

Field Forum Scheduled

Rethinking the assembly and evolution of plutons: Field tests & perspectives

October 7 -13, 2005

A field excursion across the Mesozoic Cordilleran batholith from Yosemite to the White Mountains, California

Conveners:

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Description and Objectives. The field forum will examine the geologic record of assembly of large Mesozoic granitic plutons in California, focusing on portions of the Sierra Nevada batholith in Yosemite National Park and in the John Muir Wilderness, and more scattered plutons outside of the main batholith in the White Mountains. Particular emphasis will be placed on evaluating the hypothesis that large, superficially homogenous plutons were emplaced in small increments over millions of years rather than as large molten magma bodies. Field examples will be studied in the light of complementary analytical and geophysical data and theoretical considerations, as well as for their broader implications for igneous petrogenesis, the longevity of magmatic systems, and linkage between plutonism and volcanism; for processes by which continental crust

is constructed; and for interaction between tectonic and magmatic processes in orogens. The conveners invite participants concerned with all aspects of crustal magmatic processes and their spatial and temporal scales, including but not limited to petrologists, structural geologists, geochronologists, volcanologists, geodesists, seismologists, and geodynamic modelers. Our goal is to consider how better understanding of the growth of plutons can advance general understanding of igneous and tectonic processes and crustal evolution.

Outline of Conference. The conference will include a five-day field trip followed by a one-day wrap-up and discussion session. Participants will meet at the Fresno, CA, airport and travel by van to Yosemite. In the first two days we will examine the Yosemite Valley and Tuolumne intrusive suites; the next two days will be spent on full-day hiking trips to intrusions exposed on the eastern flank of the Sierra Nevada (Bishop and Big Pine creeks); and the last day in the field will be spent on intrusions in the White and Inyo Mountains east of the Sierra Nevada. The wrap-up session will be held at the Crooked Creek Laboratory of the White Mountain Research Station, which is located astride the contact of the Sage Hen Flat pluton at 10,000' (3000 m) elevation in the White Mountains.

N.B.! Days 3 and 4 of the Field Forum will involve strenuous trail and off-trail hiking at altitudes ranging above 10,000' (3000 m). The first two days will be less vigorous and at somewhat lower elevations (4000-9000'; 1200-2750 m), and therefore will aid in the acclimatization of participants who reside at sea level. However, excellent physical fitness that permits participants to travel safely through rugged back country areas at high altitude is a prerequisite for participation.

Venue. The first two days will be based at Curry Village in the heart of Yosemite Valley. The remainder of the forum will be based at the Owens Valley (Bishop) and Crooked Creek facilities of the White Mountain Research Station of the University of California. The estimated registration fee of \$950 will cover transportation, including to and from the Fresno airport, lodging, and meals.

Application Deadline: *May 6, 2005.* Geoscientists of all specializations who are interested in magmatic processes are encouraged to apply. Potential participants should send a letter of application to John Bartley (address above) that includes a brief statement of interests and the relevance of the applicant's recent work to the themes of the meeting. Interested graduate students are strongly encouraged to apply; partial support is available. Invitations will be e-mailed to participants by the end of May 2005.

Registrants with Special Needs. If you require special arrangements or have special dietary concerns, please contact one of the conveners. However, as noted above, applicants should bear in mind the rigorous physical demands inherent in the planned excursion.