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## A LATE PREHISTORIC DOG BURIAL ASSOCIATED WITH HUMAN GRAVES IN ORANGE COUNTY, CALIFORNIA

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**ABSTRACT.**—The aboriginal dog exhumed at CA-Ora-849, a Late Prehistoric camp site in southern Orange County, California, is the only known animal burial from the territory historically occupied by the Juaneno. The specimen was found in association with human burials, a typical occurrence for animal burials in the California culture area. The juvenile canine was placed in its grave in a flexed position, without grave goods. Dog burials in California are interpreted as representing ritualized disposal of deceased pets or the destruction of personal property attendant to the funeral of the animal's owner. Evidence of the dog's diet, a cluster of partly digested rabbit and gopher bones and a deer proximal phalanx, was recovered from the visceral area of the skeleton.

**Key words:** California, dog, animal burial, anatomy, ethnography.

**RESUMEN.**—El perro aborigen exhumado en CA-Ora-849, un antiguo yacimiento prehistórico del sur del condado de Orange, California, es el único enterramiento conocido de un animal en el territorio ocupado históricamente por los Juanenos. El espécimen se encontró asociado a sepulturas humanas, algo típico en enterramientos de animales en el área cultural de California. El ejemplar juvenil de perro fue colocado en la tumba en una postura flexionada, sin ajuar funerario. Se suele interpretar que los enterramientos de perros en California representan una eliminación ritualizada de los animales de compañía, o la destrucción de los bienes personales del dueño del animal. Entre las pruebas de la dieta del perro, se recuperó de la zona visceral del esqueleto un trozo de conejo semidigerido junto con huesos de roedor y una falange proximal de ciervo.

**RÉSUMÉ.**—Un chien indigène exhumé à CA-Ora-849, un campement datant de la période préhistorique finale dans le sud de l'Orange County en Californie, est le seul enterrement d'un animal connu du territoire historiquement occupé par les Juanenos. Le spécimen a été trouvé en association avec des enterrements humains, une situation typique pour les enterrements animaux dans l'aire culturelle de la Californie. Le chien, un juvénile, a été placé dans sa tombe en position fléchie, et sans d'autres objets funéraires. Les enterrements canins ont été interprétés comme étant soit des dépôts rituels des animaux domestiqués morts soit les restes des destructions de la propriété personnelle d'une personne au moment de son décès. Des restes du régime alimentaire du chien, un amas d'os des lapins et des taupes et du phalanx proximal d'un cerf, ont été retrouvés dans la région viscérale du squelette.

### INTRODUCTION

Excavation of CA-Ora-849, a prehistoric camp site in southern Orange County, California, yielded a dog burial in association with two human burials and other

features. The practice of animal burial occurred throughout North America and much of the world during prehistoric times (Arnaud 2000; Davis 1987; Flores 2003; Heizer and Hewes 1940; Schwartz 1997). The earliest known dog/wolf burial was found with a human in a Natufian grave (ca. 12,000 B.P.) in Israel (Davis and Valla 1978). Dogs were being buried during the Early Archaic (8,500 B.P.) at the Koster Site in Illinois (Struever and Holton 1979). Such burials are interpreted as sacrificed grave goods, spirit guides, pet burials, or totem and religious symbols.

Ethnographic studies in the California culture area indicate the burial of animals took place in a number of contexts. These include pet burial, property destruction attending human burial, corporate group (tribal) ceremonies, lineage-associated totemic activities, and the procurement of magic (see Heizer and Hewes 1940; Langenwalter 1986). The Ora-849 dog burial provides evidence of one or more of these activities in Juaneno territory.

This study examines cultural and biological research problems related to aboriginal dogs in southern California, and provides a description of the Ora-849 dog burial. The cultural issues include the nature of the mortuary customs accorded canids in southern California and the possible functions of dog burial. There is no ethnographic or ethnohistoric information about animal burial customs among the Juaneno, but the Ora-849 dog burial data may be compared to burials from the Encino Village site, LAn-43, located in northwestern Gabrielino (Fernandeno) territory (Langenwalter 1986). The related question of why animals were buried is discussed in connection with the archaeological data.

Questions of biological concern that are addressed with the Ora-849 dog burial include the physical appearance and diet of the aboriginal dogs in the region. Prior studies indicate that at least two sizes of aboriginal dogs lived in prehistoric California and that they varied between regions (see Langenwalter 1986). The diet of aboriginal dogs has been little studied, for lack of ethnographic and archaeological information.

## THE SITE

Ora-849 is located on the southeastern bank of Aliso Creek (Figure 1), at the extreme northern edge of Juaneno territory (Kroeber 1925:621). The Juaneno were the northwestern-most linguistic branch of the Luiseno, a Takic-speaking people located along the southern California coast and the adjacent intermontane valleys (Bean and Shippek 1978; Kroeber 1925:636). Modern descendants of the Native Americans who lived in the region during the Late Prehistoric period refer to themselves as Acagchemem. The Gabrielino, another Takic-speaking group, occupied the territory to the north, including northern Orange County, most of Los Angeles County, and the western parts of Riverside and San Bernardino counties and several of the Channel Islands (Johnston 1962; McCawley 1996).

The site was a seasonally occupied camp used primarily for foraging (McKenna 1986). A light scatter of artifacts and occasional features occurred within a 50-m wide band of midden that extended along Aliso Creek for more than 400 m. The stone and bone artifacts from the site were associated with food processing and basket making. A shell pendant is one of two nonutilitarian artifacts recovered from the site. Shell and bone food remains were present in the midden.

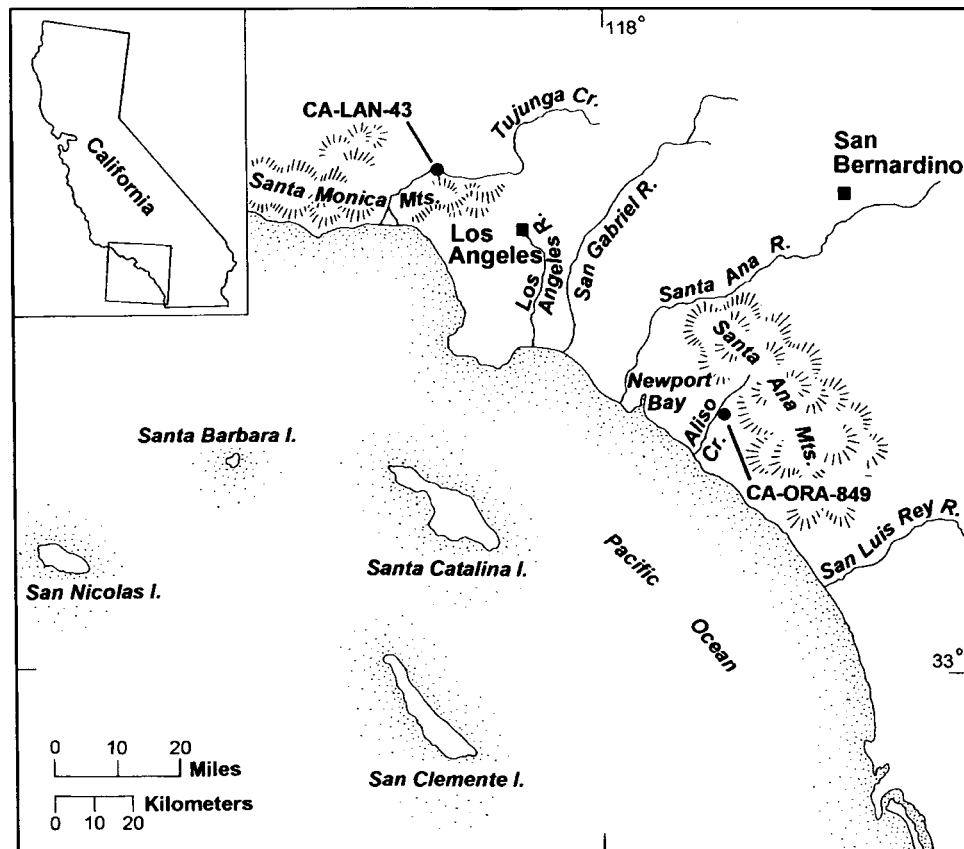


FIGURE 1.—Map showing the location of CA-Ora-849.

Features at the site included a semicircular cobblestone footing for a 2-m diameter shelter, several hearths, two human burials, and a dog burial. The human burials were those of an adult female and a juvenile approximately 12 years of age. They were found 9 m and 18 m from the buried dog, respectively. Although the association is a loose one, dog burials are always reported from archaeological sites where human interments have been recovered.

Ora-849 was occupied during the Late Period (ca. A.D. 750 to 1769) (McKenna 1986), based on a regional projectile point typology (Koerper and Drover 1983). A shell yielded a radiocarbon date of A.D. 1230–1350 ( $1660 \pm 60$  B.P., BETA-7626; Reservoir Effect adjusted). A portion of the dog skeleton was processed for the inorganic and organic fractions of the sample (UCR-1744A/B) which provided readings “above modern,” indicating external contamination.

## METHODS

The Ora-849 dog burial and associated human burials were discovered during monitoring of earthmoving at the site. The burials were recovered by cutting a small trench around each specimen and encasing the matrix in plaster jackets.

Compass orientation was indicated on each jacket. Initially, the dog burial was identified only as a "canid" because key taxonomic features were not exposed and evaluated during the first study. The jacket was sealed and reburied (Stickel and Bissell 1983:17, 38). The specimens were later re-exhumed for further study at the request of the Juaneno Band of Mission Indians.

The matrix surrounding the specimen was removed with dental picks and small brushes. To reduce shrinkage and warping of large fragments, the specimen was kept moist by intermittent spraying with deionized water. Color differences were accentuated and the adhering sediments softened by the moistening process, facilitating exposure and documentation of the skeleton. The specimen was fully exposed in relief and photographed. Thereafter, it was disassembled, inventoried, and examined for morphologic attributes, pathologies, and evidence of alteration or tool marks. A sample of ribs, vertebrae, and limb bone was taken for radio-carbon dating.

#### THE SPECIMEN

The burial consists of the remains of a dog placed on its right side in flexed position in a small grave pit (Figure 2). The upper portion of the burial was damaged when exposed during construction activity at the site. The remaining portion of the skeleton consisted of 98 articulated complete and fragmentary skeletal elements (30 percent of the average dog skeleton). The remaining skeleton included a partial skull (left side), left dentary (mandible), three cervical vertebrae, all thoracic and lumbar vertebrae, incomplete rib cage, innominate fragments, left scapula, shafts and distal ends of the humeri and femora, and the proximal portions of the fore and hind limbs. The skeletal remains were slightly decalcified in a manner typical of burials where the flesh has decayed on the bones. The condition of the dog bone is comparable to that of the two human burials, but differs from that of food remains recovered from the site.

The Ora-849 canid is identified as a dog (*Canis familiaris* Linnaeus) based on multiple anatomical features (e.g., Howard 1949; Olsen 1985; Reynolds 1985). The root of the zygomatic arch is weakly buttressed, the maxilla foreshortened, and the maxillary dental arcade crowded. The P1 is absent. Diastemata (spaces) between the premolars are minimal or absent. The left tympanic bulla is flattened and reduced in size. The inferior margin of the mandible is convex in profile, and deep in the premolar region. The mandibular dentition is crowded, with diastemata between the premolars reduced or absent. The P1 is absent. The hypoconid on the lower first molar is more than twice the size of the entoconid. All of these characteristics contrast markedly with the attributes of coyotes (*Canis latrans* Say).

Using chronologies of dental eruption in modern beagles (Kremenak 1967; Shabestari et al. 1967), chronological age at death is estimated to be approximately five months, based on the eruption of the canine, premolars, and M1. Following the age classes used for other aboriginal dogs in California (Langenwalter 1986: 84), the Ora-849 specimen is placed with "juvenile," a category which includes animals with complete deciduous dentitions with wear on the dM1 and dM1 to animals approximately 6 to 7 months in age.



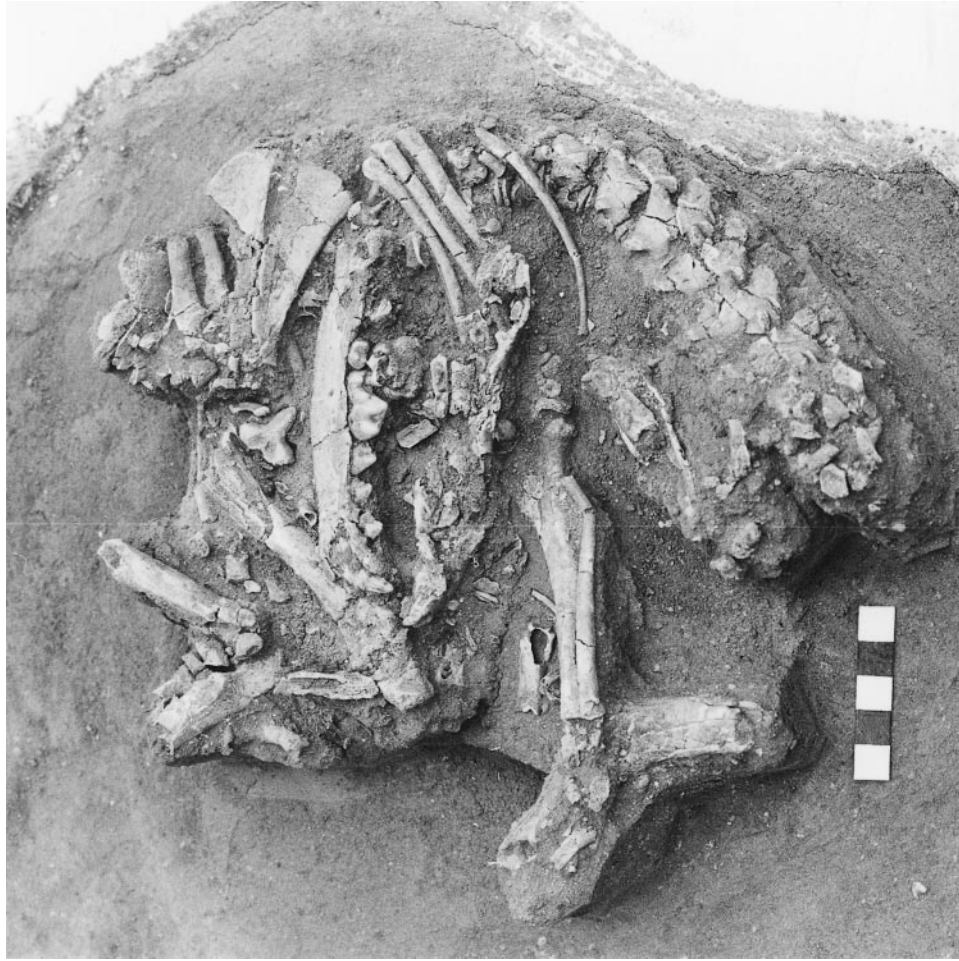


FIGURE 2.—Ora-849 dog burial exposed in plaster jacket, with 5 cm scale. Photograph by Paul E. Langenwaller II.

### PHYSICAL ATTRIBUTES

Anatomical features were recorded while the specimen was still articulated in the jacketed block, and again after it was removed and disassembled. Some observations are more subjective than is desirable, because of the age of the animal at death and the condition of the specimen. The only measurable attribute on the skeleton was the length of the M1. This was 22.1 mm, which is within the range known for aboriginal dogs.

Some of the morphological attributes of the skull and limb bones were observable. The slope of the face from the frontals to the mid-nasal area is steep and the corresponding ramus of the dentary short, in comparison to coyotes and many long muzzled dogs. The muzzle was relatively short, although it would have grown to be somewhat longer if the animal had survived to adulthood. A

humerus and femur, both nearly complete, are broad and heavily built, relative to evident length. The humerus and femur are distinctly more robust than those found in the limbs of juvenile and adult coyotes. Had this dog lived to adulthood, it would probably have had a build similar to other California aboriginal dogs (cf. Langenwalter 1986). In these respects, the appearance of the Ora-849 dog is comparable to most other California aboriginal dogs (cf. Langenwalter 1986:81, fig. 13), and aboriginal dogs in general.

The little that is known about the detailed appearance of aboriginal dogs in southern California comes from a single description by Father Antonio de la Ascension, a participant in Sebastian Vizcaino's voyage along the California coast in 1602. While Vizcaino's ships were visiting Santa Catalina Island, Ascension wrote that "the Indians have many dogs of medium size and of good appearance like our spotted retrievers, only they do not bark, but howl like coyotes" (Wagner 1929:237). Santa Catalina Island is adjacent to the mainland, northwest of Juaneno territory, and was occupied by the Gabrielino.

Ascension favorably compared the medium-sized Catalina Island dogs to "spotted retrievers," implying that the dogs had a build typical of modern European hound-like dogs, sometimes known as gun dogs, which are bred for hunting. Spaniels, setters, pointers, and retrievers all belong to this broad category of medium to large dogs that have sturdy builds and relatively average body proportions.

The general build inferred for the Ora-849 dog and most other California Indian dog skeletons is consistent with this general description. However, specific details of appearance, such as color, coat, ear shape, and the carriage of the tail cannot be determined from Ascension's description. Ascension mentions that the dogs he saw did not bark, but howled like coyotes. This is consistent with ethnographic reports that some aboriginal dogs in California had coyote-like attributes (Powers 1877:379), which implies interbreeding with coyotes. Nevertheless, most of the skeletal remains of aboriginal dogs studied in California indicate a more robust body form than is typical of coyotes (Langenwalter 1986).

Most California aboriginal dogs can be considered to belong to the "Plains Indian Dog" category described by Allen (1920:449-454), as revised by Haag (1948) in his "Common Indian Dog" category. As a juvenile, the Ora-849 dog is developmentally compatible with these classifications. The Techichi and Short-nosed Indian Dog are both reported from the region (Allen 1920:495-500; Reynolds 1985). The Ora-849 dog was too large at the time of death to be considered a "Techichi" (Allen 1920) or "Small Indian Dog" (Haag 1948). The apparent form of the muzzle does not compare with Allen's Short-nosed Indian Dog, which had a short face and broad maxilla.

### MORTUARY CUSTOMS

Animal burials were recognized early in California archaeological research by both private collectors and scientists who discovered interments of various birds, bears, and other species in Central California (Gifford and Schenck 1926: 64; Lillard et al. 1939). These burials were considered to be evidence of prehistoric religious and ceremonial activity, similar to that recorded for the historic tribes

of the region. General observations of mortuary customs were sometimes made for these burials (occurrence of grave goods, type of grave fill, general position), but no detailed analysis of mortuary attributes was undertaken. The attributes of many of the Californian animal burials indicates mortuary practices that paralleled, and were as elaborate as that accorded humans (Langenwaller 1986). Significant factors in animal burial include positioning of the carcass, shape of grave pit, composition of grave fill dirt, presence of grave goods, and association with cairns.

Burial positions known for canids range from flexed to extended with variations in limb flexure similar to those seen in human burials. Since the Ora-849 dog burial was collected in a plaster jacket, accurate determination of burial position was possible. The young dog was laid on its right side with its back tightly arched. The forelimbs were in a resting position, neither extended or tightly flexed. The left hindlimb was flexed while the right hindlimb was at rest. The skull was found on top of the rib cage behind the left scapula. Originally the head had probably been laid against the wall of the grave pit and collapsed to this position during decay of the body and compaction of the grave fill. This scenario is implied by the position of the anterior thoracics, the disarticulation of the cervicals, and skull orientation. The long axis of the body was positioned east to west. The Ora-849 dog burial is a flexed burial according to the burial position criteria (flexure of the spinal column and limbs) used to describe the Encino Village dog burials (Langenwaller 1986:68, 70). Human burials with similar positioning are usually described as loosely flexed.

Part of the grave pit outline survived with the Ora-849 burial, preserving evidence that the neck and forward part of the back were placed closely against the grave pit wall. The positioning and degree of flexure of the burial may have been partly determined by the size of the grave pit, which in turn may have been determined by convenience. In cases where grave pit outlines have been recognized in other California animal burials, the animals were found to have been placed next to or against the grave pit wall. This suggests that burial flexure resulted from the use of the smallest possible grave pit needed to bury the animal. However, deliberate positioning of the carcass of several animal species, requiring appropriately shaped grave pits, is well documented for prehistoric California (cf. Heizer and Hewes 1940; Langenwaller 1986).

All animal burials in California occur as either primary flexed or extended inhumations, except for one cremation. The single known canid cremation occurred at LAn-43 in association with multiple human cremations (Langenwaller 1986). Some of the Californian animal burials contained grave goods, and some were covered with cairns (cf. Heizer and Hewes 1940). No grave goods were found with the Ora-849 burial, and the circumstances of its discovery precluded determining if a cairn was present.

The forms of prehistoric dog burial parallel the forms of contemporaneous human burials, suggesting that the method of disposal was taken from tribal mortuary custom. The Ora-849 dog burial was a flexed primary inhumation as were the two human burials found near it. It resembles most canid burials from other parts of California, having a flexed spine and slightly to tightly flexed limbs, with the head positioned over the shoulder. Notable exceptions to this position



are the SJo-68 dog which was buried head down and tail up (cf. Haag and Heizer 1953) and Features 46, 117 and 132 at LAn-43 which were in extended position (Langenwalter 1986).

### DIET

A cluster of 95 bones and bone fragments, found in the visceral area between the forelimb and hindlimb of the dog burial (Figure 2), are remains from the dog's digestive tract. The bones in the visceral grouping include skeletal elements from a juvenile gopher (*Thomomys bottae* Eyndoux and Gervais), a brush rabbit (*Sylvilagus bachmani* Waterhouse), and a deer (*Odocoileus* sp.). The natural and broken surfaces of the specimens are eroded indicating exposure to digestive enzymes.

Several feeding behaviors are suggested by the remains found in the visceral area. Most of the major body parts of the gopher and rabbit are represented, implying the consumption of complete carcasses. These remains indicate that the dog foraged for small mammals. Rabbits were a major food source for humans in prehistoric California, making it unlikely that whole rabbits would be fed to a dog by its owner. These remains do not represent the scavenging of offal or other wastes, since both the gopher and rabbit were consumed whole. In contrast, the deer bone, a proximal phalanx, implies scavenging or feeding by the dog's human companions. Scavenging by dogs has been reported as a common behavior throughout the world (Binford and Bertram 1977; Crader 1974; Kent 1981; Lyon 1970). Some Central California Indians are known to have fed their dogs bones, butchering scraps, and entrails (Gayton 1948:183).

The visceral grouping is one of three known examples of digestive tract residues recovered from California dog burials. Similar remains were found in two canid interments at the Encino Village site (Langenwalter 1986). The visceral remains from the Encino Village dogs also included gopher, rabbit, and deer skeletal elements. The gopher and rabbit remains similarly implied the consumption of complete animals by the Encino Village dogs, while the deer remains were from low meat-bearing parts of the body, implying scavenging or the consumption of offal.

The deer phalanx found in the visceral residues of the Ora-849 dog may have been modified. Two, possibly three, holes penetrate the distal end, and the proximal end has been removed. These holes are parallel sided. The location of the holes and the removal of the proximal end is consistent with the configuration of deer phalanges used in some forms of the ring and pin game found in North America (Culin 1907:527-561). Similar end damage is sometimes caused by carnivores when they chew phalanges, but the holes are not usually symmetrical or parallel sided. The surface of the Ora-849 specimen has been etched by acids in the dog's digestive tract, including the remaining internal surfaces of the cylindrical holes, so that no marks remain that would indicate whether the source of the modification was natural or cultural.

### DISCUSSION

Evidence of animal burial is less common in southern California than in Central California. Animal burial traditions were of considerable antiquity in Central

California, with the earliest evidence occurring at an Early Horizon site belonging to the Windmill culture (Wallace 1978). The earliest animal burial, a dog, was interred ca. 4,000 B.P. (Haag and Heizer 1953). Prehistoric Central Californians buried a wider variety of animal species than southern Californians. Animal burials in southern California are usually recovered from later contexts.

The only report of an earlier possible burial is a domestic dog in Pit 10 at the Rancho La Brea tar pits (Reynolds 1985). This same pit yielded human remains dating to ca. 9,000 B.P. (uncalibrated). If the dog and human remains are associated, they may represent one of the oldest examples of dog sacrifice in the world, and certainly the oldest instance for the New World. However, there is no evidence to indicate whether the dog was sacrificed, became trapped in the tar, or was washed in after death. Moreover, the artifacts recovered from Pit 10 are representative of Milling Stone Horizon culture. An atlatl dart foreshaft dated about 4,450 B.P. (Hubbs et al. 1960) raises concerns about the antiquity of the human bone. For now, the age and cultural context of the Rancho La Brea dog remain unresolved.

In Central California, the large number of recorded animal burials are primarily dogs and animals with magico-religious significance (bears, coyotes, badgers, hawks, eagles, and condors: "power animals") (Cowan et al. 1975; Gayton 1948; Gifford 1955; Heizer and Hewes 1940; Wedel 1941). The power animals were important as the earthly representatives of the "First People" of the creation time in California Indian creation stories. Some animal species (e.g., bear) were important as totems. The ethnography of Central California indicates that interments of the power animals were part of an elaborate tradition of rituals related to tribal and lineage religious ceremonies.

Dogs are not likely to have been given burial in the context of group-wide religious ceremonies, such as rites of passage, because they were primarily pets and working animals (Aginsky 1943:402; Barrett and Gifford 1933:271; Driver 1937:65), not power-filled representatives of the spirit world important to the tribe or lineage as a whole. The close daily relationship between dogs and their owners, who used them as guards, pets, hunting partners, and as food, constitutes a different dynamic of interaction between man and animal. Central California ethnographies indicate that dogs were intimately associated with their masters and lower in status than the "power animals." They were not feared, and were sometimes beaten to ward off storms (Gayton 1948).

The archaeological evidence contradicts Kroeber's statement that throughout the state "as among ourselves in the country the carcasses of Indian dogs were variously got rid of without formality or channeled procedure" (1941:11). This is untrue in both cultural contexts. Many modern Americans bury their dogs, and the numerous dog burials found in California archaeological sites demonstrate the practice among the California Indians (Haag and Heizer 1953; Langenwalter 1986). The proportion of the canine population buried in prehistoric California and the functions of these burials remain unclear.

Two interpretations are most likely, of the several possible explanations for dog burials. Driver (1961) indicates that domestic dogs were widely used as a funerary sacrifice (personal property destruction) by North American Indians. For southern California Gabrielino, Bean and Smith (1978) report that dogs were rit-

ually buried when their owners died as part of the destruction of personal property, which would explain their association with human graves. Several of the LAn-43 dog burials contained more than one individual, favoring the interpretation of destruction of property. It is unlikely that repeated multiple burials, rare elsewhere, would represent pet burials, except in the unlikely case that the village experienced repeated episodes of disease resulting in multiple animal deaths.

The burial of dogs as a kind of ritual disposal reflects a narrow use of the animals in funerary contexts, the dog being part of personal property which must be destroyed. Possibly the animals were intended to act as guides in the spirit world, as they were in some other Native American societies (Allen 1920), but this is not documented for California.

Some California Indian societies considered dogs polluted (Kroeber 1941). Dogs may not have been ritually pure enough to be placed in direct association with the human corpse, explaining why dogs were placed in their own pits. Bean and Smith (1978:545) state that among the Gabrielino, dogs were often buried over the human interment. However, there are no archaeological examples of a dog-over-human burial, although animal burials of all kinds are almost always found in the vicinity of human burials throughout the California Culture Area (see Strong 1929:83).

Another possible interpretation of dog burials is that they are of pets special to their owners. The burial of dogs and other pets can help a person to process feelings of grief resulting from the death of their pet. This behavior is well documented for some societies (Neiberg and Fischer 1982). Dog burials containing elaborate grave goods, interments covered by cairns, and the unusual Encino Village canid cremation (Langenwalter 1986) all imply more than mere destruction of personal property during a funeral process. Rather, they suggest a ritual focused on the deceased animal, consistent with pet burial which is known to have occurred among some Central California tribes (Aginsky 1943:402; Driver 1937: 65).

Interpreting the function of dog burials from archaeological contexts is only partly possible, and some aspects of animal burial may crosscut the contexts described above. Nearly all well documented dog burials give evidence that the animals were buried respectfully. Such respect may have been due animals sacrificed as personal property, a reflection of the animistic worldview of the California Indians. Their view, still held by many traditionalists, is that all animals are imbued with a spirit which must be propitiated. Individual burials, such as the Ora-849 dog burial, are not easily identified as evidence of property destruction as opposed to burial of a pet. The presence of perimortum trauma would support the interpretation that an animal was buried as a part of the destruction of property during the owner's funeral. Unfortunately, the cause of death of the Ora-849 burial is not evident.

## CONCLUSIONS

The ethnographic record indicates that dogs were kept as pets, guards, and working animals. Some were used as food. They served other functions among some tribes, including use in weather magic. The burial of these animals, so close-

ly associated with humans, began more than 4,000 years ago in California. The practice occurred much earlier elsewhere in North America, and probably entered California through diffusion or the entry of new peoples into the region.

California dog burials are consistently found at sites with human interments. The characteristics of these canid burials, including burial position, grave goods, grave pit size, and the presence of cairns, are varied. The most common canine burial position was flexed, laying on one side. All of the Central California burials are flexed, except the dog burial with the head down and tail up from SJo-68. The few canine interments in an extended position were found in southern California, but most were found in flexed position. The single known canid cremation is from southern California. The only dog burials found with grave goods or rock cairns thus far have been from Central California. The few burials where the grave pit has been observed indicate that animals were placed in graves just large enough to accommodate the carcass.

Taken together, the Ora-849 and Encino Village site data indicate a mixed pattern of feeding behavior among aboriginal dogs in Southern California. Both gophers and rabbits seem to have been significant components of the diet obtained by foraging. Larger bone scraps from low meat-bearing bones implies that dog owners were feeding their dogs the least desirable parts of their large game captures, or that the dogs were scavenging discarded byproducts.

The physical evidence needed to identify functionally different burial contexts is equivocal. Those burials with grave goods, and perhaps cairns, are most likely instances of the burial of a pet. However, lacking animal-focused ritual, such as the presence of grave goods and a cairn, there seem to be no clearly definable criteria to separate a burial containing a pet dog from dog burials representing the destruction of personal property. Animals found within a human grave are grave goods sacrificed during the funeral ceremony, given their context. The presence of perimortum trauma on an animal skeleton would support the interpretation of a burial as representing property destruction as well. Using these criteria, most of the burials found in California are likely the end result of property destruction that occurred at the time of their owner's funeral ceremony. It is likely that the Ora-849 burial represents property destruction associated with one of the human burials, but pet burial cannot be excluded.

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