

Service/News

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New publications

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***Bulletin 142**—Supplement to the Desert Project guidebook, with emphasis on soil micromorphology, by L. H. Gile, J. W. Hawley, R. B. Grossman, H. C. Monger, C. E. Montoya, and G. H. Mack, 1995, 96 pp., 8 tables, 18 figs., 1 appendix, and 25 color plates. \$17.00

This supplement, which was prepared for a field trip in conjunction with an international meeting of soil micromorphologists, presents additional information for many of the original Desert Project study areas and presents new information for five additional study areas. Major changes in the classification of the Aridisols were made in 1994; the new system and its relation to the old one are shown.

Illustrative soils and landscapes range in age from late Holocene to late Pliocene. Photomicrographs in color include a variety of argillans and calcitans, evidence for dissolution of primary grains, silica nodules that post-date argillans in an ancient pipe, and both clay formation and illuviation in a soil formed in bedrock.

The five additional study areas are located on detailed soil maps and include sites illustrating (1) formation of the stage IV carbonate horizon and its radiocarbon chronology, the first to be reported in the world literature on genesis of soil carbonate; (2) profound changes in carbonate morphology (stage III to IV) associated with change in particle size; (3) a rare bedrock-defended, ancient fan and soil in Ice Canyon of the Organ Mountains; (4) a scarplet terrain in high-carbonate sediments where argillic horizons have formed in late Pleistocene soils but not in Holocene soils; and (5) a middle Pleistocene soil with evidence for dissolution of silicate grains by pressure solution, for precipitation of calcite by microorganisms, and for neof ormation of palygorskite.

Readers may find these publications interesting: Memoir 39, *Soils and geomorphology in the Basin and Range area of southern New Mexico—guidebook to the Desert Project*, by L. H. Gile, J. W. Hawley, and R. B. Grossman; and Bulletin 133, *Soils, geomorphology, and multiple displacements along the Organ Mountains fault in southern New Mexico*, by L. H. Gile. See also the video by Gile et al. referenced on this page.

***Scenic Trip 15**—A trip through space and time—Las Cruces to Cloudcroft, by R. E. Clemons, 1996, 194 pp., 3 tables, 9 figs. 6 maps, glossary, index, 146 black-and-white photos (includes 62 historical photos), and 26 color photos. \$12.00

South-central New Mexico is characterized by extremes. During geologic history the area was covered by ocean water at least six times before becoming the arid region we see today. Prehistoric hunter-gatherers crisscrossed the area for centuries before Spanish

explorers arrived in the 1500s. The railroads brought "civilization" from the East in the late 1800s and with it local historical characters like Pat Garrett, Oliver Lee, and Albert Fall, some of whom live on in legend. In the 20th century, the area has become home for White Sands Missile Range and Johnson Space Center.

The first trip starts in Las Cruces, travels through San Augustin Pass and across the Tularosa Basin to Alamogordo, and continues on US-82 to Cloudcroft; a reverse road log points out features not easily seen going east. The second trip explores the Lincoln National Forest from Cloudcroft to Timberon, while a third trip travels from Cloudcroft to La Luz for a back-road journey to Alamogordo. Aguirre Springs Recreation Area is visited in Trip 4. No visit to the Tularosa Basin would be complete without a trip to White Sands National Monument, seen in Trip 5. Oliver M. Lee Memorial State Park is visited for two trips—a round-trip road log from Alamogordo and a trail log for Dog Canyon Trail, 4.2 mi one way with a 3,100-ft change in elevation. With elevations ranging from less than 4,000 ft in the Tularosa Basin to nearly 9,700 ft in the Sacramento Mountains, the seven road logs and one trail log give the traveler an exciting trip through space and time.

Readers spending extended time in southern New Mexico will find Scenic Trip 3, *Roswell-Ruidoso-Valley of Fires*; Scenic Trip 10, *Southwestern New Mexico*; and Scenic Trip 16, *Elephant Butte-eastern Black Range region—journeys from desert lakes to mountain ghost towns*, interesting companion volumes to Scenic Trip 15.

Other publications

Adams, D. C., and Keller, G. R., 1996, Precambrian basement geology of the Permian Basin region of west Texas and eastern New Mexico: a geophysical perspective: American Association of Petroleum Geologists, Bulletin, v. 80, no. 3, pp. 410-431.

Campbell, A. R., Banks, D. A., Phillips, R. S., and Yardley, B. W. D., 1995, Geochemistry of Th-U-REE mineralizing magmatic fluids, Capitan Mountains, New Mexico: Economic Geology, v. 90, no. 5, pp. 1271-1287.

Clark, J. D., and Pickering, K. T., 1996, Architectural elements and growth patterns of submarine channels: application to hydrocarbon exploration: American Association of Petroleum Geologists, Bulletin, v. 80, no. 2, pp. 194-221.

Julian, R., 1996, The place names of New Mexico: University of New Mexico Press, Albuquerque, 385 pp.

Klett, C. T. O. (editor), 1995, The water future of Albuquerque and middle Rio Grande Basin, Proceedings of the 39th annual New Mexico Water Conference: New Mexico Water Resources Research Institute, WRI Rept. 290, 449 pp.

Kottlowski, F. E., 1996, Sherman A. Wengert Memorial: American Association of Petroleum Geologists, Bulletin, v. 80, no. 3, pp.

445-446.

*Smith, E. W., and Austin, G. S., 1996, Modern adobe in New Mexico: New Mexico Energy, Minerals and Natural Resources Dept., 25 pp. Free.

Van Wagoner, J. C., and Bertram, G. T. (editors), 1996, Sequence stratigraphy of foreland basin deposits—outcrop and subsurface examples from the Cretaceous of North America: American Association of Petroleum Geologists, 500 pp. (includes chapters on New Mexico).

Video

Gile, L. H., Hawley, J. H., Grossman, R. B., Peterson, F. F., Ruhe, R. V., Mack, G. H., and Monger, H. C., 1996, Evolution of the Rio Grande valley in southern New Mexico: implications for global change: Dept. of Agricultural Communications, video. (Purchase from Dept. of Agricultural Communications, P.O. Box 30003, Campus Box 3AI, Las Cruces, NM 88003.)

Open-file reports

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***410**—⁴⁰Ar/³⁹Ar age determinations of four plutons associated with mineral deposits in southwestern New Mexico, by V. T. McLemore, W. C. McIntosh, and T. C. Pease, 1996, 36 pp., 2 tables, 15 figs., 1 appendix. \$7.20

***417**—Geologic maps of upper Cenozoic deposits of the Loma de las Cañas and Mesa del Yeso 7.5-minute quadrangles, New Mexico, by S. Cather, 1996, 32 pp., 1 fig., 2 oversize map sheets with explanations. \$10.00

Quadrangles can be purchased separately:

***417-A**—Geologic map of upper Cenozoic deposits of the Mesa del Yeso 7.5-minute quadrangle, New Mexico, by S. Cather, 1996, 27 pp., 1 fig., 1 oversize map sheet with explanation. \$7.40

***417-B**—Geologic map of upper Cenozoic deposits of the Loma de las Cañas 7.5-minute quadrangle, New Mexico, by S. Cather, 1996, 24 pp., 1 fig., 1 oversize map sheet with explanation. \$6.80

***420**—The geology, leasing, and production history of the Plot 7 uranium-vanadium mines, San Juan County, New Mexico, by W. Chenoweth, 1996, 24 pp., 2 tables, 3 figs. (2 oversize), 1 appendix. \$10.00

***422**—The geology, leasing, and production history of the Plot 3 uranium-vanadium mines, San Juan County, New Mexico, by W. Chenoweth, 1996, 37 pp., 7 tables, 5 figs., 1 oversize sheet. \$10.25

***423**—Application of an area of review variance methodology to the San Juan Basin of New Mexico, by D. L. Warner, L. D. Koederitz, S. Dunn-Norman, and R. C. Laudon, 1996, 201 pp., 22 tables, 28 figs., 28 oversize sheets. \$89.20

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