

SAN DIEGO NATURAL HISTORY MUSEUM

PaleoServices Overview

- The San Diego Society of Natural History was founded in 1874 by a small group of citizen-scientists and is the second oldest scientific institution in Southern California and the third oldest in the western United States; a leader among local museums and scientific institutions. The San Diego Natural History Museum, a flagship institution in Balboa Park, is owned and operated by the San Diego Society of Natural History.
- The Museum has a 142-year history of storing, interpreting, and displaying scientific specimens from southern California.
- The Department of PaleoServices is a paleontological mitigation group that has been successfully salvaging and conserving fossils in the southern California region for 35 years.
- PaleoServices was founded by Dr. Tom Deméré in 1981 and operated as an independent paleontological mitigation firm for 14 years. It merged with the San Diego Natural History Museum in 1995. This is a unique fee-for-service arm of the Museum that people don't typically think about a natural history museum doing. The department contributes both revenue and specimens to the Museum.
- Over the years, the Department of PaleoServices has worked on thousands of diverse projects, developed an extensive client base, and conserved hundreds of thousands of scientifically significant fossil specimens, while maintaining high safety standards and ensuring compliance with all relevant environmental requirements.
- The Museum's paleontology collection includes more than 1.4 million fossils. We conservatively estimate that approximately 75% of those were salvaged or conserved as a direct result of mitigation paleontology.
- The positioning of PaleoServices within the San Diego Natural History Museum allows for mitigation paleontology—and more specifically, the preservation of the important fossil collections—to be brought into the public eye. The Museum is among the most visited museums in Balboa Park, with more than 350,000 visitors each year, and the vast majority of the specimens featured in the Museum's permanent exhibition *Fossil Mysteries*, including dinosaurs, whales, walruses, brontotheres, camels, and primates were collected by PaleoServices personnel from contract projects.
- Additionally, researchers and students from all over the world access our collection (recently, we've had visitors from Mexico, Canada, Japan, Australia, New Zealand, England, France, Germany, and Italy).

- In the past five years, the department has increased its capacity to monitor new types of projects (e.g., renewable energy generation and transmission projects), and introduced new ways of improving our routine office and field duties. This effort has been aided by the recent hiring of 7 young, motivated staff members with bachelor's degrees in geology, three of which additionally have M.S. degrees in fields related to geology and paleontology, and one of which has a G.I.S. certificate. The department is introducing new technologies and procedures to more accurately and efficiently collect fossils and record data. For example, PaleoServices is pioneering the use of ESRI's Collector App for ArcGIS for collection of paleontological data. Continued use of this app will allow for better communication between field staff and office staff, more efficient completion of paleontological field surveys, and collection of higher quality field data, while still maintaining the rigorous data collection standards and safety standards for which PaleoServices is known.
- The Department of PaleoServices currently employs 16 full-time staff members (seven office staff, nine field monitors), seven of which have been with the Museum for 10 years or more. Staff have academic degrees in paleontology, geology, or biology, and/or over 20 years of experience in paleontology mitigation. All staff members (including office and laboratory staff) are trained and available to assist in fossil salvages.

Services

Resource Assessments

- Extensive experience completing: PIR, PER, PMP Reports; Paleontological record searches; Paleontological field surveys
- Expertise in GIS for map production

On-site Construction Monitoring

- All monitors have academic training in geology and/or paleontology – scientific rigor in field notes
- All monitors equipped with necessary field and safety gear
- Excellent safety record

Fossil Recovery

- Extensive experience in:
 - Microfossil recovery; bulk sampling
 - Macrofossil recovery
 - Plaster jacketing
- Documentation of stratigraphic contextual data

Fossil Dating

- Biostratigraphic analyses completed in-house
- Work with outside professionals for other dating techniques

Fossil Identification and Curation

- Direct access to SDNHM collections for comparison with fossil and modern specimens
- SDNHM research associates and visiting researchers aid in fossil identifications
- All curation tasks including cataloguing completed in-house

Fossil Preparation

- SDNHM is equipped with fossil preparatory lab capable of processing microfossils, macrofossils, and oversized fossils
- Offsite screen-washing facility
- Heavy liquid flotation lab
- Experienced fossil preparatory team

Fossil Storage

- All fossils curated into the SDNHM repository in perpetuity
- 3,120 square feet of compactorized collection space at the Museum
- 2,100 square feet of collection space at offsite facility

Paleontological Mitigation Reports

- Extensive experience producing high quality final reports, including maps and graphics
- Reports include Appendices with lists of curated fossils

Communication of Fossil Discoveries

- Extensive experience with media coverage of notable fossil discoveries
- Many fossils on public display as part of permanent exhibitions