

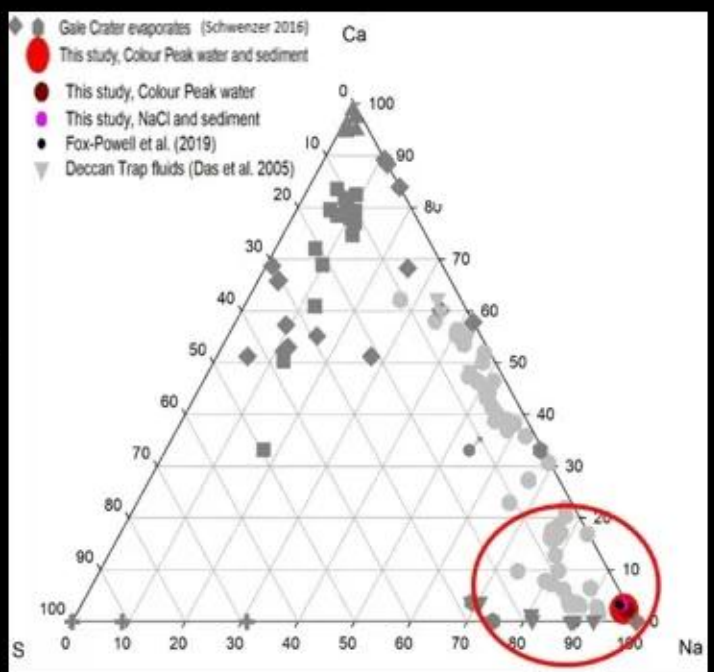
Colour Peak: An analogue environment for the waters of late Noachian Mars



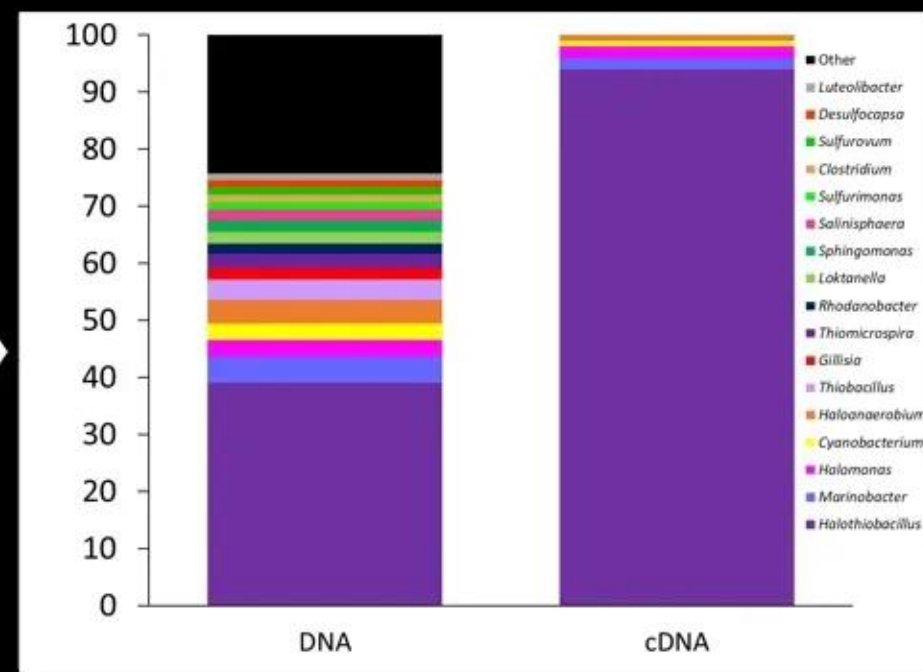
Michael C. Macey, N. K. Ramkisson, M. Fox-Powell, J. A. W. Oliver, T. Barton, B. P. Stephens, S. P. Schwenzer, V. K. Pearson, C. R. Cousins and K. Olsson-Francis



Axel Heiberg Island



Chemistry of Colour Peak water and sediment



Community profile of the Colour Peak Sediment

1
00:00:04,630 --> 00:00:03,110
we characterized an environment that is

2
00:00:07,590 --> 00:00:04,640
considered an analog

3
00:00:09,830 --> 00:00:07,600
for the waters that existed on mars

4
00:00:12,390 --> 00:00:09,840
during the late snowakia

5
00:00:13,749 --> 00:00:12,400
this environment is color peak springs

6
00:00:15,589 --> 00:00:13,759
which is one of many

7
00:00:17,990 --> 00:00:15,599
sailing and sulfurous spring systems

8
00:00:21,349 --> 00:00:18,000
located on axel heiberg island

9
00:00:22,310 --> 00:00:21,359
in the canadian high arctic looking at

10
00:00:25,189 --> 00:00:22,320
the chemistry

11
00:00:26,790 --> 00:00:25,199
using icp oes shown on the middle figure

12
00:00:28,390 --> 00:00:26,800
the ternary plot

13
00:00:30,470 --> 00:00:28,400

with the color peak chemistries

14

00:00:33,510 --> 00:00:30,480
indicated with the red circles and

15

00:00:35,430 --> 00:00:33,520
highlighted in the outer red circle

16

00:00:37,350 --> 00:00:35,440
compared to other analog environments on

17

00:00:38,549 --> 00:00:37,360
earth and thermochemically modelled

18

00:00:40,150 --> 00:00:38,559
waters derived

19

00:00:42,229 --> 00:00:40,160
from the chemistry of gale crater

20

00:00:44,150 --> 00:00:42,239
evaporates we found

21

00:00:45,990 --> 00:00:44,160
that at least in broad strokes and the

22

00:00:48,150 --> 00:00:46,000
most abundant elements

23

00:00:49,590 --> 00:00:48,160
color peak is a chemically appropriate

24

00:00:51,510 --> 00:00:49,600
analog environment

25

00:00:53,510 --> 00:00:51,520
then looking at the microbial community

26

00:00:56,069 --> 00:00:53,520

profile it was dominated

27

00:00:57,350 --> 00:00:56,079

by sulfur oxidizing bacteria please