



## Geologic Map of Deer Creek Hills — Sacramento Valley Conservancy

Extract of Plate #1 from:

See accompanying page for description of geologic formations and symbols  
 Loyd, Ralph C., 1984, Mineral land classification of the Folsom 15-minute quadrangle, Sacramento, El Dorado, Placer, and Amador Counties, California: California Geological Survey, Open-File Report 84-50, 44 pages, 8 map plates, 5 figures, 1 table.

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map scale: 1:48,000

contour interval is 10 and 20 feet

# Geologic Formations of the Deer Creek Hills area

## Sacramento Valley Conservancy

| Geologic<br>Map Symbol        | Description of Geologic Unit or Formation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| T                             | <b>Dredge tailings</b> from placer gold mining. These occur only along Deer Creek in the northwestern area of the conservancy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Qal                           | <b>Quaternary alluvium</b> — modern stream alluvium of Deer Creek and Crevis Creek; consists of sand and gravel, with some quartz cobbles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Tl                            | <b>Laguna Formation</b> , Pliocene Epoch of late Tertiary Period. Consists of consolidated alluvial gravel, sand, and silt that is composed of granitic, metamorphic, and some volcanic detritus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tm                            | <b>Mehrten Formation</b> , late Miocene to early Pliocene age. Consists of volcanic conglomerate and tuffaceous sandstone and siltstone derived from andesitic sources; with some andesite mudflow breccia. Notable for hard rounded cobbles that are gray to black. Produces very poor quality soils with low fertility. Occurs just outside of the boundaries of Deer Creek Hills Conservancy, in the hills southwest of Stonehouse Road and Latrobe Road.                                                                                                                                                                                                                                                                                                                                                                                                |
| Ti                            | <b>Ione Formation</b> , Eocene Epoch. Consists of quartz sandstone interbedded with kaolinite (a clay used for pottery). The type locality ( $\approx$ namesake) of the formation is Ione, in Amador County, southeast of Deer Creek Hills. The Ione Formation is famous for its clay deposits. Within the Deer Creek Hills, the Ione Formation occurs near our meeting place at Stonehouse and Latrobe. It is a relatively soft formation with minimal relief, so there are no cliffs and few outcrops along the eroded channel of Crevis Creek. Capped by good-quality soils with turf grass favored by cattle.                                                                                                                                                                                                                                           |
| <i>major<br/>unconformity</i> | <i>hiatus (<math>\approx</math> huge gap) in geologic time. The older volcanic rocks were changed into metamorphic rocks during intense shearing and foliation along the tectonic faults of the Sierran foothills.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Jch                           | <b>Copper Hill Volcanics</b> , Jurassic Period. Consists of metamorphosed mafic pyroclastic rocks, pillow lava with minor felsic porphyrite. This formation occurs just <i>outside</i> of the Deer Creek Hills Conservancy in El Dorado County.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Jss                           | <b>Salt Springs Slate</b> , Jurassic Period. Mainly dark gray slate, with some mica schist. The foliated gray slate occurs widely in the middle third of the Deer Creek Hills Conservancy, near the horse corral where we begin our hikes. The distinct foliation is near-vertical in outcrop, so we perceive it as upturned flagstone or gray tombstones that trend northwestward. Note that Deer Creek and Crevis Creek must cut perpendicular across the strike of the foliation. Early ranchers at Deer Creek Hills took advantage of the northwest-trending geologic structure of the Salt Springs Slate. They constructed dams along resistant ridges formed by hard slate to create irrigation ponds for cattle during the long dry summers. The poor-quality, rocky soils are well-drained, and so this formation supports the robust oak savannah. |
| Jgo                           | <b>Gopher Ridge Volcanics</b> , Jurassic Period. Metamorphosed mafic to felsic pyroclastic rocks; massive flows with some pillow structure. A number of quartz dikes occur, but none have yielded any gold. Strongly foliated by shearing along the Bear Mountain Fault Zone. Occurs in the upland (eastern) hills within Deer Creek Hills. Poor-quality soils result in fewer oak trees and bare grassy uplands.                                                                                                                                                                                                                                                                                                                                                                                                                                           |