

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY



“GEOLOGY OF THE GOLDEN GATE HEADLANDS”



NCGS FIELD TRIP - Saturday June 22, 2013

**Field Trip Leader:
Dr. William Elder**

Golden Gate National Recreation Area, San Francisco, CA

**Field Trip Director:
Tridib Guha**

“Geology of the Golden Gate Headlands”

Abstract: From ancient mid-ocean ridges and hotspots, to seamounts and subduction zones and finally to roaring glacial rivers and drifting sands, learn how geology has shaped the Golden Gate headlands and provided habitat for the diverse biota of Golden Gate National Recreation Area. This field trip focuses on the rocks of the headlands just north and south of the Golden Gate. Exposed in dramatic sea cliffs, these rocks not only form a spectacular backdrop for the Golden Gate Bridge, but also provide a detailed record of Pacific basin and active margin tectonics spanning nearly 200 million years. The significance of these rocks also goes beyond the geologic story that they tell, for these and other rocks of the Franciscan Complex associated with them were central to the development of our current understanding of subduction zones processes and the mechanics of accretionary prisms. Join geologist and park ranger Will Elder for the day as we view exquisitely folded chert, ore-grade manganese beds, textbook pillow basalts, tortured serpentinite cliffs and more, while we explore and reveal stories from the past, present and future of the Golden Gate Headlands.

Biography: Dr. Will Elder has been an interpretive park ranger at Golden Gate National Recreation Area for 15 years, and before that he was a geologist and paleontologist with the U.S. Geological Survey. Will first became acquainted with the local geology as an Earth Sciences student at College of Marin and U.C. Santa Cruz. Following a stint with the geophysics group at USGS in Menlo Park, Will went to University of Colorado, where his dissertation project focused on a major marine extinction that occurred 100 million years ago, during the warmest time in the Earth’s history. Will returned to the USGS at Menlo Park as the Mesozoic invertebrate paleontologist, where he studied many of the fossils known from the Franciscan Complex and published on a wide variety of paleontologic and sedimentologic topics. Today, Will is back thinking about a warm Earth and focusing much of his time on communicating climate change issues to the public.

THIS FIELD TRIP WILL BE LIMITED TO 40 PEOPLE

(Due to very limited parking carpool/vanpool is a must; will circulate the attendees list)

***** Field Trip Logistics *****

Time & Departure: June 22, 2013, 9:00 am, meeting place and attendees list will be circulated

Cost: \$25/person (guidebook, lunch, refreshments, soft drinks)

*****REGISTRATION FORM (Golden Gate Headlands)*****

Name: _____ E-mail: _____

City Residence: _____ Phone: _____ Phone (alternate): _____

Lunch: Regular: _____ Vegetarian: _____ (Please check one) Check Amount: _____

Please mail a check made out to ‘NCGS’ to:
Tridib Guha
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Martinez, CA 94553

Questions: e-mail: tridibguha@yahoo.com Phone: (925) 370-0685 (evening) (925) 451-1999 (day)