

**Santa Barbara Museum of Natural History Earth Science Collections:
Search Results of Paleontological Specimens from Localities
Near the Calle Real Campus Master Plan Project**

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Prepared for:

UltraSystems Environmental

April 21st, 2023

APPENDIX D7

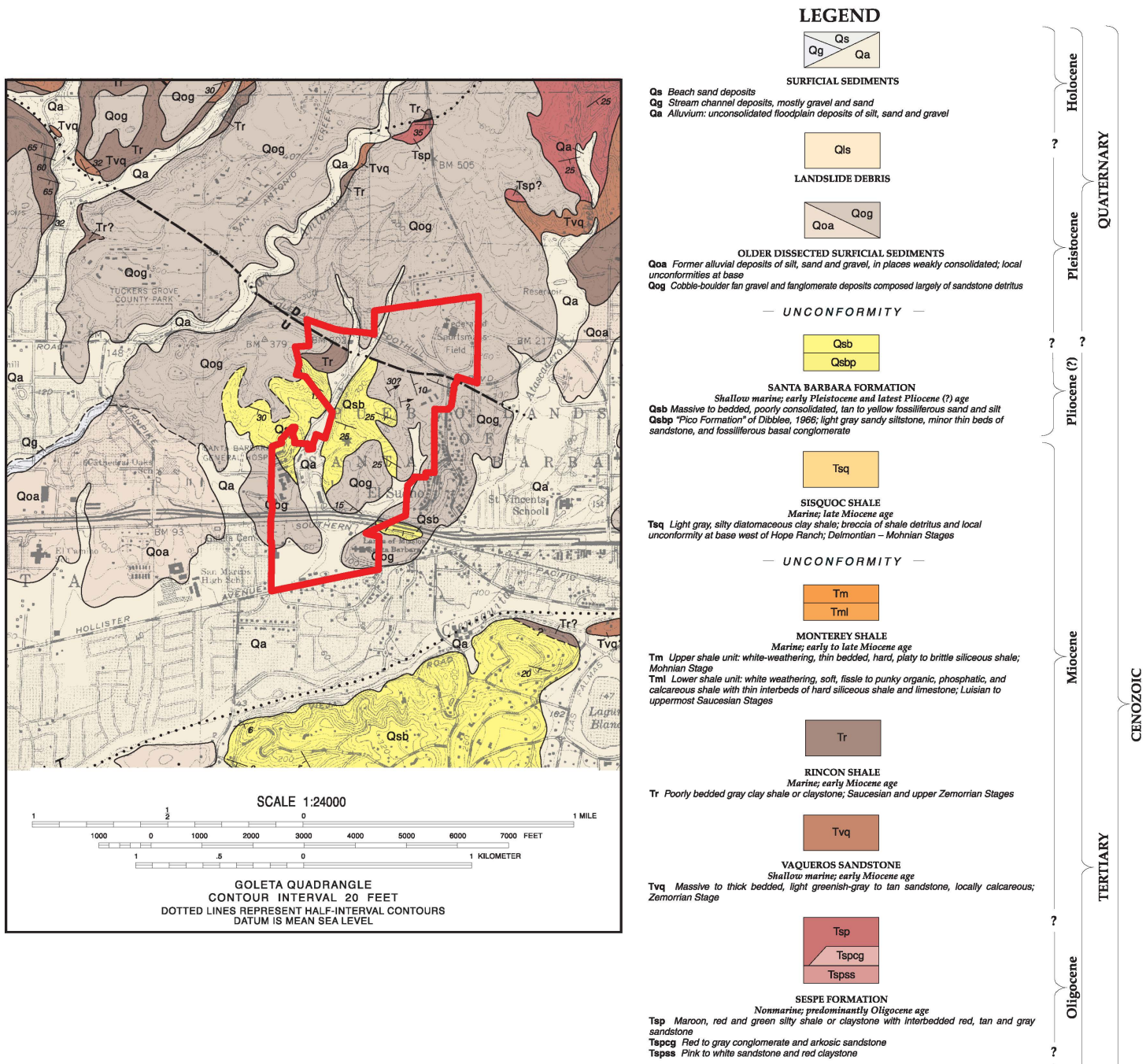
Paleontological Resources Records Search

This report summarizes the results of a Santa Barbara Museum of Natural History (SBMNH) records search for the Calle Real Campus Master Plan Project (Project). The location of the Project has been mapped as sitting on Holocene alluvial deposits (Qa), Pleistocene fan gravels and conglomerates (Qog), the Pleistocene Santa Barbara Formation (Qsb), and Miocene Rincon Shale (Tr) (Dibblee, 1987; Figure 1). Outside of the project boundaries, nearby outcrops of additional strata include: Holocene gravel (Qg), the Sespe Formation (Tsp); and Vaqueros Formation (Tvq) (Dibblee, 1987). Revised mapping shows the project site consisting of artificial fill, Holocene and Pleistocene alluvium and colluvium, Pleistocene alluvial deposits, the Pleistocene Santa Barbara Formation, Miocene Monterey Formation, and Miocene Rincon Shale (Minor et al., 2009).

The SBMNH Earth Science Collection (ESC) does not include any fossils collected from within the project site boundaries, however the ESC does include fossils from correlated strata within the Goleta quadrangle and adjacent Santa Barbara and Dos Pueblos quadrangles. The closest SBMNH locality is Veronica Springs, approximately 2.75 miles southeast of the Project site in the Santa Barbara quadrangle. The Veronica Springs site is currently located within Arroyo Burro Park and the exposed geology has been mapped as Quaternary alluvium with Rincon Formation or lower Monterey Formation (Dibblee, 1986; Minor et al., 2009). The type specimen (a coracoid) of the cormorant *Phalacrocorax rogersi* was found within the Miocene Rincon/Monterey strata at a depth of 50 feet in Veronica Springs (Table 1). The Pleistocene alluvium has yielded hundreds of unidentified bird bones, a pine cone, and hundreds of mollusks and bryozoans.

Approximately 4 miles southeast of the Project site, two specimens of cormorant (*Phalacrocorax penicillatus* and *Phalacrocorax* sp.) were recovered from the Santa Barbara Mesa in the Santa Barbara quadrangle. The exact localities are unknown, but these fossils were likely found in Pleistocene deposits that form the Santa Barbara Formation, Casitas Formation, or marine terraces. Another significant SBMNH fossil locality is found approximately 6 miles southwest of the Project at Coal Oil Point in the Dos Pueblos quadrangle. This site, formerly known as Campbell Palisades, is mapped as Quaternary marine terrace deposits (Minor et al., 2009) and has produced limb bones and a deciduous tooth from a sea otter (*Enhydra* sp.) and hundreds of mollusks.

Numerous proboscideans (i.e., mammoths and mastodons) have been found in Pleistocene alluvial deposits throughout Santa Barbara County. The closest proboscidean locality to the Project site is roughly 2.1 miles east, where the left mandible of a mastodon (*Mammot pacificus*) was recovered from Barger Creek in the Santa Barbara quadrangle. Another mastodon locality in the Santa Barbara quadrangle is located at the southwestern terminus of Pedregosa Street (tooth found in gravel, ~3.7 miles southeast of Project). In the Dos Pueblos quadrangle, a mastodon skull was



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Figure 1. Geologic map of project site and surrounding area. Adapted from *Geologic map of Goleta quadrangle, Santa Barbara County, California* by T.W. Dibblee, 1987.

excavated at Dos Pueblos High School (~5.6 miles west of Project) during construction of a new building in the 1970s. Finally, the mandible of a Columbian mammoth (*Mammuthus columbi*) was discovered at El Capitán Beach in the Dos Pueblos quadrangle (~13.9 miles west of Project).

Additional proboscidean material has been found in Pleistocene deposits in northern Santa Barbara County, including: a tooth found within Lompoc city limits (~41 miles northwest of project site), a juvenile proboscidean scapula found a few miles southeast of Santa Maria (~50 miles northwest of project site), mastodon limb bones recovered in Corallitos Canyon (~55 miles northwest of Project), and a mastodon skull and mandible found at Point Sal (approximately 59 miles northwest of Project site).

Finally, a significant assemblage of invertebrate fossils, including echinoids, mollusks, and foraminifera, were recovered from the Pleistocene marine strata at Bathhouse Beach in the Santa Barbara quadrangle. The Bathhouse Beach locality is approximately 5.6 miles southeast of the Project and the geology has been mapped as Casitas Formation by Dibblee (1986) and Santa Barbara Formation by Minor et al. (2009).

Table 1. Relevant Vertebrate Taxa in SBMNH Collections

Birds

Phalacrocorax rogersi

Phalacrocorax penicillatus

Phalacrocorax sp.

Aves gen and sp. indet.

Mammals

Mammut pacificus

Mammuthus columbi

Proboscidea gen. and sp. indet.

Enhydra sp.

References

Dibblee, T.W. 1986. *Geologic Map of the Santa Barbara Quadrangle, Santa Barbara County, California*. Thomas Wilson Dibblee, Jr. Geological Foundation.

Dibblee, T.W. 1987. *Geologic Map of the Goleta Quadrangle, Santa Barbara County, California*. Thomas Wilson Dibblee, Jr. Geological Foundation.

Minor, S.A., Kellogg, K.S., Stanley, R.G., Gurrola, L.D., Keller, E.A., and Brandt, T.R. 2009. *Geologic Map of the Santa Barbara Coastal Plain Area, Santa Barbara County, California*: U.S. Geological Survey Scientific Investigations Map 3001, scale 1:25,000, 1 sheet, pamphlet, 38 p.