

SACRAMENTO STATE COLLEGE
Sacramento
SACRAMENTO, CALIFORNIA

Presented by
MRS. J. B. LILLARD

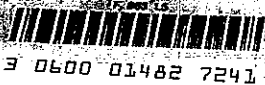
Spec Coll F 863 .LS
Lillard, Jeremiah Beverly,
1873-
An introduction to the
archeology of central
California,

AN INTRODUCTION
TO THE
ARCHEOLOGY OF CENTRAL CALIFORNIA

by
Jeremiah B. Lillard
R. F. Heizer
Franklin Penzga

Sacramento Junior College
Department of Anthropology
Bulletin 2

Published by
The Board of Education
of the
Sacramento City
Unified School District
Sacramento, California
1939



56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

It carries over into Transitional times. Charnstones (A, and B types) are abundant in Early period sites. These, together with great numbers of clear quartz crystals, are characteristic Early burial components. Both quartz crystals and charnstones in California are found and employed with supernatural powers ordinarily to be used and controlled only by shamans. It seems improbable that there were great numbers of shamans in Early culture times; perhaps charnstones and quartz crystals could be "controlled" by anyone, or they may not have had, at this Early time, supernatural powers. The use of human bones for artifacts is noteworthy Early trait. Of our four sites, C.68 is the only one where this trait is absent. The presence in the Early horizon of sites C.68, C.107 and C.142 of objects of baked-clay modifies a previous statement (Heizer 1937) that these were limited to the Late horizon (see also Heizer and Fenenga, n.d.).

We have indicated in other publications the wider Californian significance of the Early Sacramento culture, attempting to correlate it, (and the succeeding cultures) with the cultural succession of the Santa Barbara region (see Heizer, 1930; Heizer and Fenenga, n.d.). The importance of the Early Sacramento culture to the student of California prehistory or to the Californian ethnographer is very great. But, it must be emphasized, that the Early culture is a developed culture which has already achieved a distinctive Central Californian tenor. It must not be looked upon as the ultimate historical datum--it is merely the oldest culture yet found in the Sacramento valley plain. Speculation is ever hazardous, and it must be realized that when we point to the priority of dolichocephalic peoples, the metate, and large heavy stemmed projectile points over a brachycephalic population, the mortar, and small light side-notched points used with the bow and arrow, we are only indicating a demonstrable, local change. Paralleled cases (e.g. in the southwest) come immediately to mind, but we specifically avoid any attempt to correlate these broad changes in widely separated areas. The data must be much more complete before broader treatments can be undertaken. For the same reason, (see Heizer, 1938) in the valley. It is highly hazardous to transfer time through distance and space on the questionable basis of typological similarity. In order to judge whether or not a Folsom culture (in the true sense) is present, we must see it in its stratigraphic position; it must occur in context.

Nevertheless, there must be somewhere not too far away, the antecedent stage or stages of our Early culture. And we shall recognize it when it is found. There is evidence for these statements, as will be seen. As shown, before, the Early culture is already a settled, pre-civilized culture, quite homogeneous as far as our evidence indicates, fairly localized in its manifestations, already bearing in typical form the general basis of Central Californian material culture, and lastly but perhaps most significant, with definite regularized trade relations with the coast (from which were got Olivella and Haliothis shell beads), (from here were got clear quartz crystals, chert, flint, amphibolite schist, translucent limestone, etc.) and probably with the Napa valley area to the northwest which was the main source for obsidian for the Interior Valley region. We can postulate a coastal population coreal with the Early period valley dwellers, since it is improbable that people would migrate to the seacoast, manufacture a few shell beads and return with no raw shell materials, sea-mammal bones, etc. It seems obvious that trade must have occurred; the coastal congeners of the interior peoples receiving materials or goods in return for shell beads. These trade objects we may expect to find and use for cross-ties. Whether there

artifacts for charactones--the... bones...
manufacture by a particular village group from materials gathered at a certain known spot. This is less definite than the evidence for the coast. Thus, we have indicated several possibilities for future work; the coast, elevated valley fringes which have not undergone alluviations, etc.

Of wider significance in tracing origins or derivations, we might mention the apparent express desire to manufacture projectile points out of chert or flint or slate, rather than obsidian. Presumably this reflects inclination rather than necessity, since obsidian was definitely obtainable and was used, but to a lesser extent than other materials. We might infer (subject to further tests) that the ancestors of the Early people had a well developed flint-chipping tradition which persisted to some extent into later times, finally to be given up almost entirely. Evidence of this sort are numerous. We might also mention the unusual trait of the use of human bones as a material to make artifacts from. Or again, the peculiar antler fish-spears with three points; or the practice of grinding the surface and/or edges of chipped points; or the Early practice of slightly--this however, secondary flaking or edge-reworking used only rough or coarse granular material be a functional reselection of the use of rough or coarse granular materials such as slate, chert, etc. We point with some interest to the distinctive Early burial position--its only analogue seems to be with the Oak Grove culture of Santa Barbara (see Rogers, 1935). The asphaltum sources of the Early people are unknown, but they may have been in the Carquinez Straits region where surface seeps occur.

Thus for an all too short discussion of the Early culture which aims only at the bare mention of certain problems. When we know more, much more, than now, we shall be on more certain grounds, but it is certain that the search is not ended--we must look for earlier horizons than the Early culture. Just as we would not understand the Transitional culture without a knowledge of its parent, the Early culture, so we cannot understand the Early culture when its antecedents are unknown. This is not a philosophical question of the chicken-or-the-egg order, but is the state-philosophical question and important local problem. The late culture is emblematic of an immediate and important local problem. The late culture is plebeian only in terms of earlier, ancestral cultures and finally, the understanding of modern, ethnographic Central Californian culture cannot stand alone--its very foundation lies deep in the valley soils--it is merely the terminal manifestation of a long, local development of Indian culture brought to an untimely termination by the Caucasian impact.

The Transitional Period

The striking difference in burial position, and in the materials in which skeletons were found made possible a distinction between the Early period and the Late period even before the artifact inventory was well known for either culture. Thus Schenck and Dawson (1) correctly recognized sites C.56 and C.68 as belonging to the oldest period, and sites C.6, C.19, C.43, and C.48 as being pre-American, but more recent than the other group. In the absence of controlled burial by burial information and a typological comparison of artifacts, they placed Transitional site C.66 with the Early sites (C.56 and C.68) and Transitional site C.66 with the sites (C.6 etc.) Similarly Lillard and Purves (2) place Transitional at S.60 with the Early period.

By the time the excavation of C.66 was begun, pure culture of both the Early and Late periods had been carefully excavated and

- (1) Schenck and Dawson, 1929, pp. 402-403
- (2) Lillard and Purves, 1936, p. 10

Group of burials which did not fit in either period and besides we were looking for the link between the two. The Transitional period was large sites, belonging either in their entirety or in their majority to this period, have come to light. In this paper we describe four of these sites and over 300 inventories assignable to the Transitional period. It might be well to mention here that certain unsupported claims which have been made for the antiquity of man in the Sacramento delta region are based on a burial from the Transitional Van Lobensels mound (Site S.73). (See work cited below (3)).

Elements found in Transitional sites are divisible into three groups: carry overs from Early times, elements which appear first in Transitional times but last up into Late times, and elements unique to the Late material. The degree of preservation of the skeletal material is intermediate between that of the Early material and that of quantitative chemical analyses are now under way and offer promising results. The mound mass in Transitional sites is a somewhat undated midden deposit. It is not dusty, nor does it have the "greasy" feel of Late sites. On the other hand it has little in common with the compact concretion-like deposits characteristic of Early sites.

Traits associated with the Transitional burial complex were apparently not very stable. There is some evidence at sites C.141 and S.60 that a tradition of the Early burial posture was retained but with the exception of these few burials the characteristic position is slightly flexed on the side or back. There is no discrimination in regard to orientation; heads are as frequently pointed east as west. Cremation, a trait unknown in the Early period, is practiced to a small extent in Transitional times. Cremations seem to be accompanied by more wealth than are burials. Only about 40 per cent of the inventories have artifacts in association.

The military and hunting complex shows much closer affiliation with the Early period than with the Late period. Projectile points are large with a minimum weight of 5 grams. They would be poorly suited for use with a bow and arrow of the type known historically in California. This is a subject of broader interest than the specific field with which we are dealing, and as indicated before, will be dealt with in a future paper. By far the most frequently found type was N Abl. In general, small points are stemmed and large points are not stemmed. Obsidian is the material most frequently used but there is still an interest in both chert and chert. A unique feature of this period is the occurrence of large obsidian blades which have been fashioned by the removal of long flakes remaining diagonally across the blade. Some of the smaller points which this diagonal flaking technique but they are seldom less than 100 mm in length. The practice of grinding portions of the surfaces of blades points is evidenced by two points from S.99 and one from S.60. Occurrence of spearpoints imbedded in human bones is interesting. It is pointed out at C.107, three times at C.66, one each at S.99 and S.60. In several specimens in private collections from S.73 and C.59. No bones were found imbedded in Early bones and it is an extremely rare feature in Late times.

The Economic Complex shows considerable change over the Early period. Grain grinding implements are specialized to fit the different uses in which our sites are located. In the low foothills of the Sierras, Malillo, A.S., Origin of the Indians of America. Mimeographed copy of a paper read at the A.A.A.S. convention held at San Diego in June 1938.

the overflown sites type D pestles used with mortars (sites C.107, C.142, C.66, S.60 etc.) From the region south of the Car- (Site C.107, C.66, S.60 etc.) From the region south of the Car- (Site C.107, C.66, S.60 etc.) From the region south of the Car- (Site C.107, C.66, S.60 etc.) From the region south of the Car-

times than they were in Early times.

In this area cultural differences are most easily recognized on the basis of differences in the features associated with dress and ornament. We have stated that our traits determination of culture, our "time bearing elements" are bead types and shell ornament types. Spire lopped Olivella beads (type 1) and rectangular Olivella beads (type 2) occur through all three periods but types 3b, 3M, and 5a found only in the Transitional culture. Type 3b is found at every known site belonging to this period. Olivella beads, type 3 and 4 also are found only in the period Hallois ornaments are much more varied than they were in the Early period Hallois ornaments type is circular with one central, and one peripheral perforation (C.11), 1.1-1). Edges incising of ornaments is a carry over from Early times but serration of edges is a unique feature of the Transitional culture. The great interest in the use of Hallois orachonohi may be a reflection of the source of material but seems more likely to be a reflection of mode or fashion. Hallois rufescens is used exclusively in the Early and late periods. The most characteristic stone ornaments in the Transitional culture are ground and perforated pendants of slate. Flat stone rings are very common. Only one similar specimen is known for the Early period (C.107) and two for the Late period (S.66) Very thin, steatite disk beads are rare, but occur, in the Transitional period. A special feature for the Transitional Culture in the region south of the Carquinez Straits are the labrets and earplugs of steatite. They are also reported for C.66 by Dawson but were not present in our excavated perforated canine teeth of the coyote appear in Early, but are more frequent in Transitional times. Perforated and incised bone pendants are unique to the Transitional Culture.

When compared with the Early period, the ceremonial complex of the Transitional Period is unspicuous. Both whole and cracked quartz crystals still occur but cracked quartz crystals are greatly in the minority. Charastones are much rarer and type D5, a form absent in all times, is the characteristic form. Natural stone curios, and mineral specimens occur with several burials. They were apparently carried to the sites. The practice of sprinkling powdered red ochre over burials is most common during this period. It was also observed for all Early, but is practically absent in the Late period, ground chunks also occur in large cobblestones, one side of which has been painted blue pestles and burials. The "killing" of mortary offerings, especially pestles and obsidian blades is a frequent trait. Platforms of stones, either oval or under burials is an element unique to this period.

(1) Fenenge, 1939

of elk antler were known for the Early horizon but are especially common in the Transitional period. Paired bone gaming dice (see illustrations striking resemblance to Basket Maker specimens from the San Juan area. Frequently, usually in matched pairs. The curious notched tips of antler tines (see illustrations in the plates) are unique to the Transitional period, and so far as we know to this area. The pseudo harpoons, although most common at Site C.66 are apparently on the characteristic features of the Transitional horizon.

The temporal position of the Transitional horizon is known stratigraphically from five sites. Its position in the development of late culture is, in general, intermediate between that of Early and that of Late. That is, it has more features in common with each of the other periods than they have with each other. It is not a true transition stage for it has numerous elements not found in either the preceding or succeeding period. It is expected that Transitional sites resembling more closely each of the other periods, and thus enabling us to define various stages, will be found. (1) At the present time, differences between the several Transitional sites appear to be due to different environments rather than to temporal differences.

The Late Period

Late, culture, in its general tenor, is an outgrowth from that of the preceding Transitional period. It derives from its Transitional ancestor the following: a similar burial complex (predominant flexed position with indeterminate orientation, or occasionally extended burials (sites S.1, S.3); ornaments); large projectile points which in Late are entirely in the minority; type D.1. and D.2. pestles used in wooden containers; various types of shell ornaments; steatite earplugs (type A); an elaboration of the rude attempts at incising designs on bone; bone whistles; "killing" of grave offerings; presence of beaver for teeth and unworled mandibles in burials; an elaboration in forms, uses, etc. of objects of baked-clay; ceremonial intonement of bone; stone "discoidal" or spindle-whorls; bone basketry-sewing awls; pointed bone pins or gorges-hooks; and perhaps others.

In phase 1 of Late culture there is no invariable regularity in the earliest appearance of certain diagnostic elements; the cultural history of the several phase 1, Late culture sites will be seen to differ in many respects. Indeed, there seem to have been several local cultural groups from which radiated specific traits--thus, in the Delta an element of phase 1 and be transmitted northward, arriving there in the Delta in phase 2 in the south.

In the southern region (Stockton-Delta) in sites C.138, C.150, C.66, S.60, the following elements appear in phase 1 but are not present in the north (Colusa County) in sites S.1, S.2, S.3 with phase 2. The differential demonstrates the priority of these traits in the Delta region. The traits are: type A. stone mortars and type B. type-intonement burning in grave pit (type 3 cremations);

This is written from the Sacramento Junior College is excavating the Transitional site C.10 with promising results.

"Stockton type" square, deep, single-piece, lanceolate, incised geometric designs; bilaterally barbed, single-piece lanceolate designs; and, in general, the great hemispherical (type G) Haliotis ornaments; types 3a, and 3a.2 elaboration of late period types of shell ornaments; bird-efigy shapes, etc. Olivella beads; elaborated baked-clay object forms (bird-efigy shapes, etc. ornaments); animal bone tubes with constricted centers; and others.

Tubular and disc beads of magnetite occur earliest (i.e. in phase 1) in the northern area and registers in phase 2 further south. It seems likely that olamshell disc beads, like magnetite beads, are earlier in the north, since the source of both is Lake County. At least, they are later at G.138 than at S.1, although they were absent in phase 1 at sites S.1 and G.3. This short list would indicate that late cultural efflorescence occurred mainly in the southern area, although a northern local center (Pomo?) is apparent also.

The following traits are common to both the northern and southern areas in phase 1, late culture: Olivella bead types 1b, and 2a.1; tubular bilaterally drilled stone pipes with enlargement or flange at base; small delicate side-notched serrate-edged obsidian projectile points. Phase 2 elements appearing at the same time in both regions (northern and southern) are: olamshell disc beads; Olivella bead type 3a.1; type 2 decoration on Haliotis shell ornaments; stratified disc, tube, and hourglass shaped beads; obsidian "Stockton-curves"; baked-clay bird effigies; certain elements unique to the southern area in phase 2 are: wooden fishhooks, obsidian "Stockton-curves"; baked-clay bird effigies; certain trade objects from very much further south which include turquoise disc beads (site G.138; long, tubular and flat, ovoid shell beads of Tivall Creekstelloides (sites G.127, G.128, G.107, G.6 and others).

We call the historic or post-Caucasian period of late culture which is marked by the presence of Caucasian materials, phase 3. Many features are: projectile points chipped from bottle glass; tubular magnetite beads drilled with steel drills; grooved dug with shovels and deeper than ordinary pits dug with native implements; glass and possibly trade beads; Haliotis ornaments cut and drilled with steel tools; knives; needles, nails, bottles, etc.; pre-interment burning in grooved charbonized coiled basketry, matting, netting, etc.; stone pestles; charbonized clam shell disc beads; fishnets (charbonized); and others. drilled clam shell disc beads; fishnets (charbonized); and others. sampling from this phase (3) is not what we should like in order to quantity is concerned, but it is sufficient to prove without any doubt that it connects the last prehistoric phase of late with the modern ethnographic cultures.

It is at this point that the archaeologist may broaden his viewpoint by the use of historical accounts and ethnographical data. We point with some emphasis to the excellence of Schenck's work from a study of the early historical accounts, of the historical groups of the California delta region (Schenck, 1936). As Schenck points out, the study provides an historical background for the work in Central California and furnishes the otherwise "one-way" terminal, or modern ethnographic phase. It is like a pivot point between the long archaeological chain and the ethnographic phase without which the meaning of the sentence would never be clear. Actually, Schenck has not carried his study far enough. date 1834 is, in large areas of the Interior Valley, too early a terminal point. In support of this, we might mention Williams' accounts such as the U.S. Exploring Expedition (Cleveland, 1804), mentions (1834); etc. Zenas Leonard (Cleveland, Delta region, 1823) ment (1834) while passing through the Delta region, and recorded in 1835 while passing through the Delta region, and recorded over the prairies (pp.183, 185) that in some parts of the grew corn, pumpkins, melons, etc. (p. 189); the finding of group which had run away from Santa Barbara Mission and was

all indicating that since about 1800 the Central Valley, though definitely Indian, was subject to Spanish influence from missioned natives who had returned from the mission to their old homes. In 1834, when the secularization of the missions took place, many released Indians returned to their old homes thus introducing further new elements of culture. And, in 1834, the valley was still native in no small degree--the final, Caucasian impact was late in California, it must be remembered.

The horse made for easy, rapid, long-range contact between Indian groups, and there is evidence of habitat shifts (for which see Schenck, 1926) during the century preceding actual modern ethnographic investigation. All this would seem to indicate that some of the late culture, phase 2 material elements may date from this proto-historic period (roughly 1710-1830) when the normal, old-time native life was undergoing some metamorphosis due ultimately to Hispanic influence or causes, never direct or indirect they may have been.

In evidence of this, we might mention findings in certain late culture, phase 2 sites of our area shell objects which undoubtedly came from the Chumash (Santa Barbara) area. Perhaps the few stone mortars from certain late period sites in the heart of the stoneless alluvial valley floor along the rivers were transported by natives on horseback; at any rate, it is hard to conceive of an Indian nonchalantly bearing on his back a 40 pound stone mortar for a distance of 50 miles, although it would be beyond the bounds of possibility. If these heavy mortars were used on horseback, it might explain their presence far away from their site of origin. The fact that these are found in phase 2 burials or points strengthens the hypothesis. The several examples bring us to the conclusion that late culture, phase 2, while lacking concrete evidence of Missian culture, may actually date from the post-European period. The contact and contacts investigated, while purely native in evidence and effect, may explain the northward spread of phase 2 late culture, as well as its uniformity over a very large area. That group contacts were primarily depopulated by the famous smallpox epidemic of 1833.

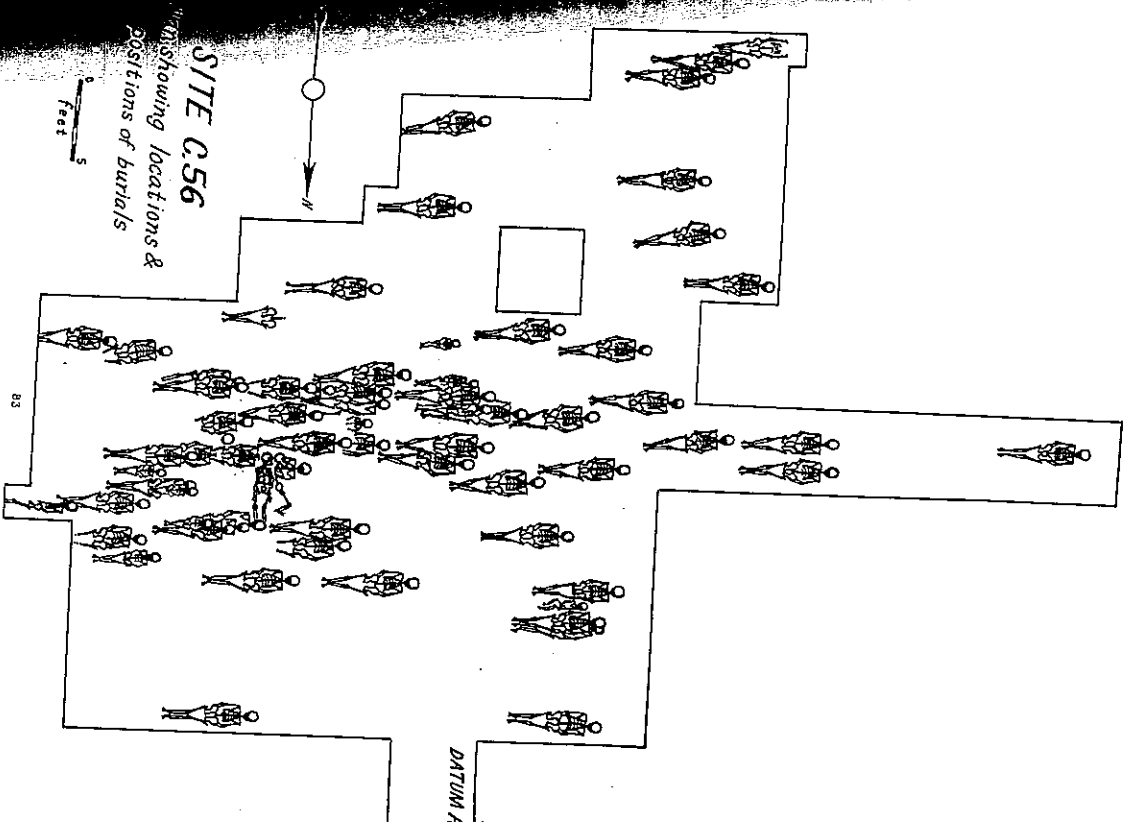
Modern	(Ethnographic collections and accounts)	1660-date
Phase 3	(Presence of actual European objects)	1830-1860
Phase 2	(Proto-historic with native trade objects)	1790-1830
Phase 1	(Wholly prehistoric)	? 1790

LATE CULTURE PHASES

Note: the dividing line between phases 2 and 3 is perhaps more apparent than real, since some phase 2 native trade objects are actually found in association with historic objects (e.g. a Spanish coin dated 1780 in site G.109). However, the essential distinction probably holds in most cases--e.g. phase 3 burials are ordinarily associated with Hudsons Bay Company trade beads, etc.

The aim of this paper is not theoretical, yet we cannot forgo attention to the work of Strong, and Wedel (see works cited below) where a similar contact-phenomenon of a proto-historic phase or of how important the horse was in phase 2 or phase 3 times in but there is a similarity in the fact that the horse in both contact and rapid contact a relatively simple matter.

culture, phase 2 period, the Delta area becomes the center of specialization. Perhaps, granted that phase 2 culture may date from around the period of 1800 and after, this area (where fish and game were so very abundant, and which was difficult of access and travel due to its many tule swamps, overflow lowland, and drainways and therefore hindered Spanish pursuit) offered a sanctuary to runaways or oppressed groups where now native contacts were fostered and resulted in cultural stimulus and specialization. We offer this last only as a suggestion--in support we cite our archeological and historical evidence; its import to the ethnographer with his task of interpreting the ethnographic picture, is obvious.



- Smithsonian
- Strong, W.D. An Introduction to Nebraska Archeology. Miscellaneous Collections, Vol. 93, No. 10, 1935. Bureau of American Ethnology, Bulletin 112, 1936.
- Wedel, W.R. An Introduction to Pawnee Archeology. Miscellaneous Collections, Vol. 97, No. 7, 1938.
- Wedel, W.R. The Direct Historical Approach in Pawnee Archeology. Miscellaneous Collections, Vol. 97, No. 7, 1938.