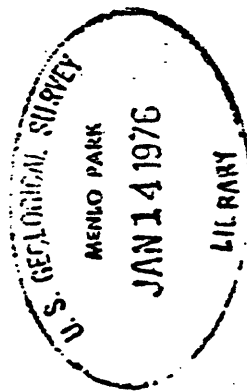


R296
no. 75-552
p. 7

Table 2.--Microfossil localities.

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Early Miocene				
m700			13,535 ft W. and 4,835 N. of the SW cor. sec. 7, T. 7 S., R. 8 W. Laguna Beach, Calif., quad., 1949 ed., alt about 370 ft. In bottom of W. tributary to Moro Canyon. Vaqueros Fm.	J. G. Vedder, 1954
Middle Miocene				
m701	Mf178	V-140	2,540 ft NE and 2,025 ft NW of S. cor. of Irvine block 98, Laguna Beach, Calif., quad., 1949 ed., alt 260 ft. Tributary to Coyote Canyon, Los Trancos Mem.	J. G. Vedder, 1954
m701A	Mf173	V-133	150 ft SW and 4,075 ft SE of N. cor. of Irvine block 98, Tustin quad. S. of Bonita Creek, alt about 380 ft. Los Trancos Mem.	J. G. Vedder, 1954
m702	Mf172	V-130	16,990 ft W. and 3,520 ft S. of NE cor. of Laguna Beach, Calif., quad., 1949 ed., alt 700 ft. W. side of Bommer Canyon. Los Trancos Mem.	J. G. Vedder, 1954



Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
m703A	Mf179	V-141	800 ft NE and 251 ft NW of N. cor. of Irvine block 97, Laguna Beach, Calif., quad., 1949 ed. Large canyon W. of Coyote Canyon, alt about 195 ft. Los Trancos Mem.	J. G. Vedder, 1954
m703B	Mf183	V-151	1,550 ft NE and 840 ft SE of S. cor. of Irvine block 97, Laguna Beach, Calif., quad., 1949 ed., alt about 390 ft. Upper Buck Gully. Los Trancos Mem.	J. G. Vedder, 1954
m704	Mf180		925 ft NW and 2,250 ft NE of S. cor. of Irvine block 57, Tustin quad., alt about 60 ft. E. of MacArthur Blvd. in Donita Creek. Paularino Mem.	J. G. Vedder, 1954
m704A	Mf458	V-237	2,050 ft SE and 1,525 ft NE of W. cor. of Irvine block 56, Newport Beach, Calif., quad., 1951 ed., alt about 75 ft. On N. side of Big Canyon. Monterey Shale.	J. G. Vedder, 1959
m705	Mf79		850 ft E. and 1,880 ft S. of NW cor. sec. 30, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 275 ft. Blue- bird Canyon road cut. Topanga Fm.	J. G. Vedder, 1953

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
m705B	Mf294		310 ft E. and 1,575 ft S. of NW cor. sec. 25, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 30 ft. N. of Chenaya Point, Topanga Fm.	J. G. Vedder, 1959
m706	Mf78		1,375 ft E. and 60 ft S. of NW cor. sec. 30, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Ridge E. of Rim Rock Canyon, alt about 540 ft. Topanga Fm.	J. G. Vedder, 1953
m708a	Mf184	V-153	1,050 ft SE and 1,850 ft SW of N. cor. of Irvine block 55, Newport Beach, Calif., quad., 1951 ed., alt about 50 ft. On E. side of Palisades Road. Monterey Shale.	J. G. Vedder, 1954
m708b	Mf232	N1 14	1,050 ft SE and 1,600 ft SW of N. cor. of Irvine block 55, Newport Beach, Calif., quad., 1951 ed., alt about 50 ft. On E. side of Palisades Road. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955
m709	f11453	V-10	1,350 ft W. and 13,750 ft S. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 340 ft. N. side of Sheep Hills. Monterey Shale.	J. G. Vedder, 1952

Number used Permanent in this Geological report Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued			
m710	f11468	V-13 8,225 ft W. and 2,525 ft N. of SE cor. sec.34, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., alt about 470 ft. On W. side of Arroyo Salada. Monterey Shale.	J. G. Vedder, 1952
m711	Mf176	SA225 1,075 ft N. and 300 ft W. of SE cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 260 ft. On E. side of Aliso Creek bed. Monterey Shale.	J. G. Vedder, 1953
m713	f11441	S-289 1,550 ft S. and 4,550 ft E. of NW cor. sec. 20, T. 6 S., R. 7 W., El Toro, Calif., quad., 1950 ed., alt about 990 ft. E. of upper Oso Creek. Monterey Shale.	J. E. Schoellhamer, 1954
m714	f11442	S-287A 1,550 ft S. and 2,100 ft E. of NW cor. sec. 20, T. 6 S., R. 7 W., El Toro, Calif., quad., 1950 ed. E. of upper Oso Creek. Alt about 820 ft. Monterey Shale.	J. E. Schoellhamer, 1954
m715	f11452	PJB115a 4,750 ft S. and 1,140 ft W. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of Aliso Creek. Alt about 640 ft. Monterey Shale.	P. J. Smith and R. F. Yerkes, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
m717	f11453	V-5	4,825 ft S. and 200 ft W. of NE cor. sec. 5, T. 6 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of Aliso Creek. Alt about 440 ft. Monterey Shale.	J. G. Vedder, 1952
m718	f11456	PJB115e	5,400 ft S. and 50 ft E. of NW cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of Aliso Creek. Alt about 380 ft. Monterey Shale.	P. J. Smith and R. F. Yerkes, 1954
m720	Mf375	V-228	750 ft SE and 600 ft NE of W. cor. of Irvine block 55, Newport Beach, Calif., quad., 1951 ed., alt about 50 ft. On Coney Island. Monterey Shale.	J. G. Vedder, 1958
m721	Mf313	V-218	2,925 ft E and 700 ft S. of NW cor. sec. 35, T. 6 S., R. 10 W., Newport Beach, Calif., quad., 1951 ed. alt about 30 ft. In cliff N. of Bayside Drive N. of Balboa Island. Monterey Shale.	J. G. Vedder, 1957
m722	f11460	V-12	1,850 ft E. and 700 ft S. of NW cor. sec. 33, T. 6 S., R. 8 W., in ditch on N. side of Niguel Road in San Juan Capistrano, Calif., quad., 1949 ed., alt about 360 ft. Monterey Shale.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
m722A	MF704	V-249F	500 ft S. and 2,400 ft W. of NE cor. sec. 33, T. 6 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 350 ft. On S. side of Niguel Road in new cut. Monterey Shale.	J. G. Vedder, 1963
m722B	MF480		25 ft E. and 525 ft N. of SW cor. sec. 22, T. 6 S., R. 8 W., El Toro, Calif., quad., 1950 ed., about 1 mi. NW of El Toro, alt about 350 ft. Monterey Shale.	J. G. Vedder, 1960
m723	f11461	PJB116c	5,625 ft S. and 1,025 E. of NW cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949, ed., W. of Aliso Creek, alt about 420 ft. Monterey Shale.	P. J. Smith and R. F. Yerkes, 1954
m724	f11462	PJB116d	6,625 ft S. and 3,175 ft W. of NE cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., ed. 1949. W. of Aliso Creek, alt about 340 feet. Monterey Shale.	P. J. Smith and R. F. Yerkes, 1954
m725	MF80	V-42	540 ft E. and 2,040 ft S. of NW cor. sec. 34, T. 6 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 360 ft. Monterey Shale.	J. G. Vedder, 1953

Number used Permanent in this Geological report Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued			
m727	f11465	PJB116e 6,950 ft S. and 2,550 ft W. of NE cor. sec. 4,	P. J. Smith and
		T. 7 S., R. 8 W., San Juan Capistrano, Calif.,	R. F. Yerkes,
		quad., 1949 ed. W. of Aliso Creek, alt about	1954
		300 ft. Monterey Shale.	
m728	f11466	V-43 1,350 ft E and 1,925 ft N. of SW cor. sec. 34,	J. G. Vedder, 1953
		T. 6 S., R. 8 W., San Juan Capistrano, Calif.,	
		quad., 1949 ed., on side of low hill, alt about	
		360 ft. Monterey Shale.	
m729A	Mf182	V-150 2,490 ft NW and 2,500 ft NE of the S. cor. of	J. G. Vedder, 1954
		Irvine block 96, Laguna Beach, Calif., quad.,	
		1949 ed., alt 200 ft. Lower Buck Gully.	
		Monterey Shale.	
m729B	Mf304	V-214 3,020 ft NW and 540 ft NE of the S. cor. of	J. G. Vedder, 1956
		Irvine block 96, Laguna Beach, Calif., quad.,	
		1949 ed. Lower Buck Gully, alt 120 ft. Lower	
		Monterey Shale.	
m729C	Mf181	V-149 1,680 ft NW and 175 ft SW of S. cor. of Irvine	J. G. Vedder, 1954
		block 97, Laguna Beach, Calif., quad., 1949	
		ed., alt about 270 ft. Buck Gully. Monterey	
		Shale.	

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
m730A	Mf379	V-233	50 ft NE and 25 ft NW of S. cor. of Irvine block 92, Laguna Beach, Calif., quad., 1949 ed., alt 260 ft. Tributary to Big Canyon. Monterey Shale.	J. G. Vedder, 1958
m731	Mf186	V-156	1,120 ft NE and 810 ft NW of N. cor. of Irvine block 96, Laguna Beach, Calif., quad., 1949 ed. Tributary to Big Canyon, alt about 259 ft. Monterey Shale.	J. G. Vedder, 1954
Late Miocene				
m720A	Mf377	V-227	2,450 ft SE and 150 ft NE of S. cor. of Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 35 ft. N. of Hgwy 101-alt., N. of Balboa Island. Monterey Shale.	J. G. Vedder, 1958
m721A	Mf316	V-221	1,600 ft SE and 1,175 SW of S. cor. of Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 30 ft. On N. side of Hgwy 101-alt. N. of Balboa Island, Monterey Shale.	J. G. Vedder, 1957
m721B	Mf315	V-220	1,250 ft SE and 1,500 ft SW of S. cor. of Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 30 ft. On N. side of Hgwy 101- alt., N. of Balboa Island. Monterey Shale.	J. G. Vedder, 1957

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m732	Mf108	V-83	4,950 ft E. and 1,000 ft S of NW cor. sec. 5, T. 8 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., SE of San Juan Creek, alt about 210 ft. E. of San Juan Creek. Monterey Shale.	J. G. Vedder, 1954
m733	Mf151	Y-70C	3,650 ft E. and 3,700 ft N. of NW cor. sec. 17, T. 6 S., R. 7 W., El Toro, Calif., quad., 1950 ed., alt about 900 ft, N. of Los Alisos Ave., upper Aliso Creek. La Vida Mem.	R. F. Yerkes, 1954
m733A	Mf116	Y-63A	950 ft N. and 2,875 ft W. of intersection of S. boundary, sec. 8, T. 6 S., R. 7 W. and E. boundary of El Toro, Calif., quad, 1950 ed. alt 960 ft. On ridge between Oso Creek and Aliso Creek. La Vida Mem.	R. F. Yerkes, 1954
m734	f11443	S-307	1,740 ft. N. and 2,575 ft E. of SW cor. sec. 5, T. 7 S., R. 7 W. on E. side of Arroyo Trabuco, San Juan Capistrano, Calif., quad, 1949 ed, alt about 500 ft. Monterey Shale.	J. E. Schoellhamer, 1954
m735	f11446	S-305	2,625 ft S. and 475 ft W. of NE cor. sec. 7, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad, 1949 ed, alt about 470 ft. W. side of Arroyo Trabuco. Monterey Shale.	J. E. Schoellhamer, 1954

Number used Permanent in this Geological report Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued			
m736	f11447	Y-66D 3,625 ft S. and 600 ft W. of NE cor. sec. 7, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. Alt about 470 ft. W. side of Arroyo Trabuco. Monterey Shale.	R. F. Yerkes, 1954
m737A	f11448	S-300 2,620 ft E. and 700 ft S. of NW cor. sec. 6, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. in tributary to Oso Creek, alt about 465 ft. Monterey Shale.	J. E. Schoellhamer, 1954
m738	f11449	S-301 3,150 ft E. and 935 ft S. of NW cor. sec. 6, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., in tributary to Oso Creek. Alt about 500 ft. Monterey Shale.	J. E. Schoellhamer, 1954
m739	f11450	S-302 3,920 ft E. and 1,900 ft S. of NW cor. sec. 6 T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., in tributary to Oso Creek. Alt about 550 ft. Monterey Shale.	J. E. Schoellhamer, 1954
m740A	f11451	Y-68B 1,725 ft S. and 450 ft E. of NW cor. sec. 29, T. 7 S., R. 7 W., alt about 270 ft, San Juan Capistrano, Calif. quad., 1949 ed. In Horno Creek. Monterey Shale.	R. F. Yerkes, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m741A	Mf118	Y-67B	975 ft S. and 1,525 ft W. of NE cor. sec. 18, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. E. side of Arroyo Trabuco, alt about 380 ft. Monterey Shale.	R. F. Yerkes, 1954
m741B	Mf281 Mf286	V-115	12,960 ft W. and 7,115 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 40 ft. E. end Emerald Bay. Monterey Shale.	J. G. Vedder, 1954
m742	Mf110	V-87	2,500 ft S. and 2,075 ft E. of NW cor. sec. 32, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. N. of San Juan Creek, alt about 330 ft. Capistrano Fm.	J. G. Vedder, 1954
m743	f11467	V-65	1,450 ft W. and 12,200 ft S. of NE cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. E. side of Aliso Creek, alt about 240 ft. Monterey Shale.	J. G. Vedder, 1953
m744	Mf150	Y-70B	3,875 ft E. and 4,975 ft N. of NW cor. sec. 17, T. 6 S., R. 7 W., El Toro, Calif., quad., 1950 ed. alt about 1,090 ft. N. of Los Alisos Ave. upper Aliso Creek. La Vida Mem.	R. F. Yerkes, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m744A	Mf159	Y-76D	1,500 ft E. and 5,950 ft N. of NW cor. sec. 17, T. 6 S. R. 7 W., El Toro, Calif., quad., 1950 ed. First canyon E. of upper Serrano Creek. Alt about 940 ft. La Vida Mem.	R. F. Yerkes, 1954
m744B	Mf834	Y-48B	3,150 ft NE and 1,675 NW of S. cor. Irvine block 153, El Toro, Calif., quad, 1950 ed. Alt about 570 ft. On small ridge on NW side of Agua Chinson Wash near its mouth. Monterey Shale.	R. F. Yerkes, 1953
m745A	Mf376		3,150 ft SW and 2,670 ft NW of E. cor. Irvine block 56, Tustin quad., alt about 160 ft. N. of Big Canyon, W. of MacArthur Blvd. Monterey Shale.	J. G. Vedder, 1958
m746	f11444	V-102	3,100 ft S. and 4,100 ft E. of NW cor. sec. 29, T. 7 S. R. 7W., San Juan Capistrano, Calif., quad., alt about 580 ft. Monterey Shale.	J. G. Vedder, 1954
m747	f11445	V-101	4,100 ft S. and 3,850 ft E. of NW cor. sec. 29, T. 7S., R. 7 W., San Juan Capistrano, Calif., quad., alt about 410 ft. Monterey Shale.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m748	Mf169	V-29b	4,000 ft W. and 11,050 ft S. of NE cor. sec. 4, J. G. Vedder, 1953	
			T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of Aliso Creek, alt about 320 ft. Monterey Shale	
m749	Mf148	PJB117b	3,475 ft S. and 3,375 ft W. of NE cor. sec. 10, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 320 ft.	P. J. Smith and R. F. Yerkes, 1954
			E. of Aliso Creek on S. end of reservoir. Capistrano Fm.	
m750	Mf84	V-53	1,675 ft W. and 4,000 ft S. of NE cor. sec. 30, J. G. Vedder, 1953	
			T. 8 S., R. 7 W., Dana Point, Calif., quad., 1949 ed., alt about 60 ft. On NE side of Hwy 101, NW of Poche Siding, Capistrano Fm.	
m750A	Mf374	V-225	2,850 ft W. and 2,775 ft S. of NE cor. sec. 30, J. G. Vedder, 1957	
			T. 8 S., R. 7 W., Dana Point, Calif., quad., 1949 ed., alt about 80 ft. On NE side of Hwy 101, NW of Poche Siding, Capistrano Fm.	
m751	Mf319	V-223	2,150 ft S. and 1,125 ft E. of NW cor. sec. 22, J. G. Vedder, 1954	
			T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 50 ft. In sea cliff at Dana Cove. Lower Capistrano Fm.	

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m751A	Mf606	V-249	2,150 ft S. and 2,625 ft E. of NW cor. sec. 22, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed. Alt about 15 ft. At base of sea cliff in Dana Cove under beach rubble. Capistrano Fm.	J. G. Vedder, 1961
m752	Mf291	V-165b	1,175 ft N. and 1,250 ft W. of SE cor. sec. 27, T. 6 S., R. 10 W., Newport Beach, Calif., quad., 1951 ed., alt about 20 ft. Near cor. of 17th St. and Hwy 101-Alt. Capistrano(?) Fm.	J. G. Vedder, 1954
m753A	Mf287	V-191b	1,550 ft NW and 100 ft SW of S. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. W. side Upper Newport Bay. Monterey-Capistrano transition.	J. G. Vedder, 1954
m753B	Mf231	NL-13	1,050 ft SE and 1,175 ft SW of N. cor. Irvine block 55, Newport Beach, Calif., quad., alt about 50 ft. On E. side of Palisades Road Monterey Shale.	R. J. Smith and J. E. Schoellhamer, 1955
m753C	Mf230	NL-12	275 ft SE and 400 ft SW of N. cor. Irvine block 55, Newport Beach, Calif., quad., 1951 ed., alt about 30 ft. On E. side of Palisades Road. Monterey Shale.	R. J. Smith and J. E. Schoellhamer, 1955

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m753D	Mf228		10 ft NW and 25 ft SW of E. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. S. side of mouth of Big Canyon. Monterey Shale.	J. G. Vedder, 1954
m753E	Mf219	NL-1	800 NW and 1,950 ft SW of E. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955.
m753F	Mf221	NL-3	875 ft. SW and 1,750 ft SW of E. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955
m753G	Mf222	NL-4	950 ft NW and 1,650 ft SW of E. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955
m753H	Mf223	NL-5	4,250 ft SE and 1,550 ft SW of N. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955

Number used Permanent in this Geological report	Field Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Late Miocene--Continued				
m753I	Mf224	NL-6	3,850 ft SE and 1,400 ft SW of N. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955
m753J	Mf226	NL-8	3,525 ft SE and 1,300 ft SW of N. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On W. side of Upper Newport Bay. Monterey Shale.	P. J. Smith and J. E. Schoellhamer, 1955
Pliocene and Pleistocene				
m754A	Mf203	V-168	2,700 ft NW and 2,800 ft NE of S. cor. Irvine block 57, alt about 65 ft. On E. side of MacArthur Blvd., Tustin, Calif., quad. Fernando Fm.	J. G. Vedder, 1954
m754B	Mf188	V-167	2,000 ft NW and 1,350 ft NE of S. cor. Irving block 57, Tustin, Calif. quad., alt about 110 ft. On E. side of MacArthur Blvd. Fernando Fm.	J. G. Vedder, 1954
m755	Mf111	V-95	1,750 ft S and 775 ft W. of NE cor. sec. 13, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. SE of Galivan Siding, alt about 460 ft. Capistrano Fm.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Pliocene and Pleistocene--Continued				
m756	Mf90	V-71	2,975 ft S. and 1,250 ft W. of NE cor. sec. 3, T. 8 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., E. of Salt Creek, alt about 580 ft. Capistrano Fm.	J. G. Vedder, 1953
m757	Mf161	V-105	3,425 ft S. and 200 ft E. of NW cor. sec. 35, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., E. of Salt Creek, alt about 570 ft. Capistrano Fm.	J. G. Vedder, 1954
m758	Mf160	V-104	800 ft S. and 1,950 ft W. of NE cor. sec. 35, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of lower Arroyo Trabuco, alt about 360 ft. Capistrano Fm.	J. G. Vedder, 1954
m759	Mf112	V-96	3,000 ft S. of NE cor. sec. 31 and lying on the section line between secs. 30 and 31, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 300 ft. W. of lower Horno Creek. Capistrano Fm.	J. G. Vedder, 1954
m760	Mf113	V-97	5,000 ft S. and 3,250 ft W. of NE cor. sec. 30, T. 7S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 350 ft. W. of lower Horno Creek. Niguel Fm.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
			Pliocene and Pleistocene--Continued	
m761	Mf124		1,425 ft S. and 3,350 ft W. of NE cor. sec. 30, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed. Between Arroyo Trabuco and Horno Creek, alt about 530 ft. Niguel Fm.	J. G. Vedder, 1954
m762	Mf205	V-203	3,225 ft W. and 5,075 ft S. of NE cor. sec. 13, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 240 ft. N. side of lower Deep Canyon. Capistrano Fm(?)	J. G. Vedder, 1954
m763	Mf109	V-84	4,625 ft S. and 400 ft E. of NE cor. sec. 14, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 160 ft. On E. side of Hwy 101 NE of Serra Siding. Capistrano Fm.	J. G. Vedder, 1953
m764	Mf92	V-74	2,350 ft E. of NW cor sec. 10 and on section line of secs. 3 and 10, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 310 ft. In Canyon. E. of Salt Creek. Capistrano Fm.	J. G. Vedder, 1953
m765	Mf93	V-75	500 ft N and 2,475 ft E. of SW cor. sec. 10, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 Ed. Alt about 225 ft, about 1 ml E. of lower Salt Creek. Capistrano Fm.	J. G. Vedder, 1953

Numbers used in this report		Permanent	Field	Description of locality and stratigraphic unit		Collector and date
Geological Survey No.	Number					
Pliocene and Pleistocene--Continued						
m766	Mf94	V-76	75 ft E. and 1,120 ft N. of SW cor. sec. 11, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 290 ft. Capistrano Fm.	J. G. Vedder, 1953		
m768	Mf96	V-77	400 ft E. and 75 ft S. of NW cor. sec. 11, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 400 ft. Capistrano Fm.	J. G. Vedder, 1953		
m769	Mf97	V-78	1,525 ft E. and 650 ft N. of SW cor. sec. 2, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 600 ft. Capistrano Fm.	J. G. Vedder, 1953		
m770	Mf91	V-73	1,975 ft S. and 600 ft E. of NW cor. sec. 10, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 210 ft. E. of lower Salt Creek. Capistrano Fm.	J. G. Vedder, 1953		
m771	Mf190	V-179	560 ft SE and 2,950 ft SW of N. cor. Irvine block 57, Tustin quad., alt about 50 ft. E. of Palisades Road. Fernando Fm.	J. G. Vedder, 1954		
m772A	Mf705	V-249G	1,550 ft NE and 1,500 SE of W. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed., alt about 20 ft. In sea cliff on W. side Upper Newport Bay. Lower Fernando Fm.	J. G. Vedder, 1963		

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Pliocene and Pleistocene--Continued				
m772B	Mf706	V-249H	1,450 ft NE and 1,475 SE of W. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed. Alt about 85 ft. Near top of sea cliff on W. side Upper Newport Bay. Basal Palos Verdes Sand(?)	J. G. Vedder, 1963
m773	Mf189	V-169	2,250 ft SE and 550 ft SW of N. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed., alt about 20 ft. E. side of Upper Newport Bay Fernando Fm.	J. G. Vedder, 1954
m773A	Mf460	V-238A	2,700 ft SE and 1,500 ft SW of N. cor. Irvine block 52, Newport Beach quad., alt about 70 ft. On E. side of Upper Newport Bay. Fernando Fm.	J. G. Vedder, 1959
m773B	Mf459	V-238	2,200 ft SW and 2,625 ft E. of N. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed., alt about 15 ft on E. side of Upper Newport Bay. Fernando Fm.	J. G. Vedder, 1959
m773C	Mf741	V-249I	650 ft SW and 1,475 ft NE from W. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed. Alt about 60 ft. On W. side of Upper Newport Bay. Fernando Fm.	J. G. Vedder, 1963

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
m774	Mf192	V-181	Pliocene and Pleistocene--Continued 200 ft NW and 3,750 ft SW of E. cor. Irvine block 51, Tustin, Calif., quad., alt about 40 ft. On S. side of Palisades Road. Fernando Fm.	J. G. Vedder, 1954
m774A	Mf461	V-238B	2,475 E. and 75 ft NE of W. cor. Irvine block 51, Newport Beach, Calif., quad., 1951 ed. Alt about 20 ft. On E. side of Upper Newport Bay. Fernando Fm.	J. G. Vedder, 1959
m775	Mf191	V-180	200 ft SE and 2,750 ft SW of N. cor. Irvine block 57, Tustin, Calif., quad., alt about 60 ft. On E. side of Palisades Road. Fernando Fm.	J. G. Vedder, 1954
m775A	Mf318	V-217C	650 ft NW and 50 ft SW of W. cor. Irvine block 51, Newport Beach, Calif., quad., 1951 ed., alt about 10 ft. On NW end of Upper Newport Bay. San Pedro Fm.	J. G. Vedder, 1957
m775B	Mf742		Approx. 2575 ft NE and 75 ft SE from W. cor. Irvine block 57, Tustin, Calif., quad., 1950 ed. Alt about 20 ft. In quarry cut now buried by sub- division. About 1-3/4 miles S. of BM 45 at NE end of runway. Orange County, Calif., airport. Fernando Fm.	Irvine J. G. Vedder, 1956

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Pliocene and Pleistocene--Continued				
m776	Mf312	V-216	1,350 ft SE and 425 ft SW of N. cor. Irvine block 57, Tustin, Calif., quad., alt about 30 ft. E. of MacArthur Blvd. Fernando Fm.	J. G. Vedder, 1957
m777	Mf479	V-243B	1,600 ft SE and 150 ft NE of W. cor. Irvine block 58, Tustin, Calif., quad., alt about 20 ft. E. of MacArthur Blvd. Fernando Fm.	J. G. Vedder, 1959
	Mf1725	V-249v	Approx. 2,325 ft S and 900 ft E of NW cor. sec. 7, T.7S, R.7W, San Juan Capistrano, Calif., quad., in new road cut near ridge crest, alt. about 600 ft.	J. G. Vedder, 1971
	Mf1726	V-249w	Approx. 2,850 ft N and 75 ft W of SE Cor. sec. 13, T.5S, R.8W, San Juan Capistrano, Calif., quad., in new road cut near saddle in ridge crest, alt. about 500 ft.	J. G. Vedder, 1971
	Mf1727	V-249x	Approx. 700 ft N and 825 ft W of SE cor. sec. 13, T.7S, R.8W, San Juan Capistrano, Calif., quad., in new road cut in saddle in ridge, alt. about 530 ft.	J. G. Vedder, 1971

Table 3.--Vertebrate fossil localities.

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Miocene				
V-400		GLD-11	12,000 ft S. and 4,400 ft W. of NE cor. Laguna Beach, Calif., quad., 1949 ed., alt about 650 ft. On SW side of ridge crest. Topanga Fm.	G. L. Dolton, 1950
V-401			4,000 ft W. and 11,050 ft S. of NE cor. sec. 4, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., W. of Aliso Creek. Alt about 320 ft. Monterey Shale.	
Pleistocene				
V-402			2,850 ft SW and 1,175 ft SE of N. cor. Irvine block 96, Laguna Beach, Calif., quad., 1949 ed., alt about 270 ft. In nonmarine terrace cover.	J. G. Vedder, 1954
V-403			3,750 ft S. and 5,225 ft W. of NE cor. sec. 3, T. 8 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 255 ft. In incised older alluvium in gully wall.	J. G. Vedder, 1953
V-404		RV-58-7	925 ft N. and 700 ft E. of SW cor. sec. 13, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 280 ft. In road cut into older alluvium.	J. G. Vedder, 1953

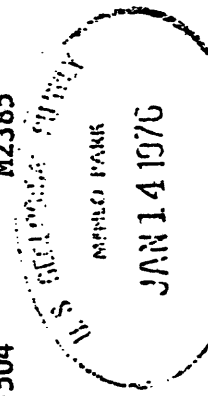
Table 3.--Vertebrate fossil localities--Continued.

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Pleistocene--Continued				
V-405			2,500 ft S. and 3,350 ft W. of NE cor. sec. 16, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt 45 ft. In landslide debris derived from nonmarine terrace cover.	J. G. Vedder, 1954

Table 1.--Megafossil localities

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Paleocene				
F500	21906	SA-271	10,425 ft W. and 2,025 ft S. of NE cor. of Laguna Beach, Calif., quad., 1949 ed., alt about 330 ft. In Shady Canyon. Silverado Fm.	J. G. Vedder, J. E. Schoellhamer, and R. F. Yerkes, 1954
Eocene				
F501	21905	SA-256	1,250 ft NE and 3,025 ft SE of S. cor. of Irvine block 101, Tustin, Calif., quad., alt about 240 ft. E. of Sand Canyon Reservoir. Santiago Fm.	J. G. Vedder, 1954
Early Miocene				
F502	M3214	SA-258	450 ft NW and 2,950 ft NE of S. cor. of Irvine block 124, Tustin, Calif., quad., alt about 170 ft. W. of Laguna Road. Vaqueros Fm.	J. G. Vedder, 1954
F503	M3215	SA-254	900 ft SW and 850 ft SE of S. cor. of Irvine block 124, Tustin, Calif., quad., alt about 290 ft. Vaqueros Fm.	J. G. Vedder, 1954
F504	M2385		1,540 ft NE and 85 ft NW of S. cor. of Irvine 138, Tustin, Calif., quad., alt about 260 ft. At Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954

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Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Early Miocene---Continued				
P-504	M3158	---	1525 ft NE and 100 ft NW from S. cor. Irvine block 138, Tustin, California, quad., alt about 250 ft. Vaqueros Fm.	J. G. Vedder, 1954
P504A	M3152	SA-303	390 ft NW and 515 ft NE of S. cor. of Irvine block 138, Tustin, Calif., quad., alt 300 ft. Near Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
P506	M3154	SA-253	575 ft NW and 690 ft SW of S. cor. of Irvine block 138, Tustin, Calif., quad., alt about 385 ft. W. of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
P507	M3155	SA-259	4,125 ft N. and 3,950 ft W. of SE cor. of Tustin, Calif., quad., alt about 420 ft. Vaqueros Fm.	J. G. Vedder, 1954
P507A	M3156	SA-304	4,275 ft N. and 5,425 ft W. of SE cor. of Tustin, calif., quad., alt about 520 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
P507B	M3157	SA-305	3,925 ft N. and 4,600 ft W. of SE cor of Tustin, Calif., quad., alt about 440 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954

Numbers used in this report	Geological Survey No. Permanent	Field Number	Description of locality and stratigraphic unit	Collector and date
			Early Miocene--Continued	
F508	M3159	SA-255	3,775 ft N. and 4,850 ft W. of SE cor. Tustin, Calif., quad., alt about 470 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
F509	M2393		3,500 ft N. and 5,575 ft W. of SE cor. Tustin, Calif., quad., alt about 670 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
F510	M2394		3,300 ft N. and 8,575 ft W. of SE cor. Tustin, Calif., quad., alt about 560 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
F511	M2395		2,950 ft N. and 2,500 ft W. of SE cor. Tustin, Calif., quad., alt about 450 ft. Vaqueros Fm.	J. G. Vedder, 1954
F512	M2396		2,725 ft N. and 6,300 ft W. of SE cor. Tustin, Calif., quad., alt about 720 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
F513	M2397		2,600 ft N. and 6,600 ft W. of SE cor. Tustin, Calif., quad., alt about 720 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954
F514	M2398		2,150 ft N. and 8,475 ft W. of SE cor. Tustin, Calif., quad., alt about 655 ft. SW of Laguna Reservoir. Vaqueros Fm.	J. G. Vedder, 1954

Numbers used in this report	Permanent Geological Field Survey No. Number	Description of locality and stratigraphic unit	Collector and date
Early Miocene--Continued			
F515		1,025 ft N. and 465 ft W. of SE cor sec. 29, T. 6 S., R. 8 W., S. of Veeh Reservoir, San Juan Capistrano, Calif., quad., 1949 ed., alt about 320 ft. Vaqueros Fm.	J. G. Vedder, 1954
F516	M3160	SA-274B · 1,440 ft E. and 800 ft S. of NW cor. sec. 32, T. 6 S., R. 7 W., W. side of Arroyo Trabuco, San Juan Capistrano, Calif., quad., 1949 ed., alt about 720 ft. Sespe-Vaqueros, undiff.	J. G. Vedder, 1954
F517	M3161	SA-300 2,580 ft S. and 1,100 ft W. of NW cor. of T. 7 S., R. 8 W. Laguna Beach, Calif., quad., 1949 ed., NW of Laguna Canyon- Niguel Road junction. Alt about 605 ft. Vaqueros Fm.	J. G. Vedder, 1954
F518A	M3162	SA-226 3,250 ft W. of SE cor. sec. 32, on township line of T. 6 S. and T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. On hillside N. of ranch road, alt about 510 ft. Vaqueros Fm.	J. G. Vedder, 1953
F518B	M2403	2,000 ft S. and 3,600 W of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. At head of Wood Canyon. Alt about 600 ft. Vaqueros Fm.	J. G. Vedder, 1953

Numbers used in this report	Permanent Geological Field Survey No. Number	Description of locality and stratigraphic unit	Collector and date
F519	M3163	SA-279 17,140 ft W. and 2,475 ft S. of NW cor. of T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 850 ft. On side of ridge between Los Trancos Canyon and Muddy Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F520	M2405	4,335 ft S. and 1,190 ft W. of NW cor. of T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 565 ft. NW of Laguna Canyon Road junction with Niguel Road. Vaqueros Fm.	J. G. Vedder, 1954
F521	M2406	5,495 ft N. and 630 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 470 ft. Near Laguna Canyon Road junction with Niguel Road. Vaqueros Fm.	J. G. Vedder, 1954
F522	M3164	SA-276 11,375 ft W. and 5,225 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 540 ft. In upper Moro Canyon tributary. Vaqueros Fm.	J. G. Vedder, 1954
F523	M2408	6,700 ft S. and 4,875 ft W. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 500 ft. E. side of Wood Canyon. Vaqueros Fm.	J. G. Vedder, 1953

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Early Miocene--Continued				
F524	M3165	SA-285	16,360 ft W. and 4,150 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 300 ft. In bottom of Muddy Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F525	M2410		3,400 ft N. and 2,450 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Ridge W. of Laguna Canyon. Alt about 765 ft. Vaqueros Fm.	J. G. Vedder, 1954
F526	M3166	SA-296	3,400 ft N. and 540 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Tributary W. of Laguna Canyon. Alt 380 ft. Vaqueros Fm.	J. G. Vedder, 1953
F527	M3167	SA-291	13,555 ft W. and 2,435 ft. N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 380 ft. N. of reservoir in Moro Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F528	M2413		1,550 ft N. and 2,160 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Ridge W. of Laguna Canyon. Alt about 825 ft. Vaqueros Fm.	J. G. Vedder, 1954

Numbers used Permanent in this Geological report Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
		Early Miocene--Continued	
F529	M3168	SA-287 8,290 ft W. and 260 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 530 ft. On W. side Nigger Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F530	M2416	270 ft. N. and 2,970 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 582 ft. NW of big bend in Laguna Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F531	M3169	SA-294 225 ft N. and 440 ft. W. of NW cor. sec. 18, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. W. side Laguna Canyon, alt about 343 ft. Vaqueros Fm.	J. G. Vedder, 1953
F532	M3170	SA-288 9,125 ft W. and 830 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 450 ft. On W. side of Nigger Canyon. Vaqueros Fm.	J. G. Vedder, 1954
F532A	M3171	SA-306 1,820 ft S. and 1,575 ft W. of NW cor. sec. 18, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Near big bend in lower Laguna Canyon. Alt about 230 ft. Vaqueros Fm.	J. G. Vedder, 1954

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Early Miocene--Continued				
F533	M2419		10,800 ft W. and 2,780 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 300 ft. W. of lower Nigger Canyon. Vaqueros Fm.	J. G. Vedder, 1954
Middle Miocene				
F534	M3172	SA-302	1,925 ft SE and 600 ft SW of N. cor. block 174. El Toro, Calif., quad., 1950 ed., alt about 600 ft. Near mouth of Borrego Canyon. Topanga Fm.	R. F. Yerkes, 1954
F534A	M3225		525 ft W. and 1,200 ft N. of SE cor. sec. 21, T. 6 S., R. 8 W., El Toro, Calif. quad., 1950 ed. At W. end of dam for small reservoir, alt about 320 ft. Monterey Shale.	J. G. Vedder, 1960
F535	M3213	SA-274A	4,365 ft E. and 800 ft S. of NW cor. sec. 32, T. 6 S., R. 7 W., W. side of Arroyo Trabuco in San Juan Capistrano, Calif., quad., 1949 ed., alt about 840 ft. Topanga Fm.	J. G. Vedder, 1954
F536	M3173	SA-283	12,290 ft W. and 1,320 ft N. of NW cor. T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 995 ft. On ridge ESE of Signal Peak. Bommer Mem.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F537	M2424		14,880 ft W. and 270 ft N. of NW cor. of T. 7 S., J. G. Vedder, 1954 R. 8 W., Laguna Beach, Calif., quad., alt about 970 ft. On ridge S. of Signal Peak. Bommer Mem.	
F538	M2425		70 ft S. and 4,690 ft W. of NW cor. of T-7 S., J. G. Vedder, 1954 R. 8 W., Laguna Beach, Calif., quad., 1949 ed. On ranch road S. of head of Shady Canyon, alt about 710 ft. Bommer Mem.	
F539	M2426		15,245 ft W. and 1,400 ft S. of NW cor. T.7 S., J. G. Vedder, 1954 R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 930 ft. On second ridge 3/4 mi. S. of Signal Peak. Bommer Mem.	
F540	M3174	SA-281	1,620 ft S. and 4,150 ft W. of NW cor. of T. 7 S., J. G. Vedder, 1954 R. 8 W., Laguna Beach, Calif., quad., 1949 ed. In large tributary about 1 mi. W. of Laguna Canyon. Alt about 670 ft. Bommer Mem.	
F541	M3232		4,650 ft E. and 1,175 N. of SW cor. sec. 5, T. 7 S., R. 7 W., in San Juan Capistrano, Calif. quad., 1949 ed. E. of Arroyo Trabuco, alt about 720 ft. San Onofre Breccia.	J. G. Vedder, 1954 J. E. Schoellhamer

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F543	M3175	SA-266	5,690 ft N. and 1,800 ft E. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 250 ft. Along Niguel Road, Topanga Fm.	J. G. Vedder, 1953
F544	M2430		5,350 ft N. and 425 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. W. of Laguna Canyon-Niguel Road, junction, alt about 430 ft. Bommer Mem.	J. G. Vedder, 1954
F545	M3176	SA-298	4,700 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 350 ft. W. of Laguna Canyon Road and Niguel Road intersection. Topanga Fm.	J. G. Vedder, 1954
F546	M3177	SA-290	11,000 ft W. and 4,460 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 465 ft. In upper Moro Canyon. Bommer Mem.	J. G. Vedder, 1954
F547	M3178	SA-275	3,400 ft N. and 4,725 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 710 ft. Near head of Nigger Canyon. Bommer Mem.	J. G. Vedder, 1954

Number used this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F548	M3179	SA-265	2,550 ft S. and 4,350 ft E. of NW cor. sec. 8, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 800 ft.	J. E. Schoellhamer and J. G. Vedder, 1954
F549	M3180	SA-299	3,130 ft N. and 3,075 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. Near ridge top W. of Laguna Canyon, alt about 810 ft. Bommer Mem.	J. G. Vedder, 1954
F550	M3181	SA-239	2,990 ft N. and 2,450 ft E. of SW cor sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. On ridge E. of Laguna Canyon alt about 785 ft. Topanga Fm.	J. G. Vedder, 1952
F551	M3182	SA-282	15,550 ft W. and 2,825 ft N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 525 ft. On ridge between Muddy Canyon and Moro Canyon. Bommer Mem.	J. G. Vedder, 1954
F552	M3183	SA-240	2,270 ft. N. and 2,250 ft E. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. On ridge E. of Laguna Canyon, alt about 790 ft. Topanga Fm.	J. G. Vedder, 1952

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
			Middle Miocene--Continued	
F553	M3184	SA-286	9,160 ft W. and 2,300 ft N. of SW cor. sec. 7, T7 S., R. 8 W., Laguna Beach, Calif., quad., alt about 882 ft. Top of ridge between Nigger Canyon and Moro Canyon. Bommer Mem.	J. G. Vedder, 1954
F554	M2440		2,220 ft N. and 3,360 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 720 ft. Near ridge top W. of Laguna Canyon. Bommer Mem.	J. G. Vedder, 1954
F555	M2441		2,050 ft N. and 7,100 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 470 ft. W. side upper Nigger Canyon. Bommer Mem.	J. G. Vedder, 1954
F556	M3185	SA-292	12,500 ft W. and 680 ft. N. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt 600 ft. High on E. wall of Moro Canyon. Bommer Mem.	J. G. Vedder, 1954
F557	M3186	SA-295	360 ft N. and 3,260 ft W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. NW of big bend in Laguna Canyon, alt about 550 ft. Bommer Mem.	J. G. Vedder, 1954

Number used in this report	Permanent Geological Survey No.	Field Survey No.	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F558	M3187	SA-228	4,900 ft W. and 10,750 ft S. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. E. of Wood Canyon, alt about 520 ft. Topanga Fm.	J. G. Vedder, 1953
F559	M3188	SA-227	1,150 ft W. and 12,250 ft S. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 360 ft. In canyon N. of Sheep Hills in stream bed. Monterey Sh.	J. G. Vedder, 1952
F560	M3189	SA-241	5,725 ft W. and 13,150 ft S. of NE cor. sec. 5, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed. W. of Wood Canyon, alt about 300 ft. Topanga Fm.	J. G. Vedder, 1953
F561	M2447		10,525 ft W. and 2,600 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., alt about 460 ft. On W. side of Nigger Canyon. Bonmar Mem.	J. G. Vedder, 1954
F562	M3190	SA-242	3,775 ft E. and 1,200 ft N. of SW cor. sec. 18, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. In canyon NE of Temple Hill, alt about 350 ft Topanga Fm.	J. G. Vedder, 1952

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F563	M3204	SA-293	10,715 ft W. and 4,075 ft S. of SW cor. sec. 7 T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 310 ft. Bommer Mm.	J. G. Vedder, 1954
F564	M3205		9,250 ft W. and 5,460 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., alt 380 ft. On W. side of Boat Canyon. Bommer Mm.	J. G. Vedder, 1954
F564A	M3206	V-242	11,260 ft W. and 6,475 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 240 ft. Near water tank N. of Crescent Bay. San Onofre Breccia.	J. G. Vedder, 1950, 1959
F565	M3207	SA-243	3,540 ft E. and 2,050 ft S. of NW cor. sec. 19, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. E. side Temple Hill, alt about 850 ft. Topanga Fm.	J. G. Vedder, 1953
F565A	M3208	SA-301	2,600 ft S. and 5,410 ft W. of NE cor. sec. 24, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., Near Irvine Bowl Park, alt about 70 ft. Topanga Fm.	J. G. Vedder, 1954

Numbers used in this report	Permanent Geological Survey No.	Field Number	Description of locality and stratigraphic unit	Collector and date
Middle Miocene--Continued				
F566	M3209		2,400 ft E. and 1,990 ft N. of SW cor. sec. 7, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 660 ft. Hill 690 S. of Canyon Acres. Topanga Fm.	J. G. Vedder, 1953
F567	M3210	BA-153	3,025 ft W. and 485 ft N. of the NW cor. sec. 25, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 25 ft. Base of sea cliff Heisler Park. Topanga Fm.	J. G. Vedder, 1946
F568	M3211	SA-229	2,565 ft W. and 390 ft N. of NW cor. sec. 25, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 20 ft. Base of sea cliff at Heisler Park. Topanga Fm.	J. G. Vedder, 1953
F569	M2457		310 ft E. and 1,675 ft S. of NW cor. sec. 25, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 30 ft. N. side of Cheneys Point. Topanga Fm.	J. G. Vedder, 1953
F569A	M3216	SA-263	1,175 ft S. and 1,175 ft W. of SE cor. sec. 24, T. 6 S. R. 8 W., El Toro, Calif. quad., 1950 ed., alt about 700 ft. On hill E. of ranch road southeast of lower English Canyon. Capistrano Fm.	J. E. Schoellhamer, and R. F. Yerkes, 1954

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
			Middle Miocene--Continued	
F570	M3212	SA-307	2,925 ft. S. and 1,350 ft W. of NE cor. sec. 21, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 30 ft. On W. side Dana Point. San Onofre Breccia.	J. G. Vedder, 1957
			Pliocene	
F571	M2092	SA-284	2,575 ft SE and 2,800 ft SW of N. cor. Irvine block 52, Newport Beach, Calif., quad., alt about 50 ft. Near top of sea cliff on E. side of Palisades Road. Fernando Fm.	J. G. Vedder, 1954
F572	M1921		2,625 ft SE and 2,975 ft SW of N. cor. Irvine block 52, Newport Beach, Calif., quad., 1951, alt about 15 ft. Near base of bluff on E. side of Palisades Road. Fernando Fm.	J. G. Vedder, 1954
F573	M3240	SA-257	1,350 ft E. and 265 ft N. of SW cor. sec. 25, T. 6 S., R. 8 W., in San Juan Capistrano, Calif., quad., 1949 ed., alt about 510 ft. About 1½ mi SE of El Toro. Niguel Fm.	J. G. Vedder, 1953

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pliocene--Continued				
F574	M3234	SA-267	2,475 ft E. and 2,950 ft S. of NW cor. sec. 6, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 680 ft. On ridge between Oso Creek and Arroyo Trabuco. Niguel Fm.	J. E. Schoellhamer, J. G. Vedder, 1954
F575	M2096	SA-244	875 ft S. and 150 ft E. of NW cor. sec. 11, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 390 ft. Between Aliso Creek and Hwy 101 in gully wall about 3 mi due S. of El Toro. Niguel Fm.	J. G. Vedder, 1953, and Vedder and W. O. Addicott, 1962
F576	M2097	SA-245	3,775 ft S. and 675 ft W. of NE cor. sec. 11, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 440 ft. About half a mile NW of Galivan Siding. Niguel Fm.	J. G. Vedder, 1953
F577	M2098	SA-262	1,650 ft S. and 2,550 ft W. of NE cor. sec. 24, T. 7 S., R. 8W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 340 ft. About 3 mi N. of San Juan Capistrano. Niguel Fm.	J. G. Vedder, 1954

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pliocene--Continued				
F578	M2099	SA-264	1,425 ft S. and 3,450 ft W. of NE cor. sec. 30, J. G. Vedder, 1954 T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 530 ft. About 2½ mi N. of San Juan Capistrano between Arroyo Trabuco and Horno Creek. Niguel Fm.	
F579	M2100	SA-261	2,000 ft S. and 2, 300 ft W. of NE cor. sec. 30, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 450 ft. On N side of small tributary draining into Horno Creek. Niguel Fm.	J. G. Vedder, 1954
F580	M2101	SA-260	5,075 ft S. and 3,250 ft W. of NE cor. sec. 30, T. 7 S., R. 7 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 340 ft. W. of Horno Creek about 1½ mi NE of San Juan Capistrano. Niguel Formation.	J. G. Vedder, 1954
F581	M2102	SA-246	4,200 ft W. and 1,500 ft N. of SE cor. of projected sec. 34, T. 7 S., R. 8 W., San Juan Capistrano, Calif., quad., 1949 ed., alt about 400 ft. On low ridge W of Salt Creek. Niguel Fm.	J. G. Vedder, 1953

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pliocene--Continued				
F582	M2103	SA-247	425 ft E. and 425 ft N. of SW cor. sec. 11, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 320 ft. In gully about 1½ mi N. of beach at Doheny State Park. Capistrano Fm.	J. G. Vedder, 1953
F583	M2104	SA-248	50 ft W. and 2,175 ft S. of NE cor. of projected sec. 13, T. 8 S., R. 8 W., Dana Point, Calif., quad., alt about 620 ft. On ridge NW of Reservoir Canyon. Niguel Fm.	J. G. Vedder, 1953
F583A	M2105		From landslide area in projected sec. 13, T. 8 S., R. 8 W., San Juan Capistrano, Calif. quad., 1949 ed. Exact location unknown. About 2 mi S. of San Juan Capistrano, presumably from landslide block of Niguel Fm.	J. S. Hook, 1929
F583B	M2106	SA-248A	4,400 ft S. and 2,400 ft W. of NE cor. projected sec. 13, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 480 feet in artificial cut on N. side of Deep Canyon. Niguel(?) Fm.	J. G. Vedder, 1964
F584	M2091	SA-297	50 ft SE and 2,950 ft SW of N. cor. Irvine block 57 Tustin, Calif., quad., alt about 20 ft. In quarry on E. side of Palisades Road. Locality now buried by fill for housing subdivision. Fernando Fm.	J. G. Vedder, 1954

Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
M2752	F-571A	Approx. 2575' SE and 2600' SW from N. cor. Irvine Block 52, Newport Beach, Calif. quad (1951 ed). Alt. about 15'. In artificial cut into sand lens on SE side of Palisades Road.	J. G. Vedder, 1966
M2753	F571B	Approx. 2775' SE and 2550' SW from N. cor. Irvine Block 52, Newport Beach, Calif. quad. (1951 ed.). Alt. about 90'. In artificial cut near top of bluff overlooking Upper Newport Bay.	J. G. Vedder, 1966

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pliocene--Continued				
F584A	M2090		Approx. 2,575 ft NE and 75 ft SE from W. cor. Irvine block 57, Tustin, Calif., quad., 1950 ed., alt about 20ft. In quarry cut now buried by subdivision. About 1-3/4 mi S. of BM 45 at NE end of runway, Orange County airport. Fernando Fm.	J. G. Vedder, 1956
Pleistocene				
F585	M1482		21,800 ft due W. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 70 ft. Marine terrace deposit near top of sea cliff between Crystal Cove and Reef Point.	J. G. Vedder, 1954
F585A	M1481		1,900 ft NW and 1,325 ft SW of S. cor. Irvine block 96, Laguna Beach, Calif., quad., 1949 ed. Alt about 90 ft. In foundation trench for apt house on N. side of Hwy 101-alt. Marine terrace deposit.	J. G. Vedder and G. E. Vedder, 1959
F586	M1018		19,400 ft N. and 17,800 W. of SE cor. Laguna Beach, Calif., quad., 1949 ed., Just N. of Emerald Bay in road cut for highway (now covered). Marine terrace deposit.	J. G. Vedder, and J. F. Vedder, 1953, 1957, 1960

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pleistocene--Continued				
F586A	M1017		19,850 ft N. and 19,750 ft W. of SE cor. Laguna Beach, Calif., quad., 1949 ed. Marine terrace deposit NE of Abalone Point (now buried). Alt 50-60 ft.	J. G. Vedder, 1954, 1958
F586B	M1480		4,875 ft W. and 2,000 ft N. of SW cor. sec. 24, T. 7 S., R. 9 W., Laguna Beach, Calif., quad., 1949 ed., alt about 85 ft in excavation for bldg at NE cor of Fairview St. and Hwy 101-alt. Marine terrace deposit.	J. G. Vedder and G. E. Vedder, 1961
F587	M1019	SA-252	11,540 ft W. and 7,800 ft S. of SW cor. sec. 7, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed., alt about 70 ft. Just N. of Crescent Bay, marine terrace deposit (now buried).	J. F. Vedder, 1946
F588			2,365 ft E. and 4,980 ft S. of NW cor. sec. 31, T. 7 S., R. 8 W., Laguna Beach, Calif., quad., 1949 ed. About half way up sea cliff., alt about 60 ft. Marine terrace deposit.	J. G. Vedder, 1954
F589	M1036	SA-249	575 ft S. and 50 ft W. of NE cor. sec. 22, T. 8 S., R. 8 W., Dana Point, Calif., quad., alt about 140 ft. On SE cor. of town of Dana Point. Marine terrace deposit.	J. G. Vedder, 1953, 1958

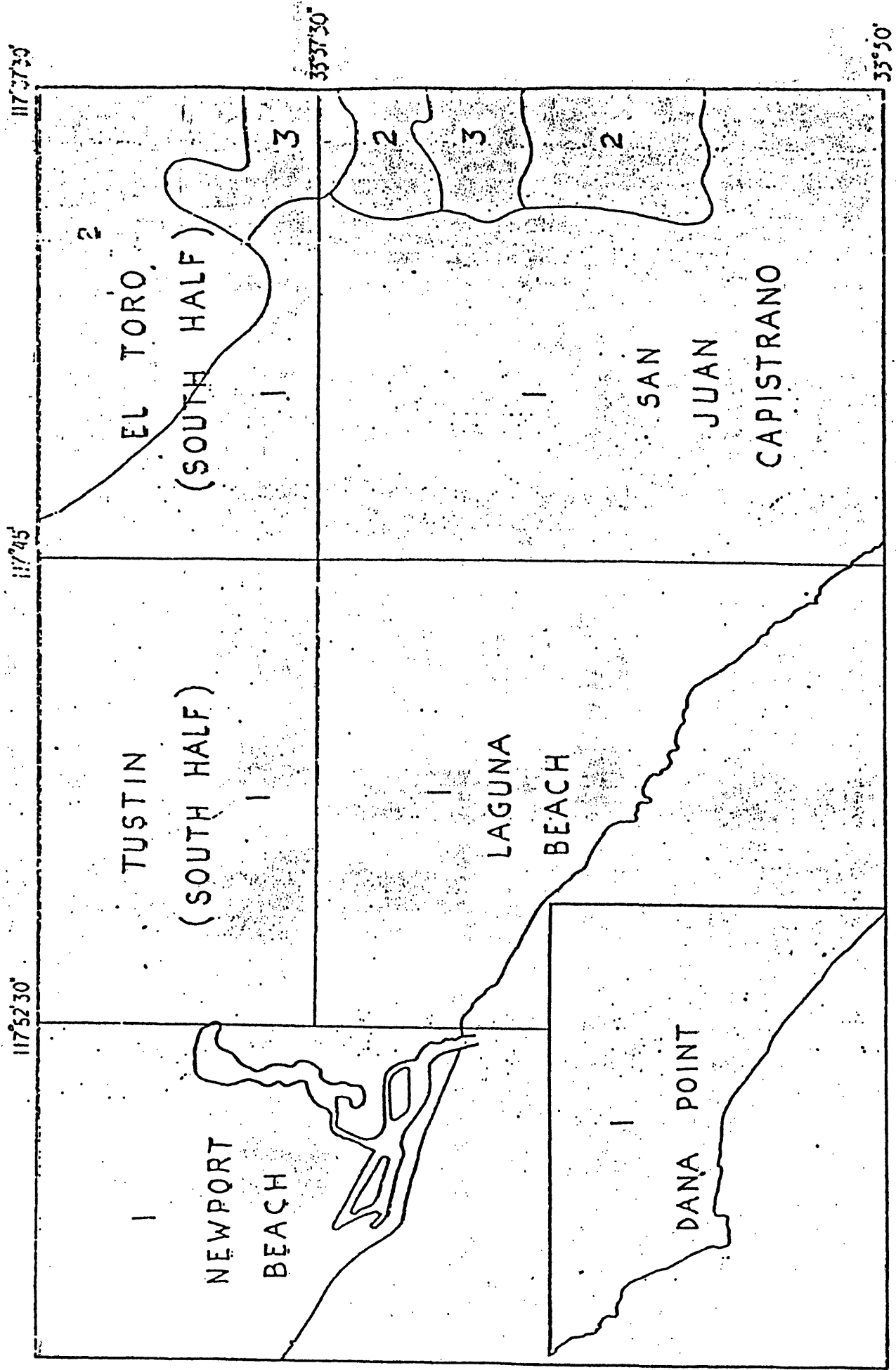
Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pleistocene--Continued				
F589A	M1485		2,025 ft W. and 8,050 ft S. of NE cor. sec. 13, T. 8 S., R. 8 W., Dana Point, Calif., quad., 1949 ed., alt about 200 ft. E. of Capistrano Beach. Marine terrace deposit.	J. G. Vedder, 1958
F590	M1483		2,100 ft W. and 825 ft N. of SE cor. sec. 19, T. 8 S., R. 7 W., Dana Point, Calif., quad., 1949 ed., alt about 190 ft. About half a mile N. of Forster Lake. Marine Terrace deposit.	J. G. Vedder, 1953
F591	M1465	SA-250	600 ft E. and 1,375 ft S. of NW cor. sec. 29, T. 8 S., R. 7 W., Dana Point, Calif., quad., 1949 ed., alt about 180 ft. Marine terrace deposit. E. of Forster Lake.	J. G. Vedder, 1953, 1960
F592	M1016	SA-251	9,050 ft S. and 3,925 ft E. of NW cor. sec. 29, T. 8 S., R. 7 W., Dana Point, Calif., quad., 1949 ed., alt about 100 ft. In sea cliff at San Clemente. Marine terrace deposit.	J. G. Vedder, 1953, 1958
F593	M1475	Newport D	50 ft SE and 1,325 ft NE of W. cor. Irvine block 58, Tustin, Calif., quad., 1950 ed., alt about 40 ft. E. of MacArthur Blvd. in road cut (not shown on map) for new route of San Joaquin Rd. Palos Verdes Sand.	J. G. Vedder, 1954

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pleistocene--Continued				
F594	M1470 M1486		100 ft SE and 2,850 ft SW of N. cor. Irvine block 57, Tustin quad., Calif., alt about 60 ft. On E. side of Palisades Rd in sand quarry opposite salt works. Palos Verdes Sand.	J. G. Vedder, 1958
F595	M1077		900 ft NW and 250 ft NE of S. cor. Irvine block 51, Tustin, Calif., quad., alt about 85 ft. S. 1958 of Palisades Rd. Palos Verdes Sand.	J. G. Vedder, 1954,
F596	M2076		800 ft SE and 1,400 ft NE from W. cor. Irvine block 52, Newport Beach, Calif., quad. 1951 ed., alt approx 85 ft. In area of cut-and-fill for housing subdivision now buried on W. side of Upper Newport Bay. Locality may be in transported artificial fill. Palos Verdes Sand.	J. G. Vedder, 1962
F597	M1476	Newport G	1,800 ft NW and 1,000 ft NE of S. cor. Irvine block 57, Tustin, Calif., quad., 1950 ed., alt about 120 ft. In road cut on E. side of MacArthur Blvd. Marine terrace deposit.	J. G. Vedder, 1958
F598	M1468	Newport E	4,175 ft N. and 1,800 ft W. of NE cor. sec. 29, T. 6 S., R. 10 W., Newport Beach quad., Calif., alt about 55 ft. E. of Santa Ana River in oil well cut in gully at W. end of 18th St. Palos Verdes Sand.	J. G. Vedder, 1956

Numbers used in this report	Permanent Geological Survey No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
Pleistocene--Continued				
F599	M2074		3,400 ft NW and 100 ft NE of S. cor. Irvine block 52, Newport Beach, Calif., quad., 1951 ed., alt approx 80 ft. In excavation (now buried) for housing subdivision on W. side of Upper Newport Bay. Palos Verdes Sand.	J. G. Vedder, 1962
F600	M1474	Newport A	3,450 ft N. and 2,425 ft W. of NE cor. sec. 29, T. 6 S., R. 10 W., Newport Beach, Calif., quad., alt about 60 ft. E. of Santa Ana River in roadcut through bluff. Palos Verdes Sand.	J. G. Vedder, 1956
F601	M1469 M1479	Newport B	2,100 ft N. and 3,250 ft W. of NE cor. sec. 29, T. 6 S., R. 10 W., Newport Beach, Calif., quad., alt about 30 ft. E. of Santa Ana River on bluff above main oil field road. Palos Verdes Sand.	J. G. Vedder, 1956
F602	M2073	Newport I	1,650 ft NW and 2,100 ft NE of S. cor. Irvine block 53, Newport Beach, Calif., quad., 1951 ed., alt approx 70 ft. In pipeline trench, now covered, on W. side of Upper Newport Bay. Palos Verdes Sand.	J. G. Vedder, 1962

Numbers used in this report	Permanent Geological Survey ;No.	Field Numbers	Description of locality and stratigraphic unit	Collector and date
			Pleistocene--Continued	
F603	M1471 1472 1473	Newport C	1,900 ft W. and 1,000 ft S. of NE cor. sec. 29, T. 6 S., R. 10 W., Newport Beach, Calif., quad., 1951 ed., alt about 20 ft. On N. side of Hwy 101-alt. SW cor. Newport Mesa.	J. G. Vedder, 1956
			Palos Verdes Sand.	
F604	M1477 1478	Newport F	1,125 ft W. and 1,300 ft S. of NE cor. sec. 29, T. 6 S., R. 10 W., Newport Beach, Calif., quad., alt about 20 ft. On N. side of Hwy 101-alt. Palos Verdes Sand.	J. G. Vedder, 1956
F605	M1922	Newport J	2,150 ft E. and 1,875 ft S. of NW cor. sec. 28, T. 6 S., R. 10 W., Newport Beach, Calif., quad., 1951 ed., On SW side of northwesterly trending gully near intersec. of Hwys 55 and 101-alt. Alt about 55 ft. Palos Verdes Sand.	J. G. Vedder, 1961
F607	M1466		1,150 ft SW and 225 ft NW of S. cor. Irvine block 93, Laguna Beach, Calif., quad., 1949 ed., In excavation for building at intersec. of Jasmine St and hwy 101 in Corona del Mar. alt about 90 ft. Marine terrace deposit.	G. E. Vedder, 1960

(3-50)
 NR 290
 75-552
 PL 647



INDEX TO GEOLOGIC MAPPING AND QUADRANGLE NAMES

1. J. G. Vedder, 1952-1954
2. R. F. Yerkes, 1954
3. J. E. Schoelhamer, 1954

See Explanatory notes for sources of revised mapping

