic conversation just the other day,

Call me doctor, call me doctor,

With the man who picks my garbage up and hauls it all away,

Call me doctor, call me doctor.

And I found that he had doctorates from Stanford and Yale, Cal Tech and MIT,

And it gave him lots of comfort when his buddies at the dump

Called him doctor you see!

3.

Now the neighbors had a baby and I'll tell you what they did.

Call me doctor, call me doctor,

For they argued over names to call their darling little kid,

Call me doctor, call me doctor,

Well they finally named him Doctor and it ended all strife, they're happy as can be,

It will save the kid some trouble as he makes his way through life,

He'll be a doctor like me.

Last Chorus
Same as first to last line
Call me Doctor that's me, boys, call me doctor that's me!

The Truncated Field Trip

By Dave Weide Written for the 1986 Pacific FOP, southern Death Valley To the tune of *Camptown Races*

1.

Avawatz rocks they sing this song, TRUNCATE, TRUNCATE, Chopped right off by a Garlock prong, they've all gone away. They've all gone away, that's what Brady say, Avawatz rocks was here and gone, left just yesterday.

2

Death Valley fault zone five mile wide, TRUNCATE, TRUNCATE, So many problems Bennie can't hide, they won't go away. They won't go away no matter what he say. Death Valley fault zone five miles wide, moved just yesterday.

3.
Butler's rocks are rolled up too, TRUNCATE, TRUNCATE,
Amargosa's cut 'em through, wish they'd go away.
Wish they'd go away, down Badwater way.
Ply-ass-tow-scene is so messed up, make old Paul's hair turn gray.

4.

We've been here for three days now, TRUNCATE, TRUNCATE, These three guys have told us how, now they're goin' away. Now they're goin' away, leave us here to pray That next year's trip will be as good and we'll see you all someday

Go Bennie Go

By Marith Reheis Written for 1986 Pacific FOP, southern Death Valley To the tune of *Johnny B. Goode*

1.

Way up in Napa valley where the grapevines grow There lives an old geologist that we all know. He's mapped around the desert nearly all of his life, He never could have done it if it weren't for his wife. Geologist keep comin' from miles around To see him drawing lines and walk that ground,

Chorus

Go, Go! Go, Bennie, go! Go-oh-oh-oh-oh, Bennie map on!

2.

Along with Lauren Wright he's a field mappin' man And now he is the leader of a big old band. They're rollin' 'cross the desert chanting "FAULTS OR BUST" You can see 'em comin' by the cloud of dust. One and all are singing "I saw the light, Please, Bennie, map on tonight!"

Field Mappin' Man

By Dave Weide, 1979 To the tune, obviously, *John Henry*

I.

When John Henry was a little freshman, well he went to M.I.T. And his Mammy said if you want to get ahead, Better study geology (yes yes), better study geology.

2.

Well John Henry he enrolled in structure, paleo and stratigraphy, But he flunked p-chem and calculus, Said "Geophysics be the death of me (Lord Lord), geophysics be the death of me."

3.

Well he finally got him a Master's, followed that with a Ph.D. Then he up and went to Menlo Park Sayin' "What can you make of me (USGS), what can you make of me?"

4.

Well they told John Henry out in Menlo, the Test Site is the place for you, Shufflin' papers all day in a bureaucratic way Writin'. reports and memos too (Good Grief), writin' reports and memos too.

5. Slowly, with drive

Poor John Henry he went down to Reston with his rock hammer in his hand. Sayin' "Director won't you listen to me?" Lordy, I want to be a mappin' man (Yes Yes), I want to be a mappin' man."

6.

So they sent John Henry west to Golden, hired him on in the C.R.G. And the Branch Chief say "You'll map a quad a day, If you're goin' to work for me (Pray, Pray), if you're goin' to work for me."

7.

Well John Henry he was a mapin', and his hammer was flashin' light. Mapped thirty-two quads for the B.L.M. And he did it in a day and a night (lord lord), he did it in a day and a night.

8.

Well the Branch Chief he said to John Henry, "I'm gonna bring me a plotter 'roundl" Maps a two degree sheet in an hour and a half, It'll map you right into the ground (Poor Boy), it'll map you right into the ground.

9.

Well the plotter started into mappin', lord the models they really flew. But John Henry mapped till his pencil melted down Sayin' "Field work I'll be true to you,(oh yes), field work I'll be true to YOU."

10.

Now the man. who invented the plotter, lord he thought he was mighty fine. But Johnny he mapped out sixteen quads, While the plotter it only did nine (my my), the plotter it only did nine,

11. Slowly, with feeling

Well they laid John Henry on the outcrop, and he looked at them and said, "I'm a field mappin' man and that's for sure."

Then he fell across his hammer dead (Good Lord), he fell across his hammer dead.

12.

So they carried John Henry back to Reston and buried him 'neath the sand. And the Geologic Chief come a strollin by Sayin' "There lies a field mappin' man (oh yes), there lies a field mappin' man."

Missing Lakeshores

By Doug Burbank, Alan Gillespie, and Jennifer Harden Written on the 1985 Pacific FOP trip to alleged Pleistocene lakes To the tune of *Poison Ivy*

1.

He's been searching for those lake shores, those mythical lake shores. He's been searching like a hound for pebbles that should be semi-round.

Chorus

Missing lake shores, missing lake shores, Every night while you're sleeping, those waves come a-creeping At your tent floor or or or or.

2.

Nobody knows how big it grows, but everybody knows That great Mojave River will set your mind all a-quiver.

Chorus

Break

Fans they may be lumpy, and playas make you grumpy. Paleosols may make you jump and twitch. Carbonates may fool ya, and ashfalls they may cool ya, But Lord, those missing lakeshores are a bitch.

3.

You're gonna need an ocean of-water in commotion, You'll be searching like a hound, but we think they may never be found.

Dear Rockwell

By Doug Burbank and Marith Reheis Written for the 1990 Pacific FOP to the Salton Trough area To the tune of *Dear Abby*

1.

Dear Rockwell, dear Rockwell, your segment's too long, The offsets are backwards and the slips are all wrong. The Elsinore fault zone is really a thrust, And your next published paper just may be a bust. Signed, A Skeptic

Dear Skeptic, dear Skeptic, your head's in the ground, Get your ass into gear, take a good look around. My faults may be backwards, but that's really OK, The GS won't notice, they'll continue to pay. Signed, Tom Rockwell.

2.

Dear Rockwell, dear Rockwell, this patina's a joke. You're salting your outcrops for ignorant folk. The calcic horizons are all flushed away, If it's really argillic, why is there no clay? Signed, Pedantic.

Pedantic, Pedantic, you hit the nail on the head. We varnished those clasts and we painted them red. We tagged all the fault lines to show the offset, And the students dug notches on each faulted arete. Signed, Contractor.

3

FOP Leader, FOP Leader, we have a complaint. You said there was blacktop and there clearly ain't. There's been no tequila, and we think it's damn queer That you're pounding sodas while we're drinking beer. Signed, Too Sober.

Too Sober, Too Sober, you have no complaint, That stuff isn't beer, it's the leftover paint. The blacktop was solid from here to the fault, But it's paved with dead fishes instead of asphalt. Signed, FOP Leader.

Buy A Backhoe

Written by Marith Reheis in honor of Bud Burke, 1989 To the tune *Hire a Wino*

INTRO:

Came crawlin' in last night, like so many nights before. Finally made it to my feet, as she opened up the door, And she said, "You're not gonna do this any more."

Chorus

She said, "I'm gonna buy a backhoe to excavate your holes, So you won't have to break your back to see those silly soils. We'll take out a second mortgage and put a lab along that wall, And electric cords will point the way to the computer down the hall."

1.

She said, "We'll hire some gung-ho students to insert hydraulic shores. With an airgun they can clean the face while you sit back and snore. Then you'll describe the profile while they hang on every word, But be careful not to talk too long or you will sound absurd."

2.

She said, "Just bring those monthly paychecks, and I'll use 'em up right here, We'll open a new bank account to buy laboratory gear. We'll have computer-driven pipettes so you won't have to guess, And a super-heated autoclave to clean up all the mess.

We'll have a dozen lab assistants who will jump at your command. They'll Walkley-Black and Chitteick, and shake down all the sand. They'll probe, diffract, and titrate, and when they're all through, They'll computerize and analyze and interpret it for you.

Trona

By Jennifer Harden, John Tinsley, and Alan Gillespie To the tune *Dona*, *Dona*

1.

In a playa, far from clean air, there run two factories With exotic salts processed from the lake come the deadly, retching smells. All the winds are stinking, their stink a deathly blight. They stink and stink the whole day through and then all through the night.

Chorus

Trona trona

2.

"Stop complaining," said the mogul, "Who said you'd have air to breathe? As we plunder for a profit you inhale the price of greed." All the winds are stinking, their stink a deathly blight.

They stink and stink the whole day through and then all through the night.

All Those Gophers

Written by David Seymour for the spring 1989 FOP to the California Transverse Ranges To the tune *All My Loving*

1.

Close your eyes and you'll hear them, but oh, don't you fear them, They're digging the soil just like you, Oh, but don't look away, your B's on top of A, And the stone line is covered with poo.

Chorus

All those gophers, see what they can do. All those gophers, destroying what you knew,

2.

Close your eyes but don't listen to what that guy been pissing, That soil's not 6000 years old!

Oh but don't look away, the A horizon they say
Was mixed by three gophers today,

I'll pretend that I'm seeing three terraces you're saying Are divided into a, b, and c. Frazier Mountain thrust they say can be all explained away by landslides and a gopher or two.

Tag:

All those gophers, all those-gophers, all those gophers destroying what you knew.

Dust In The Wind (Preliminary Draft)

By the San Diego State University Quaternary class of 1987

1.

I closed my eyes, only for a moment of graded time, The rock weathers away, and all that remains is translocated clay,

Chorus

And all it leaves is dust in the wind, eolian dust in the wind,

2.

Down to the C, the carbonates are leached out totally, It dissolves away only to become a stage IV K.

3.

Gile and Hawley would approve, and so would Marith Reheis and her dust traps too.

4.

If only we knew the influx rate, We could produce a realistic date,

5.

We calculate horizon numbers for an index no one really understands, To date soil profiles and correlate deposits across the land.

The (Soil) Circle Game

By Marith Reheis Written for Pete Birkeland's roast in honor of the 1988 Kirk Bryan Award To the tune of *The Circle Game*

1.

Yesterday a boy came out to wander, joined the Army, skied down hills and played. What to do next? He began to wonder, but first he had to raise his failing grades.

2.

At Stanford he began to do his research, followed then by Berkeley on the bay. Mackin, Arkley, and Jenny made his mind work and the Mustang Ranch and Truckee made his day

Chorus

And the lab work, it goes round and round and the soil pits, they go down and down, The more data we collect, the less we know.

We can't stand up, but our friends will keep us from falling in the flames,
And we'll pass the beer around in the circle game.

3. Then the man went on to Boulder by the Rockies, gathered students round him by the score. Used their research and his own to write a textbook, and cursed the NSF for leaving him poor.

Chorus

4.

Now the students are dispersing with their bible. The gospel, Soils and Geomorph they tell. While Pete does global studies on a cycle, and tells the NSF to go to hell.

Pedo San Antone

By Richard Griffin
Written for the 1988 International Working Meeting of Soil Micromorphology in San Antonio
To the tune of *Sloop John B*

ı

We came to San Antone, for just about a week or so, All around St. Mary s we did roam Discussing silt loams and complex rhizomes, Yeah, we feel so polished we wanna go home.

Chorus

So get out the microscopes, that's enough about isotopes, We don't want more refried beans and corn. We like pedo-jargon, so just leave it alone. Yeah, we feel vo-sepic, and we wanna go home.

2.

We took one look at the acronym, IWISM, It sounded like the right password to us. So don't make a fuss, just get on that bus, Yeah, we feel so quantified we wanna go home.

3.
So we'll take our little brown bags and stuff them with technical mags, And grimly stay at the meetings from eight until dawn, Then stroll back to the dorm, our cutans are worn, Yeah, we feel so crystic, we wanna go home.

The Soil Down The Hall (From Mary)

By Milan Pavich Written for the 1987 Penrose Conference on paleosols in sedimentary rocks To the tune of *Wouldn't It Be Loverly*

All I need is a woodland green, far away from the Pleistocene, With peds and thick Bt, O wouldn't it be loverly?

Lots of ash making lots of A, lots of bugs translocating clay, Cutans of red and grey, O wouldn't it be loverly?

I would wait for a rooting tree, the vertisols would all envy me. I'd have a never-ending B, O wouldn't I be loverly?

O, so loverly sittin' absobuuminlootly still, I would wait till Birkeland came and sampled me with his skill.

Then I'd be in the GSA or even Paleopedologia, But most importantly I'd be down the hall from Mary, Mary, Mary, Mary,

I'd be down the hall from Mary.

The Av Lament

By Marith Reheis

Written at 1987 Pacific FOP trip to the northern Lahontan desert, on the occasion of being roasted by Fred Peterson

To the tune of Mama Tried

1.

First thing I remember knowin' was the silt and clay a-blowin', And I thought that I was growin' up to hide 'Neath a pavement in the sun, never havin' any fun, Then the scientists they started takin' sides.

2.

Springer said it's really neat how vesicles form in the heat, Expanding gases make those little holes.

Miller said that's full of shit, capillarity forms those pits, And it doesn't matter if it's hot or cold.

Chorus

Is it heat or is it water that forms my vesicles?
Well, Peterson, he lectured and he tried, yes he tried,
Lord he tried to teach them better, but his teachings they decried,
That leaves only them to blame 'cause Freddy tried.

3.

First you wet that silty ground, and it percolates on down, My little air-filled pores are sucking hard. The smallest pores are mostly stressed, and they move and coalesce, Then drying leaves me massive, pocked and scarred.

Tephra

By Marith Reheis Written for the 1990 INQUA Conference on Tephrochronology in Yellowstone To the tune of *Freight Train*

Tephra, tephra, blowing so fast; tephra, tephra, volcanic ash. Wish I knew how old it is, guess I need a chronologist.

First we'll try the chemistry. Majors and rare earths are the key. Eruptive source they might locate – if I'm lucky too, a date.

Why do magmas evolve so slow? Age of ash we still don't know. Forget refraction and shard shape. Too old for a carbon date.

So a smorgasbord of methods we try. The spread of dates would make you cry: Thermoluminescence, ESR, laser fusion, K-Ar.

Fission-track dating made us curse, polarity data is even worse: It's somewhere in the Pleistocene, or maybe Pliocene.

Tephra, tephra, blowing so fast; tephra, tephra, volcanic ash. Wish I knew how old it is, guess I need a chronologist.

The Glacier's Back (and there's gonna be trouble)

By the Bunkhouse Gang, Fish Lake Valley, February 1991 To the tune of *My Boyfriend's Back*

1.

The glacier's back and there's gonna be trouble, Hey la, hey la, the climate changed. The CO₂ went up, but it didn't quite double, Hey la, hey la, the climate changed. Hey, it's gonna be freezin'! Hey we're gonna do some skiin'!

2.

Glacier's been gone for such a long time, Hey la, hey la, the climate changed. Now it's back and things'll be fine, Hey la, hey la, the climate changed. Hey, it's not the younger Dryas! Hey, we're drowning in the playas!

Break: Why would the models tell so many lies? Ah-oo, ah-oo. They'll say "Hit the beaches" while there's blizzards in the skies. Ah-oo -- Wait and see!

3.

We're lost in our data, not looking out the window, Hey la, hey la, the climate changed. Computer says it's warm and it's never gonna snow, Hey la, hey la, the glacier's back. Don't need computer simulation, we got climatic degradation.

Break:

4.

They modeled for carbon and they modeled for storm tracks, Hey Ia, hey Ia, the climate changed. Expanded all the freeways and filled all the smokestacks, Hey Ia, hey Ia, the climate changed. Hey, we wrecked the carbon cycle! From my nose, there's hanging an icicle!

Hey la, hey la, the glacier's back!

One Ton Of Guano

By Warren Hoeman, winner of the 1980 Cave Ballad Contest, National Spelological Society Convention.

1.
Guanos noches, Senora
Could I please have refresco?
I come from deep in caverna,
Where my amigos wait rescue;
Across the guano we stealing,

When we got stinking feeling. . .

Chorus

One tone of guano, I feel like one ton of guano, One ton of guano, I feel like on ton of guano.

2.
One of our loco compadres,
Was a Norte 'mericano,
And to show he tough hombre,
We enter room full of guano,
Because he thought it was macho,
We land in bat-shit gazpacho. . .

3.
Adios, my senora,
Thank you for the kind favor,
Pardon, please, my aroma,
For I'm no longer a caver;
I knew I'd come to my limit,
When they asked me swim it.

Faulty Logic

By Dave Seymour South-Central Coast of California FOP Trip, 1990 To the tune of *Girl from Ipanema*

Dark and gray and wet and stormy, What do you want from California? In the valley of bears, the raccoons say, ah-h-h

Strand lines sway across the fault zone, Embayment length is just one unknown, Harden indices don't work, and you just say, ah-h-h

Chorus

Ohh. . .you hope we believe you, But how. do your faults really move? Yes.the uplifts might prove, But now that you've put it in print, How can we call it bull _____?

Retro-de-form-a-ble cross sections, I hope you made some good assumptions, Just look at your graphics, they make me say, ah-h-h!

Somewhere Over The Threshold

By Janet Sowers and K. Vincent 1985 FOP Trip To the tune of *Somewhere Over The Rainbow*

1.

Somewhere over the threshold Streamlets braid, Making multiple channels, At least sometimes, anyway.

2.

Somewhere over the threshold, Hillslopes fail; We think "pore water pressure" Makes too complex a tale.

3.

Somewhere over the threshold, Fans entrench; It's a "complex response;" (These terms make it all make sense.)

4.

Somewhere over the threshold Big rocks move; There's a "critical shear stress" People still try to prove. We stand upon the mountaintop And gaze down to the hills and streams eroding;

Where forces build and build and build Until they reach the point where they Begin thresholding . . .

5.

Somewhere over the threshold Equilibrium is at bay; Positive feedback overcame it, So it swang the other way.

6.

Somewhere over the threshold Hills look strange; We have no good explanation, Must be climatic change.

7.

Somewhere over the threshold lvory towers shine; It built their reputations; Why, O why not mine?

Job Market Blues

U.C. Berkeley Santa Barbara's Day 1983 To the tune of *Hey, Look Me Over*

Hey, future employer, I'm over here! Fresh out of grad school, in debit up to my ears; But I've got potential, so I'm not depressed; They say the job market is looking up, as long as I'm not picky--

I could map toxic waste dumps, sampling the pits, Teach junior college way out in the sticks; Free lance consulting won't pay the bills; If only the Survey were hiring, I'd make enough to ear--

And I've got no publications, three in the pipes, Qualifications don't look very nice; I'm a little bit short on experience, but let me get me some, And look out world, here I come!

Cover Of The GSA

Lyrics by Rick Ford, Greg Martinez, John Pickle, and Steve Sares -- written on the long drive from Albuquerque to the first meeting of the AGFG in Pinedale, Wyoming To the tune of *Cover of the Rolling Stone*

Hey G.K. -- Tell him who we are!

Well we're big geomorphers, we've got
Golden trowels and we're loved everywhere we go,
We sing about process and we sing about form
For ten measly dollars a show.
We've measured all kinds of rills,
It gives us all kinds of thrills,
But the thrill we cannot say,
Is the thrill that'll get ya'
When you get your picture
On the cover of the G.S.A.

Chorus

G.S.A. --Gonna see my picture on the cover G.S.A.-- Gonna buy five copies for my mother G.S.A. --Gonna see my smiling face On the cover of the G.S.A. (on the cover of the G.S.A.)

We study incision with our stereo vision Till our eyes streak 10R HUES.
And we've measured drainage nets Till we felt those topo blues.
We've quantified cirques
Till we've gone berserk.
But we're feeling no dismay-Cause the thrill it'll get ya'
When you get your picture
On the cover of the G.S.A.

Chorus

We've got a freaky professor
--call him soil molester-Who drags us 'round the land
We see things all around us
Like a cambic B in the sand
Call us "dirt geologists," it won't bother us,
We don't give a damn today.
Cause the name that we'll have us
And the fame that we'll grab us
On the cover of the G.S.A.

Stop In The Name Of Rigor

U.C. Berkeley Santa Barbara's Day 1983 To the tune *Stop in the Name of Love*

STOP!! In the name of Rigor Before you draft that figure

Baby, baby, I'm aware of where you go
Each time you leave the lab
I watch you going down to your locker
Knowing that you're going out to play soccer
This time before you walk out that door
Leaving me with my modal amount

Think it over (I've been good to you)
Think it over (So sweet to you)

STOP!! In the name of Rigor Before you draft that figure STOP!! In the name of Rigor Before you draft that figure

Think it over, Think it over

Before you publish that absurd interpretation Stop and think if it could hurt our reputation So, get back there in the lab and keep cranking So next time we can improve our ranking This time before you walk out that door Leaving me with my modal amount

Think it over (I've been good to you) Think it over (So sweet to you)

STOP!! In the name of Rigor Before you draft that figure STOP!! In the name of Rigor Before you draft that figure

Think it over, Think it over

Before you model that thermal perturbation Don't you think you should consider it's duration All other science is so Micky Mousian 'Cause it doesn't fit a curve that's Gaussian

STOP!! In the name of Rigor Before you draft that figure--STOP!!

Gimme That Ole Time Geology

U.C. Berkeley's Santa Barbara's Day 1983 To the tune of *Gimme That Old Time Religion*

Gimme that ole time Geology, Gimme that ole time Geology Gimme that ole time Geology, That's good enough for me.

Bring back the Brunton compass, Forget the pH rumpus What's good enough for _____, That's good enough for me.

Gimme that ole time mapping, I'm tired of test tube tapping What's good enough for Clyde, Is good enough for me.

Out with smelly experimentals, And partial differentials "If you can add," said Lawson, "That's good enough for me."

Where's that ole-time Geochem fone, Who cares about Gibbs and Boltzmann? It was good enough for Goldschmidt, And it's good enough for me.

Gimme that old time Petrology, Without that Probe Technology It was good enough for Gilbert, And it's good enough for me.

Gimme those ole hand specimens, Without Weissenberg and Precision It was good enough for Adolph, And it's good enough for me.

Gimme that ole time Geomorphology, Without pipe flow hydrology It was good enough for Davis, And it's good enough for me.

Gimme that ole time seismology, No new wave propagation technology If it's good enough for Bruce Bolt, It's good enough for me.

Gimme that ole time slide rule, You know it's from the old school It's good enough for Luna, And it's good enough for me.

Gimme heat flow perturbations, Without computerizations It was good to John Verhoogen, And it's good enough for me.

Gimme those ole basic studies, And profs that are your buddies But not researching fuddies, To hell with entropy.

Rennie's Song

Written by Marith Reheis and Doug Rennie on the dust-trap rounds, 1988 and 1989 Original tune

Sing a song, I want you all to sing along, Sing a song that Rennie wrote in the field with me. He loved beer, hot springs with friends far and near, And the music that we made, singing harmony.

Doug would dance in the moonlight or broad light of day, He'd be there any time to help or to play. Fireworks in the evening or coffee in bed, He would keep us all in stitches with the things that he said, like--

"Desert air, gotta drink a lot of beer, Keeps you in your sleeping bag when the morning comes. Tarantulas, they are mighty treacherous, Crawl into your hiking boots while you're catching Zs."

Rennie loved bright moonlight or broad light of day, And he loathed the stinking desert (or so he would say). Fireworks in the evening, or coffee in bed, He would keep us all in stitches with the things that he said, like--

"Scorpions, when you camp upon their dens, Crawl into your sleeping bag while you're collecting dust. Mojave greens, something that I've never seen, But I see them in my dreams, keeps me up all night, so Desert air, gotta drink a lot of beer, Keeps you in your sleeping bag when the morning comes."

Cosmogenesis

By Milan Pavich; written for the 1990 Penrose Conference Obvious tune

O beautiful for polished rock, for surfaces pristine, For all the brilliant physicists whose equations are so clean. The helium, beryllium, chlorine and varnish too, We'll date the rind, we'll date it blind, and publish all we find.

The lichen and the varnish grow, the surfaces erode, But we will scoop and we will pluck the carbon we control. The helium, beryllium, chlorine and varnish too, But soils will yield the final truth and we can all go home.

Carver And Burke

By Alan Gillespie and Marith Reheis Written for the post-earthquake 1992 Pacific FOP, Humboldt County To the tune of *Bonnie and Clyde*, seque to *Acres of Clams*

Carver and Burke are independent thinkers and famous beer drinkers--they are not like us. Carver and Burke, they teach a lot of classes, take contracts from jackasses--not at all like us. One day at the FOP, they had a little too much to drink.

They lost the capacity to think very clear, agreed to lead a field trip next year.

So Carver and Burke selected Triple Junction in hopes that seismic function would soon begin. In that expectation, they were not disappointed, an earthquake soon disjointed rocks at Mendocin.

(break for four counts)

But we're here to tell the truth about this fairy tale:

The devil found that their souls were for sale, and cut them a discount deal.

Because of this bargain they made with the devil,
The shoreline was unleveled where the clam beds lay.
Acres of clams, gasping in the moonlight,
Not morally correct, but that's the price they paid.
(segue to Acres of Clams)
Exposing acres of clams, of clams, exposing acres of clams,
Their reprehensible bargains have murdered acres of clams.

They used to be honest geologists, they liked to dig holes and pound rocks, But they bargained to be great tectonicists, with models inside a black box. With models inside a black box, with models inside a black box, They bargained to be great tectonicists with models inside a black box.

On moving up to Humboldt weather, pedantic existence they sought, But the beer and the rain mixed together, afflicting their brains with rot. Afflicting their brains with rot, with rot, afflicting their brains with rot. The beer and the rain mixed together, afflicting their brains with rot.

In the prophecies they have been making, a magnitude nine would be best, But we think they are probably faking, and we hope they won't make such a mess--With millions of acres of clams, dead clams, with millions of acres of clams, Their reprehensible bargains would murder millions of clams.

And they're stinking to high heaven!

High-Resolution Climatic Humility

By Marith Reheis Written for 1992 AMQUA meeting, Davis, California To the tune of *Bonnie and Clyde*

Climatic change is very complicated,
We shouldn't overrate the records that we find.
Signal to noise, how can we calibrate it?
The bumps and troughs of climate may be just our minds.
Carbon dates can be interpreted in so many ways,
The time crossings leave your mind in a daze,
And stratigraphy that's clearly crazed.

Tree-rings are great if it's wet enough to grow 'em,
The squiggles that they show for radiocarbon time.
Ice cores and varves are steady as Gibraltar,
Chronologies don't falter-- most of the time.
But when drainages change or the icy polar winds blow,
Those errors creep in and you never will know
Lacking other dates to tell you so.

Loess is OK for cycles that are glacial,
But magnetic source of signal is a mystery.
Speleothems and corals are attractive,
Who cares about the dates? Field work's an ecstasy.
Glaciers advance and retreat when they bloody well please.
Interpreting permafrost's a relative breeze-Records extent to which Canadians freeze.

High resolution records are so tricky, But global change is icky--so we try.

Trench Across The Fault Tonight

Words by Janet Sowers and Gary Simpson 1994 FOP Trip, San Francisco Bay Area To the tune of *Rock Around the Clock Tonight*

One, two, three meter, four meter trench, Five, six, seven meter, eight meter trench, Nine, tem, eleven meter, twelve meter trench, We're gonna trench across the fault tonight!

1.

Got to find those fault plane slicks, Four or five, or six events;

Chorus

We're gonna trench across the fault tonight, We're gonna trench, trench, trench trench 'till the broad daylight, We're gonna trench, gonna trench across the fault tonight.

Does it truncate Qt2?
 Yeah, trench log changes red to blue;

3.
A piercing point would wrap it up Dave's got one at every stop;

- 4. Plot those vectors nose to tail, Got some extra slip for sale?
- 5. What the heck's that lineament? Just a photo fig-a-ment;

Ballad Of The Friends Of The Pleistocene

By Gerry Osborn, Eric Karlstrom, and Anonymous To the tune *My Little Buttercup*

Chorus

We're Friends of the Pleistocene, damn little ice we've seen, Listen and I'll tell you why...
The ice has retreated, the lakes have depleted,
The temperature's risen too high.

- 1. We've rocks and we've gravels, our mysteries unravel, a mammoth-sized job you can see... With eskers and kames and plenty of names to apply to the glacial debris.
- 2. We dig in the mud and we sift through the crud, we search through the grassland and scrub.. Some work on the bones and some work on the stones, some work in the Faculty Club.
- 3. We captured the essence of thermoluminescence, at carbon-fourteen we're quite fit, But if all we can find is a weathering rind, then we'll hang the whole story on it.

(CANQUA 1982 verses)

- 4. Now CANQUA's in session to serve our profession, all sorts of ideas we'll concoct. We'll hear all the news about climatic clues, and then we'll all go and get crocked.
- 5. Our President Bill (Mahaney) has I guess had his fill of hosting the annual spree. He put the cork on the meetings at York and that's why we're in Lethbridge you see.

(GSA Flagstaff 1986 verses)

- 6. In Flagstaff we're meeting, our colleagues we're greeting, to probe an arroyo or two. While drinking hot toddies, we'll ponder the wadis, promoting our own points of view.
- 7. Is it complex response or climatic nuance, or grazing by large flocks of sheep? We'll hear proclamations and learned orations--My god, how the bullshit runs deep!

(Retirement of Brainerd Mears Jr., 1989)

- 8. Now our mentor Nip has got a firm grip on wedges which criss-cross the land. He slogs through the pipelines and conjures up cold times, arm-waving with stogey in hand
- 9. Now Mears is retiring, an upstart they're hiring, it's the end of an epoch you see. This geomorph sage of structure, process, and stage, The William Morris Davis....G.K. Gilbert...Albrecht Penck...S.H. Knight...and J.D. Love... of the Quaternary.

It Was A Very Good Year

By Alan Gillespie and Marith Reheis, on the occasion of R.M. Burke's birthday, Alabama Hills, 1994

When I was twenty-two, it was a very good year, I drank some very good beer and then enlisted to avoid the war. I drank some more, and then I swore that I would drink no more.

When I was twenty-six, it was a very good year, It was a very good year to dig soil pits and play with dirt. My back did hurt, my arms got sore, and then I dug some more.

When I was thirty-three, it was a very good year, It was a very good year to lead a FOP and drink till I dropped. I became a doc, it was crock, I went to Menlo Pock.

When I was thirty-eight, I was at Humboldt State, I was at Humboldt State, I held the chair, a real nightmare-The Dean wasn't fair, I didn't care, 'cause I got hitched that year.

And now I'm forty-eight, I'm in the autumn of my years, I drink much less-- except tonight when I'll get tight.
But I feel blessed, I still take requests..... (segue to Swing Low, Sweet Chariot)

If I Had A Hammer

By Lori Dengler, during the HSU Field Valley, 1994

If I had a hammer, I'd hammer in the morning, I'd hammer in the evening, all over this land.

I'd hammer out P-waves, I'd hammer out air waves, I'd hammer out the zone between the bedrock and the soil, All, all over this land.

If I had electrodes, I'd juice them in the morning, I'd juice them in the evening, all over this land.

I'd measure out a current, I'd measure out a voltage, Electrical resistance, of every little stratum, All, all over this land.

With a magnetometer, I'd measure out the gammas, I'd measure out the gammas, all over this land.

I'd use good batteries, I'd strip off all my clothes, So my data won't be tainted And the numbers integrated, All, all over this land.

Well I've got a hammer, and I've got electrodes And a magnetometer, to study this land.

Black boxes I will use, I'll spin their little dials, And I'll get all the answers, without a pit or an auger, All, all over this land.

Fault-Scarp Ridin' Cowboy

By Marith Reheis for Bill Page at the 1995 Pacific FOP (Modoc Plateau) To the tune of *Palo Alto Cowboy* by Reilly and Maloney

Chorus

Well he's a fault-scarp ridin' cowboy,
He drives the Tahoe trench
From the lava tubes of Modoc
To the flows up on the Hat Creek bench
To the trench in Butt Crack Valley,
He herds us all along.
Though the crops are few and far between,
His tectonic views are strong.

From the moment that Bill
Handed us those five-pound color guides,
We could see from the daily schedule,
We were in for quite a ride.
There were panoramic overviews
Of pristine mountain peaks.
There were lengthy naptime lectures
By pmag and argon geeks.

Up at five, barely alive,
No sun to light our way-Good practice for those lava caves—
But no time to delay.
We sucked up all the silicosis
That our lungs could take.
We hollered "Bill, this is a drag,
Your schedule has no break!"

Chorus

On The Playa

By Janet Sowers, Bob Hale, and Mark Hemphill-Haley for the Pacific FOP, Lake Lahontan, 1997 To the tune of *Jambalaya*

Chorus

Wavecut fan, high lake stand, me-oh-my-ya, And tonight we'll sing around the old campfi-ya, Carson Sink, where we drink and frisbees fly-a, Son-of-a-gun, gonna have good fun on the playa.

I.

Residual plots, circular thoughts make us sigh-ya, And we search for shorelines perched as we drive by-a, Yes it's true, it's all new, there's one high-ya, But son-of-a-gun, gonna have good fun on the playa.

II.

Yes we found, it rebounds, I-so-sta-ya, Up and down, pound for pound, can't deny-a; On that note, take a vote, and say good-by-a, Son-of-a-gun, we had good fun on the playa!

The Ballad Of Owens Lake

Copyright July 1991 by Tom Gill; sung at 1997 Owens Valley FOP To the tune of *Margaritaville*

1. Out on the dry lake watching the sun bake millions of tons of salt-covered dirt Particulate readings are reaching their ceilings my nose is bleeding, my sinuses hurt

Blowing away again from Owens Lake today Billowing clouds of alkali salt Some people claim that there's no one to blame But I think...it must be someone's fault

2. The local folks get sick and worry 'bout arsenic The geezers in Keeler, they wheeze and they whine China Lake's missiles go off-track and fizzle Pollution could damage the bristlecone pines

Blowing away again from Owens Lake today Millions of tons of evaporite salt Someone might claim that the climate's to blame But I think...it could be LA's fault

3. We put up a tower run with solar power
Satellite uplink sends data back home
Well, there's dust in the samples and we'll soon get some answers
From SENSITs deployed in the saltation zone

Blowing away today from Owens Lake again Millions of tons of silt and of salt.

Some people claim that there's no one to blame But I know...it must be LA's fault.

4. Now we could plant saltgrass and hope that it grows fast And roughen the surface with gravel or till Or fence up some sand dunes and pray for the monsoons Not even a typhoon would make the lake fill

Blowing away today from Owens Lake again Billowing clouds of dust and of salt Some lawyers may claim that there's no one to blame But we know...it's LA's damn fault!

Zzyzx Black Ops

By Alan Gillespie and Marith Reheis Workshop on Military Use of Desert Lands, Zzyzx, 1998 To the tune *When the Caissons Go Rolling Along*

Over hill, over dale,
Tanks are making dusty trails
And the wind takes the Av away
Abrams wheel, half-tracks squeal,
How do desert critters feel
As their burrows are flattened today?

Chorus

Well it's crypto-Gs
For soil fertility
Liverworts and mosses we eschew
And wherever we go
Soils will always show
Hydrologic discontinuities.

Rip some soil, set some plants Stroke the Army for some grants But machines do the thinking today. CPUs, RAM, virtual data we put in As the models keep churning away.

Boundary C's if you please
Bring computers to their knees
As the models diverge from ideal
Write and plot, publish lots,
Hope that we are not found out
As we sub the virtual for real.

Last Chorus
Well it's hi-hi-hee
Cal Tech and MIT
Why should we go in the field?
If we do it right
And the simulation's tight
Then we won't have to know what is real.

Blowin' In The Wind

By Marith Reheis Fourth International Conference on Aeolian Research, Oxford, 1998

How many times can a barchan
Be moved before she sleeps in the sand?
How many dunes must a man walk up
Before he conceives a research plan?
Yes, and how many days must we spend in the field
Before we develop a tan?

The answers, my friends, are blowin' in the wind The answers are blowin' in the wind

How many ways can some people invent For quartz grains to luminesce? How many ways can one person try To make stupid sand confess? Yes, and how can we blame innocent little bunnies As causes of climatic stress?

The answers, my friends, are blowin' in the wind The answers are blowin' in the wind

How many models must one study use To show there is something to prove? How many differentials are needed to show That wind can make dust move? Yes, and how many methods to understand That loess means that wind once blew?

The answers, my friends, are blowin' in the wind The answers are blowin' in the wind.

How many storms in West Texas can blow Until nothing's left but sand?
How much dust can one person inhale Before her lungs can be canned?
Yes, and how many TWERPs does it take to know That tilling the soil should be banned?

The answers, my friends, are blowin' in the wind.

The answers are blowin' in the wind.

Nora

By Joanna Redwine and Marith Reheis, Owens Valley 1997 FOP To the tune of *Lola*

We came to the desert to drive a little sand Collect a little dust and work on a tan Then came Nora N-O-R-A, Nora.

She came from the south down in Mexico And how long she'll stay here, nobody knows That's Nora N-O-R-A, Nora No-no-no Nora.

Well I'd never seen a hurricane before But here in the desert it's just a downpour— Nora's here and there's no mistake The entire desert is one big lake!

El Niño's comin' to make a big splash So we set up some stations to photograph All the flora F-L-O-R-A, flora.

But long before El Niño shows his face Flowers gonna bloom all over the place 'Cause of Nora N-O-R-A, Nora No-no-no Nora

We sloshed down the fans and made it to the car Headed for the FOP at Lone Pine, not far But the Park Service said the pass is closed We ran the blockade and drove the Wild Rose!

Now I'm not the world's most intelligent guy But this time of year the desert should be dry Don'tcha know-a Know-know-know-know-a

I've never been wetter in all my days It's a soupy, soaked-down, soggy place Around Nora, N-O-R-A Nora, no-no-no-no more-a, No-no-no-no Nora I can't take no more-a No-no-no-no Nora!

The Aku Song

By Kevin Andras and Marith Reheis, for Fred Peterson on 1998 Pacific FOP to Yucca Mountain

1.

Everyone's spirit has place to dwell. Aku-aku-ah-nay. Come too near, you go to hell. Chaca-mo-fee-nah-nay. Talkin' 'bout aku, aku, aku-aku-ah-nay. Chaca-mo fee-no, ah-nah-nay, chaca-mo-fee-nah-nay.

Talkin' 'bout aku, aku, aku-aku-ah nay. Chaca-mo fee-no, ah-nah-nay, chaca-mo-fee-nah-nay.

2.

Aku here and aku there, aku-aku-ah-nay. Aku it be everywhere, chaca-mo-fee-nah-nay. Talkin' 'bout aku, aku, aku-aku-ah nay. Chaca-mo fee-no, ah-nah-nay, chaca-mo-fee-nah-nay.

3.

See that soil pit over there? Aku-aku-ah-nay.
Touch it, aku take your hair. Aku-aku-ah-nay.
Talkin' bout soil pit, soil pit, aku-aku-ah nay.
Chaca-mo fee-no, ah-nah-nay, chaca-mo-fee-nah-nay.

4.

See that pavement just ahead? Aku-aku-ah-nay. Step on it and you be dead. Aku-aku-ah-nay. Talkin' bout pavement, pavement, aku-aku-ah nay. Chaca-mo fee-no, ah-nah-nay, chaca-mo-fee-nah-nay.

Roll on Missoula

By Thomas Dunklin First Annual Pacific Northwest Cell of The Friends of the Pleistocene Channeled Scablands, 1993, led by Richard Waitt and Jim O'Connor (Sung to the Tune of *Roll on, Columbia* by Woody Guthrie)

GD/DG/GC/DG

J. Harlan Bretz, a determined young man Studied the forms of this puzzling land, His evidence showed him INVARIABLY, That scablands were formed by **cat**-astrophe.

chorus (sing-along):
Roll on Missoula roll on
Roll on Missoula roll on
You've got just two days until you'll be gone
So, roll on Missoula roll on.

A plexus of channels they gave him a clue Of what catastrophic flooding could do. He saw the big picture, though he never flew If you were in his shoes, then what would you do

chorus

They riduculed his "outrageous hypotheses"
The council of elders he never could please
But the elders knew nothing of features like these
The papers he wrote brought them to their knees

chorus

Now Waitt and O'Connor they spent lots of time Preparing for FOP'ers to drive in long lines Now no-one will question their hypotheses Of Uniformitarian Catastrophes.

Old and Blown Away - song for the Bishop Tuff

Sung to the Tune: Old and In the Way by Garcia/Grisman, from the Album of the same name. Lyrics by Thomas Dunklin, Rocco Fiori, and Natalie Cabrera, January, 1996

CHORUS:

| Old and blown away | C - D - |
|--------------------------------|----------|
| That's what I heard him say | G - C - |
| So many cubic miles | Am - C - |
| Just up and blew away | C - G - |
| Welded tuffs and ash flows lay | C - D - |
| Then glaciers had their day | G - C - |
| The tills are all a-jumbled | Am - C - |
| But in a systematic way | C - G - |

Ι.

| When this one blew, poles were normal | D - G - |
|---|-------------|
| Bruhnes/Matayuma was defined | C - G - D - |
| I don't care what people say | C |
| How old these rocks are anyway | G - Em |
| 'Cause Allen Gillespie says | Am - C - |
| they're seven hundred and sixty three K | C - G - |

CHORUS

2.

Now all that's left is the caldera
The Bishop tuff surrounds it for a ways
The Sherwin Till is buried deep
Thru clastic dikes the air it seeks (maybe not)
How exactly we can't say
We're just stoned and blown away

CHORUS

3.

Well if the Mountain starts to rumble Well don't you worry 'bout a thing The Survey says its on it way The City Chamber says "no way" Just in case you better know about the scene-less scenic highway

Repeat CHORUS one last time

The Climate Is A-changin'

Words by Thomas Dunklin Sung to "The times they are a-changin" by Bob Dylan (1963)

Come gather round people wherever you roam And admit that the waters around you have grown. Watchout, for transgression may swallow your home, For sea level just keeps on a-risin' So you better stop buildin' in the old coastal zone For the climate it is a-changin'.

The glaciers have come and then they have gone. Over thousands of years, yes, their cycles are long. As the climate gets cooler, more rain it will fall The rivers run deeper with sand, mud and all The shoreline receeds and sea level does fall For the climate it is a changin'.

Climatologists, geologists who wander the lands: Now tell us the truth if you think that you can. Can the things that you see make sense to a man? Are they just too complex to keep tryin'? If they don't listen soon they'll be dead as canned spam, For the climate it is a changin'.

Dynamic equilibrium is a thing of past,
The next threshold's comin' along awfully fast.
We better stop thinking, and start doin' at last
If your papers to you are worth writin'
Complex response will keep kickin' our ass
For the climate it is a changin'.

Come senators, congressmen please heed the call: The greenhouse effect is now real to us all, As the ozone hole gets larger each fall The burns from the sun are a killin'. Please open your ears, pull your heads from sand For the climate it is a changin'.

FOP on the Run

Words by Thomas Dunklin and Zack Mondry, for 1998 Yucca Mountain FOP To the tune "Fox on the Run".

Chords:

D Am C G (4x) D - G - (2x)

We drove thru the dust, heading out to the ballena Our heads were a-poundin' in the hot morning sun Taking all the soils that ole' Fred could a-give us And he left us to fry like a FOP in the sun

Like a FOP – in the sun Like a FOP – on the Run

Uranium series or uranium trend It don't really matter -- fits the model in the end Lots and lots of numbers, and lots and lots of dates lots of uncertainty, but that just what it takes -

to run a FOP – in the sun Like a FOP – on the Run

Two parts charcoal, and a little bit rock varnish Just don't get caught, or your rep will get a-tarnished Your career it will fly, like cosmic rays to the sun And you'll find yourself – like a Doc on the Run

Like a Doc – in the sun Like a Doc – on the run

Yeah, We drove thru the dust, heading out to the ballena Our heads were a-poundin' in the hot morning sun Taking all the soils that ole' Fred could a-give us And he left us to fry like a FOP in the sun

Like a FOP – in the sun Like a FOP – on the Run

Fish Medley

By Marith Reheis, for 1999 Pacific FOP to McDermitt and Alvord Valley, NV-OR Medley of tunes: Three Little Fishies (1st tune) and Fish Gotta Swim (2nd tune)

Three grad students and professors two,
Came to the Alvord from HSU,
Mapping shores and soils and where faults broke,
Try to write it all up, drink beer, and smoke.
Boom-boom diddum-daddum waddum shoo,
(repeat twice more)
Try to write it all up, drink beer and smoke.
(shift to second tune)
Grads gotta work, grads gotta play,
Sitting in hot springs the livelong day,
Can't help lovin' that Humboldt way.

Three big faults, what do they mean?
The Quinn and the Tule and the whoppin' Steens, Is it gravity collapse or dextral shear?
With kinematic modeling, all is so clear.
Boom-boom etc.
With kinematic modeling, all is so clear.

Faults gotta break, crust gotta strain, Make basins closed that never drain, Fish gotta wait for the major pluvial rains.

A dace and a chub and a cutthroat too,
Down in Owyhee when a flood came through,
Swim, said the chub, let's go explore
And they swam Crooked Creek right up to Alvord.
Boom-boom etc.
And they swam Crooked Creek right up to Alvord.

Fish gotta swim, fish eggs don't fly, Cruise between lakes before they dry, Hide up creeks, or desiccate and fry.

Grads gotta work, grads gotta play, Sitting in hot springs the livelong day, Can't help lovin' that Humboldt way. Can't help lovin' that Humboldt way. Can't help lovin' that Humboldt way.

IF I HAD A BACKHOE

Written by Jennifer Harden, probably 1986 at Zzyzx

1.

If I had a backhoe, I'd dig in the morning, I'd dig in the evening all over this land. I'd dig out lava flows, I'd dig out end moraines, I'd dig out the contact between the Bt and Bkq All, all over this land.

2.

If I had a student, I'd run all analyses From Fed to Mausbauer, all over this land. I'd sample just scores of soils from surfaces young to old, At intervals of centimeters for microprobe and paleomag, All, all over this land.

3.

Now I have a strong back, a shovel and a pick, And I have holes to dig all over this land. I'll make slow progress, run only prep and size, But I'll keep on dreaming of backhoes, bucks and student labor All, all over this land.

DEATH VALLEY DREAMIN'

By Marith Reheis, Feb. 2001, Pacific FOP, Death Valley Tune: California Dreamin' by the Mamas and Papas

- 1.
- All the mud is brown, and the salt is gray, I went for a walk across the playa today. Should be drinkin' beer and watchin' palm trees sway, Death Valley dreamin' on such a winter's day.
- 2.

Waded through a lake that lay across the way, Lord, I sank up to my knees, and I began to pray, "You know I'm stuck here in the salt, please don't send rain today!" Death Valley dreamin' on such a winter's day.

- 3.
 There's scarps at Mormon Point, so most geologists say, If we weren't the best of Friends, there'd be hell to pay. "It's not a fault, it's a beach, as any fool can see."
 Death Valley dreamin' Pleistocene geology.
- 4.

Slept upon a fault near Furnace Creek last night, Well the earth began to shake, I had a terrible fright. Strain accommodation on several intersecting splays, Death Valley dreamin' could be a nightmare today!

Repeat 1.

All the mud is brown, and the salt is gray, I went for a walk across the playa today. Should be drinkin' beer and watchin' palm trees sway, Death Valley dreamin' on such a winter's day.

OSTRACODE'S GARDEN

By Marith Reheis, September 2001, Pacific Northwest FOP, Summer Lake, Oregon Tune: Octopus's Garden by the Beatles

- 1.
- I'd like to play under a wave in an ostracode's garden in a lake, I'd dance about when ash falls out, turn somersaults in a big earthquake. I could ride down the gravity grade, if I only knew which way to go, I'm so confused, it makes me blue, because I thought FOP leaders would know.
- 2. When landslides come, I'd turn and run, it'll shoot me 'cross the bottom, anyway, I'll laugh and shout, turn inside out, as thrusting folds the beds in which I lay. I'll deform so brittlely now as extension makes the mud attenuate, So just you wait, let's fill the lake, and see if ostracodes can boudinate.
- 3.
 And don't you guess, we'll make a mess of the climatic proxies that you take?
 Stage 12 and 8 are replicates, doubled by the thrusts under the lake.I
 Dansgard-Oeschger cycles we will fake, in our little hideaway beneath the waves, I'd like to wait under a lake in an ostracode's garden for you,
 In an ostracode's garden for you.

DIXIE

By: Marith Reheis, September 2002, Pacific FOP, Dixie Valley, Nevada Tune: Dixie, of course

1.

Oh I wish I was in the Land of Faultin', earthquakes there are not forgotten, Shook away, shook away, shook away, Dixie Land. In Dixie Land where scarps were born in, early on one frosty mornin', Slip away, slip away, slip away, Dixie Land.

Chorus:

And I wish I'd been in Dixie, that day, that day, In Dixie Land where piedmont fans were broke that day in Dixie. That day, that day, that day out west in Dixie! We pray today, we pray for quakes in Dixie!

2.

Oh I wish I'd been on Rainbow Mountain, earthquakes came to fast to count 'em, Shook away, shook away, shook away, Carson Sink.
Tsunami waves on Lake Lahontan, beach rocks rolled up Rainbow Mountain, Slip away, slip away, slip away, Carson Sink.

Chorus:

And I wish I'd been in Dixie, that day, that day, In Dixie Land where piedmont fans were broke that day in Dixie. That day, that day, that day out west in Dixie! Hurray, hurray, hurray for Friends in Dixie!

LAHONTAN'S RISING

By: ????, September 2002, Pacific FOP, Dixie Valley, Nevada Tune:

1: We got the data, nothing to fake, no relief from the rising lake. Something in the way of the world has changed; Nevada has been faulted, rearranged.

Chorus:

Well, Lahontan's rising, the valley is dropping down, Lahontan's rising, take it to a higher ground!

- 2: All too little, much too late, natural disaster's tempting fate, Going against all natural laws, Adam's shorelines, Caskey's faults.
- 3. FOPpers came, FOPpers went, saw faults straight and saw faults bent. Were they shallow? Were they deep? Interpretation took a leap.

The Answer is Dale Gillette

By: Tom Gill and Jeff Lee, ICAR VI, Guelph, Canada, 2006

Tune: Blowin' in the Wind

How many men can let out a laugh that is heard 'cross a crowded room? And how many men would set out a trap to catch grains of sand on a dune? And how many men have distinguished careers that are lauded by us in a tune? The answer my friend is blowing in the wind,

The answer is Dale Gillette.

Who has chased dust from the loess of Lanzhou to Shaartuz in Tadzhikistan? On playas and plains, where saltation entrains who goes out in the field with a plan? In mesquites at Jornada, or some unnamed bajada, who's the master aeolian man? The answer my friend is blowing in the wind,

The answer is Dale Gillette.

What kind of guy in a sand stormy sky would run out to a B S N E? In a forsaken place like the dry Owens Lake, or the floor of the shrunken Aral Sea? And whose countless hours with 10-meter towers have taught us to love U - star- t? The answer my friend is blowing in the wind,

The answer is Dale Gillette.

Where is the man who'd catch sand in a can to find out the field length effect?
Where erodible crusts and turbulent gusts give the fluxes that he will expect
Where hotspots of emission and revised drag partition are concepts of his we respect?
The answer my friend is blowing in the wind,
The answer is Dale Gillette.

How many talks can one man present about sand flux and Owen's effect? And how many papers can one man submit that editors just can't reject? And how many ICARs can one man attend from Denmark to Zyzzyx and back? The answer my friend is blowing in the wind, The answer is Dale Gillette.

His stories get goin' of the late P.R. Owen, a pioneer who showed him the way But just like Ralph Bagnold, one day we must grow old, wrap the scene but not fade away He will leave dusty skies to philosophize so we honor and laud him today! We haven't heard the last of Dale Gillette, Let's hear it for Dale Gillette.

I Will Survive (my DNA)

By: Joanna Redwine, Kate Maher, and Heather Lackey, April 2006, Zzyzx Bio-Geo Workshop Tune: I Will Survive

First I was afraid I'd be petrified Kept thinking I would never live If I crossed the great divide But I spent so many stages Thinking how your rates are wrong I grew strong Birds will carry me on

I regret I don't have hooks

To which my hips can be placed With that look upon your face I should have changed my molecular clock To match the geology If I had known in 8 million years you'd be back to bother me

Go on now go, now for the Bouse
Your conclusions go'round now, I can't take it anymore
Weren't you the one who said the dirt was just a lake, not estuarine?
No, the forams don't lie
It's just the sea Don't you believe
The water quality don't bother me
I;m an ostracod, not an ostracode
You know I'll be alive
I've got all my life to live, I've got all my love to give
And I'll survive, I will survive

It took all the strength I had Not to fall apart Kept trying hard to breath When you took my genes apart And I spent oh so many nights Drying our upon the shelf Darwin will not lie Now I hold my head up and sigh

And you see me now Somebody new I am not the same old DNA But I'm related to you So you felt like draping and just expect my DNA Now I'm saving my DNA For someone who likes to play On my side--- of the Divide.

Delamination

By: Robert West, September 2003, Pacific FOP, Southern Sierra Nevada

Tune: Smoke on the Water

We all came to the FOP on the Lake Kaweah shoreline To hear of uplift and erosion that couldn't take much time

It could have started with tectonics or then again climate change But some people have a notion of something all together strange

DELAMINATION Eclogite going down DELAMINATION

The S o u t h e r n S i e r r a has no e v I d e n c e of a root But no one knows just how it disappeared, And so, the whole damned point is moot

Deep in the Crystal Caaaaaaave the quart-rich sediment is stored In line to see the Shield Flows I could not say I was not bored

DELAMINATION Of gravels in the ceiling DELAMINATION

We ended up at a basalt flooooooooow it was empty of outcrop But with the eclogite root thing on our minds, the arguments don't stop

With a slab window, a thermal plume, don't need much eclogite And if we add a little climate change, Greg thinks that we can all be right

DELAMINATION Who needs it in the north? DELAMINATION

New Mexico Wind Song

By: the piano player at Billy the Kid Saloon in La Mesilla in 1964, with later modifications by John Hawley and others Tune: ???

Verse 1:

There is a place where nothing grows, Cept old mesquite and horny toads. It rarely rains and seldom snows, The g-- d--- wind just blows and blows.

Chorus: New Mexico so fertile and rich, We think you are a ----- honey.

Verse 2:

Our Rios are the Grandest yet! And bolson fills can get very wet; But we must move fast on our water debt; Cause we'll be dead broke if we lose that bet.

Verse 3:

I see some snow on you mountain peak, But close at hand it's awful bleak. The desert speaks to all who seek. Ignore its truths and you're up the creek!

Verse 4:

Our wind blows strong and its price is right, So let's tap it now to light up our night. But beware of greed for too big a bite; Or we'd do as well with Franklin's kite.

Verse 5:

Our horses are the finest raised; But starvation stares them in the face. Their meat can fill some empty space In the stomachs of the canine race.

Verse 6:

El Llano's flat and the wind blows free; My dawg's hard pressed to find a tree! But the awesome space entrances me; So, I'll stick around for eternity.

Verse 7:

But here I came, and here I'll stay. I'm just too d--- poor to move away. My well's gone dry and the dawg's astray; But I'll love this State till it blows away.

Final Chorus: Viva! La New Mexico! We think you are the way to go!

Another One Traps the Dust

By: Tom Gill (with apologies to Queen)
Tune: Another One Bites the Dust

Marith walks warily down the fan with her brim pulled way down low. Ain't no sound but the sound of the wind. Distilled water ready to go.

Are you ready? Are you ready for this? Got the dishpan right by your seat? Out of the cakepan the marbles flip to the sound of the beat.

Another one traps the dust. Another one traps the dust. And another one down, and another one down. Another one traps the dust.

Hey, I'm gonna set up two. Another pair traps the dust. How do you think I'm going to catch the fines With the electricity gone?

You took Sears for every pan that they had and made some up of your own. Is she happy? Is she satisfied? How long can she stand the heat? Out of the cakepan the marbles flip to the sound of the beat.

Another one traps the dust. Another one traps the dust. And another one down, and another one down. Another one traps the dust.

Hey, I'm gonna set up two. Another one traps the dust. Another one traps the dust. Another one traps the dust, aw! Another one traps the dust, hey hey. Another one traps the dust. Heeeeeeeeeeeeeeeeeee.

There are plenty of ways you can catch this stuff As it falls down to the ground. You can suck it out, you can remote-sense, you can model it all, or leave equipment all around.

But I'm ready. Yes. I'm ready for this. I'm setting up at two meters. Out of the cakepan the marbles flip repeating the sound of the beat.

Another one traps the dust. Another one traps the dust. And another one down, and another one down. Another one traps the dust.

Hey, I'm gonna set up two. Another pair traps the dust.

Old Bud Burke

By: Thomas Dunklin 12/4/97

Tune: Old Joe Clark

D D/C

D D/A/D

Old Bud Burke is a fine old Man As fine as he can be He goes by the name of Dr. Dirt And a dirty old man is he.

Chorus:

Buy ya a Beer old Bud Burke Buy ya a round today Buy ya a beer old Bud Burke To thank you for your ways

Old Bud Burke is a FOP-ish guy And a FOP-ish guy is he He can sing and he can dance But he's usually off key

Bud can dig like a back hoe digs Down two meters - three The only time he'll ever stop Is when he has to pee

Once had a class with old Bud Burke geo - morph - ology Tooks some tests and made some maps Who knows what became of these

Once went rafting with old Bud Burke
On the North fork smith suaree
Didn't know our left from right
So like pinballs rafted we

Old Bud Burke is a fine old Man And a Fine Old Man is he He can auction anything off And you'll think you got a deal

You Could Get Flushed Any Day

By: Dan Erbes, 1984 Tune: original

Well I'm sittin' here thinkin' 'bout the beer that I'm drinkin', Wonderin' where does it go? First to my head, and then to my liver, And in the end, I just got to go.

It was fun while it lasted but now it smells kind of rancid, And if you drank it, you'd probably die. So it's into the urinal, and just like a funeral, It's good luck, good riddance, goodbye.

Chorus:

'Cause life ain't eternal, it's just like a urinal, You could get flushed any day. And who knows where what goes when you're cast out on the unknown So you'd best go on, live for today.

Well I picked up a sixpack for the drive out to my shack, Time I got there, I'd run out of beer.
See it all turned to urine, and again I'm a-yearnin'
For another, 'fore I burst into tears.

Chorus:

Well you may not consider pissin' in the river, But that's just where they told us to go. So just go on and do it, man there ain't nothin' to it, And Las Vegas could use the water, you know.

Chorus:

Silurian Valley FOP

By: Marith Reheis, Pacific Cell FOP, Silurian Valley 2006 Tune: Dear Abby

Dear Kevin, dear John, your lecture's too long, It's just after lunch and the sun angle's wrong. With Powerpoint tables and equations we're numb, Dave said there were outcrops but there's only one. Signed, Too Sleepy

Too Sleepy, Too Sleepy, your brains are all dead, Those beers before lunch have all gone to your head. We're trying our best to educate, not to bore, Please pay more attention, sit up and don't snore! Signed, The Math Guys

Dear Matt, your conversion is not quite complete.
Young dirt and soils just cannot compete
With structures and hard rocks smashed beyond belief,
A 12-Step FOP Program may lead to relief.
Signed, Your Counselors.

Dear Counselors, Dear Counselors, I'm trying so hard To appreciate dirt, be a real FOP pard. But Proterozoics and crushed rocks are fine, I fell off the wagon, this train wreck's all mine! Signed, Lapsed Q-man.

Dear David, dear David, this fan is too huge To convince us it's due to one giant deluge. You talk about outcrops, less walking and toil, But if it's really 5000, why is there no soil? Signed, Frustrated.

Frustrated, Frustrated, you have no complaint, Fans are what they are and they ain't what they aint. It's better to talk than to walk the outcrop, And it's really too late now to go to that stop! Signed, FOP Leader.

NAPpes

By: Marith Reheis, Pacific Cell FOP 2006, Mendocino Deformation Zone

Tune: Acres of Clams

Humboldt's traveled all over this country, surveying and digging for faults and folds, They've trenched and augered and seismicked, and they stank as their clothes turned to mold, They stank as their clothes turned to mold, they stank as their clothes turned to mold, They've trenched and augered and seismicked, and they stank as their clothes turned to mold,

Coseismic subsidence or folding? Is it main thrust or backthrust revealed? FOG needs more bulldozers and loggers to expose what's so thickly concealed. To expose what's so thickly concealed. FOG needs more bulldozers and loggers to expose what's so thickly concealed.

M-D-Z deforms so complexly, how can anyone figure it out? It twists and crumples and rotates, Wakabayashi's beginning to pout! Wakabayashi's beginning to pout! It twists and crumples and rotates, Wakabayashi's beginning to pout!

North America sits like a blockhead, the Gorda Plate crushed underneath, The Pacific bulldozes northwestward, Mendocino can't get no relief. Mendocino can't get no relief, Mendocino can't get no relief, The Pacific bulldozes northwestward, Mendocino can't get no relief.

F-O-P's getting longer and longer, a new generation expands, Humboldt FOG just gets stronger and stronger, how much more can old FOPpers withstand? How much more can old FOPpers withstand? How much more can old FOPpers withstand? Humboldt FOG just gets stronger and stronger, how much more can old FOPpers withstand?

Let's all take NAPpes!

Manix Basin Blues

By: Joanna Redwine and Heather Lackey, Pacific Cell FOP 2007, Manix Basin, California Tune: Folsom Prison Blues

The Mojave is a'flowin
Was bigger way back then
And after all that moonshine
I'm still not sure just when
Well I'm stuck in Manix Basin
More outcrops than I can take
The Mojave now keeps flowin
On down to Silver Lake

When I was just an intern
My boss he told me, Jo
Go on down to Afton
Tell me when the Mojave flowed
So I sought a man from Reno
And one from Riverside
And if this comes to blows
I will not choose a side

They say Manix was feeding Lake Mojave, not for long Sediment rates don't lie Catastrophic must be wrong But one knew Manix flowed Low shorelines did not see Non-evidence he did go by And that's what tortures Meek!

Well, if they could see some reasoning If I could change their minds I'd move that discharge history Farther back thru time Far before late Pleistocene Is as specific as I'll say And the Mojave, it cut Afton A little every day.

Take Me Home, Yellowstone

By: Marith Reheis, 1999??, Ken Pierce's move to Bozeman Tune: Take Me Home, Country Roads

In Kentucky, bedrock's boring—
Mapping limestone leaves me snoring.
Rocks are old there, and they're seldom seen,
Not much action in the Pleistocene.

Take me west, country roads, to the place I belong, Teton Mountains, Firehole River, take me home, Yellowstone.

All my memories gather round there, Heavy breathing hot spot I found there, Sunken shorelines drowned in Jackson Lake, Obsidian hydration ages estimate.

Take me north, country roads, to the place I belong, Gardiner River, ice cap flowing, take me home, Yellowstone.

I see the geysers and the travertine at Mammoth, Mt. Vernon reminds me of that land far away, But driving down to Lakewood I get a feeling That I should have gone there yesterday....yesterday!

Take me north, country roads, to the places I've worked on, Madison River, Washburn Mountains, Sunlight Basin, take me home. Take me home, Yellowstone. Take me home, Yellowstone!

Because of Our Soils

By Melissa Foster, with John Caskey and Humboldt Crew, Pacific Cell FOP 2007, Manix Basin, California to the tune of John Prine and Iris DeMint's "In Spite of Ourselves", for Joanna Redwine and Marith Reheis

Her G-15 makes lots more money
She'll dig a pit when weather's all crummy
Picks a banjo and carries a tune
Manix mayhem gets her singin' at noon
She's my mentor, and my buddy
Never let Reheis go

She'll climb a slope like a crazy monkey Bud Burke student and a soil pit junkie Has a blast gettin' profiles done Drinks Sierra like its oxygen She's my partner, and my buddy Never let Redwine go

Chorus:

Because of our soils, we still believe our story Discrepant dates, we'll trust the soil profile Blowin' sand, shreds skin right off of our faces Ain't got nothin' but ancient lakes here on our minds

Pink-purple lizard in thick green muds
Told her story 'bout ole flash floods
I don't know, mighta been the heat
But made her up a story that's tough to beat
She's my mentor, and my buddy
Never let Reheis go

She found Mojave pretty damn cool Workin' for the survey sent her back to school Been out here on all her spring breaks Helpin' me map eight crazy lakes She's my partner, and my buddy Never let Redwine go

Repeat Chorus

Field Trip in Nevada

By Marith Reheis, Pacific Cell FOP 2009, The Great Scarp Hunt, Central Nevada, led by Rich Koehler to the tune of "Sweet Home Alabama"

Wheels, wheels, keep on turnin'
Carry me out to see my friends.
Singin' songs about the Pleistocene,
I'll see my buddies once again, they make me grin!

Well I heard we'll gather in Great Basin, Where I hear the fault scarps are so plain. Let's all go on a Scarp Hunt, Play in trenches once again, and again.

Chorus:

Field trip in Nevada, where the skies are so blue. Field trip in Nevada, FOP is comin' home to you!

Well I heard Bill Hammond talk about it, Geodetics are so true. Those extension rates don't bother Rich, But does your model bother you? Epistemic!

Chorus

All these valleys got their shorelines, Fans and faults that cut them through. Lord they get me off so much, They pick me up when I'm out of brew, how 'bout you?

Chorus 2 X

Dusty Sources

By: Marith Reheis and Rich Reynolds, Chinle Valley field work, Spring 2011 Tune: "Little Boxes"

Dusty sources on the hillsides, Dusty sources on the valley floors, Dusty sources on the mesas All emit dust just the same.

There are red ones and tan ones And gray ones and purple ones, But they all get mixed together On the snowpack just the same.

There are quartz grains and feldspars And aggregates and magnetite And mud chips and metal salts From the sources on the wind.

Dusty sources send up devils, And vortices make bigger plumes, And the warm fronts and the cold fronts Drive the dust storms all the same.

Draft (needs more work!)

By: Marith Reheis, begun in 1983, AGFG, Chaco Canyon, New Mexico Tune: Dark as a Dungeon

1.

Come and listen, young people, so bright and so fit, And seek not your fortune by digging soil pits. It will structure your habits and color your work Till the stream of your blood runs as brown as the dirt.

Where the soil is argillic but the clay skins are few, If the B's are pre-Sangamon but the carbonate is new, When field work and lab data don't really fit Then it's easy to blow it way down in the pit.

Allo Bestiary

Marith Reheis, 1991 FOP Rocky Mtn. cell, Sevier Desert Spoken, not sung

A is for Alpine Alloformation, being dissolved by amino acid,

B is for Bonneville beach deposits; its settings were far from placid.

C is for the Cutler Dam, caught in the stratigraphic middle,

D is for Draper (not Dryas!), did the lake drop abruptly or diddle?

E is for eolian sand that covers up all the evidence.

F is for the great flood, the one event that makes sense.

G is for Gilbert, the first geologist, and gastropod dates you can't trust;

H is for Hunt of the Old Guard, may his stature never rust.

I is for Ice Springs basalt, and isoleucine interpretation;

J is for Jimson weed; if you don't see what's being described, try hallucination!

K is for Keg Mountain oscillation, which may or may not exist.

L is for gravel of Lynndyl, or Little Valley Lacustrine Alloformation—alliterations I couldn't resist...

M is for white marl, a trusty marker bed;

N is for Natrargid, a soil that's salty and red.

O is for ostracodes; if unreliable dates, at least they're cute.

P is for Provo shoreline that followed close on Pahvant Butte.

Q is for Quaternary, its complexities are so much fun!

R is for Rear Guard, Varnes and Van Horn, still sticking to their guns.

S is for Sevier, and stone lines you just can't see;

T is for tephra at Tabernacle Hill, and tufa with tafoni.

U is for underflow fan facies, a new concept for us all;

V is for volcanic vents blowing tephra, reworked and airfall.

W is for water, fresh or saline—leaves a stratigraphic record that's ample.

X is for X-ray fluorescence, applied indiscriminately to samples.

Y is for Young Turks, Oviatt and Scott, rude upstarts who ought to know better.

Z is for Zenda, the overflow point, and thank god we've run out of letters.

On the Banks of the Owyhee

By: Marith Reheis, 2012 Rocky Mountain-Pacific NW FOP, Owyhee River, Oregon Tune: Banks of the Ohio

1.

I asked my crew to take a float, Just a little float with me, Looking for flood boulder bars On the banks of the Owyhee.

2.

We saw the slides, we saw the flows, Flagrant theories all implode. Landslide dams set the waters free In the valley of the Owyhee.

Chorus:

Then only say that we'll be fine, With no rattlesnakes entwine, No more flat tires, no stinging bees, On the banks of the Owyhee.

3.

We climbed the cliffs, we drove the roads, Mapping where the lavas flowed. Lava dams, please set her free, Don't impede the Owyhee.

4.

Bogus flows and landslide dams, Extrafluvial shit hits the fan! Dammit, dams, set her waters free, Please release the Owyhee.

Repeat chorus:

Amazing (G)Race

By: Marith Reheis and Joanna Redwine, 2012 Pacific FOP, Lake Tahoe area, California Tune: too obvious!

1.

Amazing Race, should I have known The way to Day 1, Stop 2? If I had wings, I could have flown, But now the talks are through.

2.

A GPS is but a tool That marks a destination. No turns, no maps, no signs, no rules, Just use your intuition.

3.

A dozen times I turned around, Then angels heard my plea, I once was lost, but now am found, Too late this stop to see.

4.

Amazing Grace, the faults abound, And LIDAR set them free! They once were lost, but now are found, We were blind, but now we see.

Tecopa Rises

By: John Caskey, Marith Reheis, and Doug Burbank, 2014 Pacific FOP, Tecopa Basin, California Tune: Way, Hey, Up She Rises

Chorus:

Way, hey, Tecopa rises, way, hey, Tecopa rises, Way, hey, Tecopa rises, here comes Amargosa!

1.

How do we make a Lake Tecopa? Puzzle it out, bring in the FOP-a, How do we make a Lake Tecopa rise up in the basin?

- 2. Saline ponds with groundwater discharge, L. stap breeding, living larger, Alk/Ca is very marginal—ostracodes will die here!
- 3. What's the age of tuff bed C? We know now not Huckleberry, Dated by the BGC—rearranged chronology.
- 4. Yonder comes the Amargosa, flowing down from Yucca Mountain, Alkalinity rising upward—making Lake Tecopa.
- 5. What can't you do with L. staplini, when water gets more alkalin-i, What can't you do with L. staplini? Live with sappaensis!
- 6. River flow is very queer here, fan dams seem to come and go here, And the proof has disappeared—washed down to Tecopa.
- 7.
 Twice rose up to the same old sill, McMackin says Hump rising still, River cuts like a diamond drill, filling up Lake Manly.

Jay fell into a burning ring of fire

By: Tom Leroy, 2014 Pacific Cell FOP, Tecopa Tune: Ring of Fire by Johnny Cash

1.

Friends... of the Pleistocene November2014 Drunk.... in wild desire Jay fell into the ring of fire

Chorus (repeat after every verse):
Jay fell into the burning ring of fire
He went down down
And his back hair was on fire
And it burned burned burned
His back and stash.... His hair and ass

2.

Channeling....Roger Morison
In a loin cloth....may sound like fun
But reeling..... in a tequila haze
Jay went down in a fiery blaze

3.

Roland...who was sitting there
Jumped up.... from his lounging chair
And ...with determined look
Put out Jay with the FOP song book

4.

Well fur....can be a good thing But not.... around a fire ring Folks watched ...and stood and stared As burnt hair filled the desert air

Erode Me

By: Katie Gibble, 2016 Rocky Mountain FOP, Grand Staircase: Dunes and Arroyos To the tune of *Wagon Wheel*

Heading down south to see the Coral Pink pines Making my way from the (*Idaho) highs Been driving ten hours, hoping to see some sand dunes

Rolling down the lee side, I cannot stop I'm demonstrating saltation to the FOP And I'm hoping that I don't get sand in my ears or my eyes

So erode me wind like when the soil hits the dirt
Erode me wind after the soil gets burnt
Hey wind, erode me
Erode me wind like the dust in the breeze
Erode me wind any way you please
Hey wind, erode me

Now we're driving through the sage to see an arroyo How old is it exactly, with OSL we will know So I'll take some samples from the outcrop now

The cuts and aggradation go way, way back I pray radiocarbon dates aren't way off track If I can't make them relate the study goes out the door

So incise me river after heavy rain
Incise me river so the system drains
Hey river, incise me
Incise me river like a big ol' rill
Incise me river, take my grains down hill
Hey river, incise me

So why was it incising? Is it sediment choked? Is it climate induced? Is it related to slope? The theories are competing, there may be civil war

So incise me river after heavy rain
Incise me river so the system drains
Hey river incise me
Incise me river like a big ol' rill
Incise me river, take my grains down hill
Hey river incise me

Panamint Road

By: Marith Reheis, 2016 Pacific Cell FOP, Panamint Valley To the tune of *King of the Road*

Slip rates for sale or rent,
Here we are in Panamint.
No phone, no ice, no beer,
Active detachment seems mighty queer!
Ah but soil pits and 10Be will date the
Beaches and the fans we see.
We will dance the shark on this trip! Panamint Road.

Soil profiles on this fan,
Same PDI, well I'll be damned.
High stands of Panamint Lake
Local discharge must be a mistake!
We'll see old forams Rick has found,
Short, but not too big around.
We will drink lots of beer on this trip! Dust on the road.

We'll have erosion rates with big error bands, OSL ages on very coarse sands, Are shorelines stage 6, stage 5, or stage 4? I don't know, it makes me so sore!

Slip rates for sale or rent,
Here we are in Panamint.
No phone, no ice, no beer,
Active detachment seems mighty queer!
Ah but soil pits and 10Be will date the
Beaches and the fans we see.
We will dance the shark on this trip! Panamint Road.

The Crust Song

By the bio-geo gang, Fall 2017. Sung to the tune of the Battle Hymn of the Republic

Mine eyes have seen the glory of the biological crust We call it cryptogamic and lots of other stuff It supports the shrubs and grasses and suppresses all the dust The crust keeps marching on!

Glory glory to cyanos Glory glory to the mosses Glory glory to the lichens They create fertility!

When the cattle, jeepers, hikers make their trails across the crust They smash the living filaments into a fine dust The wind and rain erode them and fertility is flushed So please don't bust the crust!

Glory glory to cyanos Glory glory to the mosses Glory glory to the lichens They create stability!

They fix nitrogen and carbon and produce the soil's glue Their filaments trap sediment like none other can do They help retain the rainfall and even morning dew So all of us in crust we trust

Glory glory to cyanos Glory glory to the mosses Glory glory to the lichens So please don't bust the crust!

In spite of ourselves: the climate scientist and the denier

2019 Pacific Cell FOP

Lyrics by Jennifer Pierce, idea by Clay Roehner; for GSA 2017 Song by John Prine, In Spite of Ourselves

- [C] She keeps showing me her data But Heartland's where I get my beta The [F] warmest year in history Got [C] nothin' to do with you or me [G] She's a climate geek, I think she's a freak, she's never gonna let it [C] go. [G] [C]
- [C] He don't think the climate's changin' Just the weather, rearrangin'
- [F] Exponential rise in CO2 Got [C] nothin' to do with me or you
- [G] He's a liar, a climate denier, he's never gonna let it [C go. [G] [C]

In spite of [F] ourselves

The Earth will keep on [C] spinning,

100 [G] years, baby we'll be dead and [C] gone, [G] [C]

But [F] unless the geeks convince the [C] deniers,

There'll be no-one left on [G] Earth to sing this [C] song. [G] [C]

- [C] She keeps showin' me projections, Over-riding my objections
- [F] Fires, floods and melting ice, [C] Can't we talk about something nice?

She [G] used to be charmin', now she's alarmin' She's never gonna let it [C] go. [G] [C]

- [C] Now at least he thinks it's warmin' But not at rates he finds alarmin'
- [F] He thinks the rise in CO2, Is [C] from volcanoes, not me and you,

He's [G] still a denier, I wish he'd retire, he's never gonna let it [C] go. [G] [C]

In spite of [F] ourselves

The Earth will keep on [C] spinning,

100 [G] years, baby we'll be dead and [C] gone, [G] [C]

But [F] unless the geeks convince the [C] deniers.

There'll be no-one left on [G] Earth to sing this [C] song. [G] [C]

- [C] She tells me sea level is risin' At rates that I find surprisin'
- I [F] must admit that greenhouse gas [C] Sure is higher than in the past
- [G] Maybe her data, are not errata, maybe I should let it [C] go. [G] [C]
- He [C] may have started listenin' to me, 'cause climate is affecting his GDP
- He [F] still don't care about isotopes. But [C] now at least I've got my hopes.
- [G] These deniers, sure make me tired, but I'm never gonna let it [C] go. [G] [C].

In spite of [F] ourselves

The Earth will keep on [C] spinning,

100 [G] years, baby we'll be dead and [C] gone, [G] [C]

But [F] unless the geeks convince the [C] deniers.

There'll be no-one left on [G] Earth to sing this [C] song. [G] [C]

The Magical Missing-Slip Tour

By: Marith Reheis, 2019 Pacific Cell FOP, Central Walker Lane To the tune of *Magical Mystery Tour*

Roll out, roll out for the Mystery Tour, Roll out, roll out for the Missing-Slip Tour. This is an invitation to drive across the basins,

Roll out, roll out for the Mystery Tour, Roll out, roll out for the Missing-Slip Tour.

The magical ambulance truck is waiting to lead us away, Waiting to lead us astray, lead us today.....

Fortunately

By: Marith Reheis, 2021 Pacific Cell FOP, Mojave Desert To the tune of *Illegal Smile*

1.

When I woke up this mornin', I was lookin' good.
My field work was going well, just the way it should.
A fault scarp displaces younger fans, need dates—
I like soils but they don't yield accurate slip rates!
Ah but fortunately, a way to succeed, OSL is what I need.

Chorus:

And you may see me tonight with an illegal shovel, Don't say anything or we'll all be in trouble!
Won't you tell the park guard I only dug a soil pit,
Just forgot to obtain a permit.

2.

Well when I woke up this mornin', things were lookin' bad. A relative chronosequence were the only dates I had. We dug a fault trench, found a buried soil...what then? Hydraulic shoring failed and the walls caved in! But fortunately I have a scheme to fulfill my dating dream.

Chorus:

And you may see me tonight with an illegal shovel, Don't say anything or we'll all be in trouble!

Won't you tell the park guard I only dug a soil pit,
Just forgot to obtain a permit.

Tag: Oh shit! I'm a twit. I'll fill up the pit!

COVID safe FOPpy Feeling

By: Sylvia Nicovich, Jay Patton, and Joanna Redwine, 2021 Pacific Cell FOP, Mojave Desert To the tune of *Peaceful Easy Feelin'*

Have you ever done a palinspastic reconstruction Of the Mojave block?
You gotta divvy the slip budget through time And match it with the Garlock

Chorus:

Cause I got a COVID safe FOPpy feeling In the Mojave everyday And I'm already standing 6 feet away

I wanna know catchment and fan dynamics Through Monte Carlo simulations You tell us all about Larrea and Ambrosia Holocene and Pleistocene denudation

[Chorus]

I found out a long time ago
That Cima Dome isn't a dome
Its pediment is maintained by mysterious processes
Specifically ... (mumble rhyme with 'dome')

[Chorus]

I like the way the carbonate precipitates Against your wetlands so wet I want to see your sand conveyor belt And all the cracks your clasts get

[Chorus]

When you're sweating the 90 degree shade You better get off your arse Cause we have to make a human FOP formation And make these memories last

[Chorus]

Rock On FOPPERS

By: Bob McPherson, 2022 Pacific Cell FOP, Humboldt County, CA To the tune of Alabama's *Roll On (Eighteen Wheeler)*

Rock on, FOPPERS, rock on along,

Rock on, Humboldt, keep singin' this song.

Rock on, Burke and Hemphill-Haley too,

The committee's watching all that you do, so Rock On, Humboldt Geos, Rock On!

Well, it's Friday mornin', the FOP is gonna start, the convoy begins to move,

Patton's an F-O-P-er and he's got some research to prove.

A gang of people gather round Patton. The lectures go on and on.

Jason's got the speakers all lined up, and they'll talk till they run down.

But he smiles and cackles and tells them that he loves them,

And he taught them this song to sing,

CHORUS: Rock on, FOPPERS, rock on long,

Rock on, Carver, keep singin' this song.

Rock on, FOPPERS, before you're through,

A Humboldt jolt is what's overdue, so Rock On, Humboldt Geos, Rock On!

Well, it's Saturday mornin', there's faulting to see, here we've got three plates,

McPherson's an F-O-P-er and he knows the seismic rates.

He tends to the seismic stations, the data he does analyze,

BoMac's on a roll now, fiber-optics to visualize.

And he tells them they just need to draw it, and it will be real,

But if not they can always sing...

CHORUS: Rock on, FOPPERS, rock on strong,

Rock on, FOPPERS, keep singin' this song.

Rock on, Lajoie, Dorothy Merritts too,

We're obliged for all that you do, so Rock On, Humboldt Geos, Rock On!

Well, it's Sunday mornin', Humboldt Bay is a gem, it's got an aeolian cap,

Burke is an F-O-P-er and he sure knows how to map.

No need for computer models or Monte Carlo gambling,

Bud drives a motor wheelchair and to FOP stops he's rambling.

And he tells them to keep on mapping and digging,

And he gave them this song to sing...

CHORUS: Rock on, FOPPERS, rock on for long,

Rock on, FOPPERS, keep singin' this song.

Rock on, Friends, and never stop,

Rock on, FOPPERS, for you know how to FOP! So Rock On F-O-P-ers, ROCK ON!

(Shouting) F-O-P-ers! ..., F-O-P-ers! ROCK ON!!!!!

It's All About the Corner

By: Robert West, 2022 Pacific Cell FOP, Humboldt County, CA To the tune of *Down on the Corner* by Creedence Clearwater Revival

VERSE 1:

Early in the morning Bo Mac starts to talk
About seismicity around the corner of the block
Of rigid crust Pacific where seismicity is not
It acts like a die through which the other blocks are wrought

CHORUS

It's all about the corner at the triangle of doom

Where the other plates are shaking just to make a little room

VERSE 2:

Double difference relocations make a trend from a knot
Defining faults from nowhere as the other plates are caught
In a field of rotation that spins around clockwise
The San Andreas rolls over, the bulge begins to rise

VERSE 3:

You don't need a model when a cartoon will do
Just update it every decade or maybe even two
If you draw it on paper then it's gotta be real
Don't waste your time with data just do what you feel
CHORUS, CHORUS

San Gorgonio Blues

By: Joanna Redwine, Rich Koehler, and Marith Reheis, 2023 Pacific Cell FOP, Southern San Andreas To the tune of *Folsom Prison Blues* by Johnny Cash

We feel the plates a-movin', they're goin' north and south From San Gorgonio knot to the Colorado mouth.

We're stuck in Salton basin, stayin' up till dawn,

Generations of geologists arguing which faults move on.

Kim says that it's the Mission, Jon insists no way—it's dead! Might be on the Bannon, no that's Miocene instead. Let's dig another trench here, the fault slip can't be dead, It's just become all twisted by the propellor head.

Scarps run into the big knot and it stops the offsets dead,
Perpetual employment for generations ahead.
Well we know the quake's a-comin', we know we'll have to flee,
But which fault strand will it slip on? That's what tortures we!

Colluvial Hollow

By: Nick Sutfin, Rocky Mountain Cell FOP To the tune of *Dark Hollow* by the Grateful Dead

I'd rather be in some colluvial hollow where the risk of slope failure is high,
 Where saturation overflow is bound to make it go,
 It's just a matter of geologic time.

Chorus:

When it goes, it sounds like a freight train, rippin' out everything in its path. It may not go today, but when it does it will lay – a diamicton upon a strath.

- II. I'd rather be riding a debris flow, or surfing a big 'ol sheet flood, Than to be where the slope is low, too much normal force to let it go No mass movements to move my mind.
- III. When the trees have all been burned by wildfire, and the rain starts pouring down, Reduced cohesion is sure, along with positive pore pressure

 To reduce normal force and cause a slide.
- IV. I'd rather be riding a debris flow, or surfing a big 'ol sheet flood, Than to be where the slope is low, too much normal force to let it go V. No mass movements to move my mind.

Gonna Be the Fires and the Flood Next Time

By: Blind Howling Sawtooth, July 2017, Montana To the tune of *God Gave Noah the Rainbow Sign* by the Carter Family

I. Coastal flooding, inland fires (3X); How can you believe deniers?

Burn that petro, burn that coal (3X); You gotta reap just what you sow.

Chorus: Fires in the mountains, flooding in the valleys (3X)

Gonna be the fires and the floods next time.

- II. Fossil fuels release CO2 (3X); Temperatures rise, sea levels too.Temperatures rise, forest fires grow (3X); Smoke and haze everywhere you go.
- III. Glaciers melted, oceans rose (3X); Where's a penguin and a polar bear to go? East and west the fires will roll (3X); Down on coastlines the floods will flow.
- IV. Science talks but money screams (3X); Fake-news prophets ain't what they seem. Rich getting richer, middle getting squeezed (3X); So I ask who you gonna believe?
- V. The good Lord made us stewards of Earth (3X); Love and protect her for all she's worth. There's a calling from the rainbow tribe (3X); Hear the message and do what's right. Climate's changing, there's no denying (3X); Gonna be the fires and the flood next time.

I'm Goin' to the FOP (and I sure do love it)

By: Marith Reheis, Buffalo and Pleasant Valleys NV, Pacific Cell FOP To the tune of *I'm Gonna Get Drunk* by Willy Nelson

I'm goin' to the FOP and I sure do dread it 'Cause I know just what I'm gonna do.
Talkin' all night long, stayin' up till dawn
A hangover will surely come too.
When I hit the deck I know I'll be a wreck,
The morning comes way too soon!
I'm goin' to the FOP and I sure do dread it
"Cause I know just what I'm gonna do.

I'm goin' to the FOP, I can't stay home,
There's a lotta good people I know.
Seein' scarps and lakes, that's icing on the cake,
Nevada seismic belt marching on through.
There's a whole lotta people who tell me
I oughta start slowin' it down,
But there's more old FOPers than there are old rockers
So I guess we oughta have another round!

I'm goin' to the FOP and I sure do love it,
There's so many good people to see.
We'll argue and holler, betting our last dollar
On hypotheses that we can conceive.
Hugging all these friends, singin' songs to the end,
'Cause lordy we have written a few.
I'm goin' to the FOP and I sure do love it
'Cause I know just what I'm gonna do!