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A Small Herpetofauna from the Late Pleistocene of Newport Beach Mesa, Orange County, California

Dennis M. Hudson and Bayard H. Brattstrom

Abstract.—A Late Pleistocene herpetofauna consisting of *Hyla regilla*, *Bufo boreas*, *Rana aurora*, *Aneides lugubris*, *Thamnophis*, *Lampropeltis getulus*, *Masticophis flagellum*, and *Crotalus viridis* has been identified from Newport Beach Mesa, Orange County, California. *Aneides lugubris* is reported as a fossil for the first time. Corrections and further identifications have been made on fossil herpetofaunas from two other Orange County localities. These faunas suggest post-LaBrean changes in the coastal Orange County vegetation from chaparral and live-oak woodland with riparian woodlands to that of coastal sage scrub with sycamore woodlands. Subsequently the sycamore riparian community receded into the nearby Santa Ana Mountains leaving coastal sage scrub and intermittent grasslands in coastal Orange County. These communities have subsequently been reduced by increased agriculture and urbanization.

Department of Biology, New Mexico State University, Las Cruces, New Mexico 88003, and Department of Biology, California State University, Fullerton, California 92634.

Late Pleistocene assemblages of amphibians and reptiles are known from only a few locations in California. These include a few caves (Brattstrom, 1953a) and the asphalt deposits at La Brea, McKittrick, and Carpenteria (Brattstrom, 1953a, b, 1955; Miller, 1942). We report here a small herpetofauna from Orange County, California that comes from a stream deposit. We further make comments and identifications on recently discovered fossil amphibians and reptiles found in other Orange County localities.

The locality (LACM 3877, old number 1067; Newport Bay Mesa Locality; Miller, 1971) is a Late Pleistocene Rancho LaBrean deposit from a road cut (no longer in existance) located east of MacArthur Blvd. about two miles west of the Irvine campus of the University of California, Orange County, California (Miller, 1971). The fossils were imbedded in a water soluble, clay-like matrix apparently the result of stream deposition. The abundance and clumping of the material suggests that it may have been the results of erosion of an owl pellet cache (Miller, 1971) but the microfauna is much more diverse than usually found in owl pellet caches found today.

The material, collected by Dr. Ted Downs (TD Loc. 295), is deposited in the Natural History Museum of Los Angeles County (LACM). It has been catalogued by Paul Langewalter (LACM) as including numbers 56821 to 56972. The fossil material, consisting of over 100 bones and representing four species of amphibians and four species of reptiles, has been compared with extant skeletons and fossil bones in the collections of California State University, Fullerton (CSUF) and the LACM.

This paper is dedicated to Dr. Carl L. Hubbs because of his interest in changes in the climate along the California coast as well as for his long-term support and encouragement of one of us (BHB) as a scientist and as a friend.