## Robert J. Squier

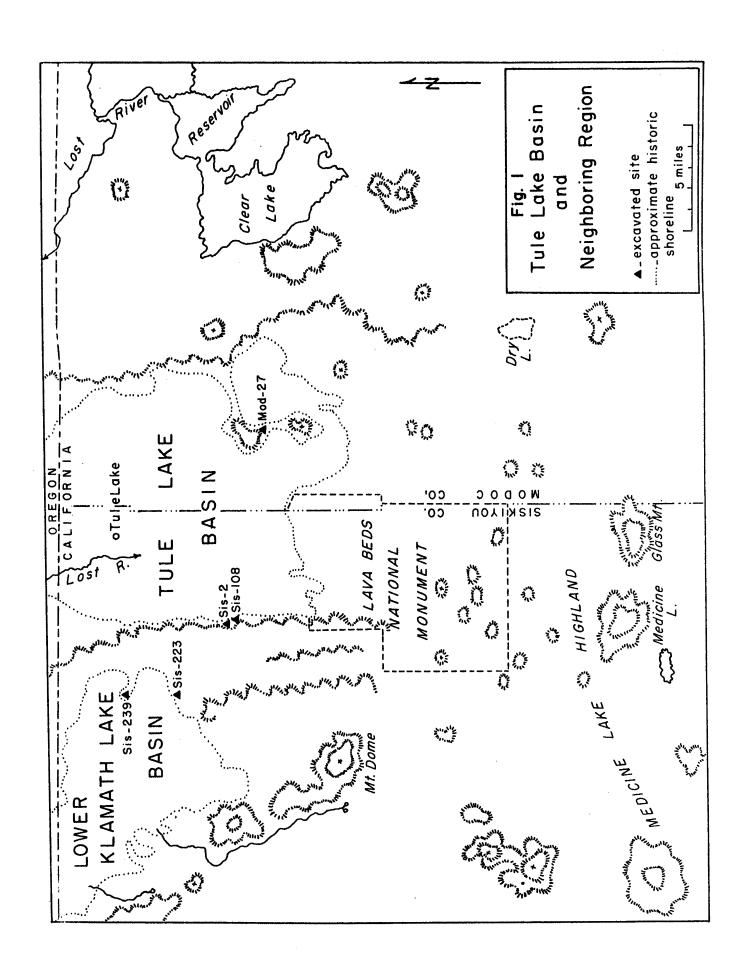
Beginning in 1952, small field parties have conducted a number of excavations and site reconnaissances in northeastern California. This work has been spensored by the Department of Anthropology, University of California, and under the direction of Mr. Gordon L. Grosscup and the writer. The area concerned lies in northeastern Siskiyou County and northwestern Modoc County, California, just south of the California-Oregon boundary.

Three lake basins, lying approximately in an east-west line, are within this area. These are, from east to west, Clear Lake, Tule Lake, and Lower Klamath Lake. Clear Lake and Tule Lake are linked by the Lost River, which flows from Clear Lake in a giant loop extending into southern Oregon and back into California to empty into the Tule Lake basin. During high water stages the Lost River formerly discharged some of its waters through the Lost River Slough (in Oregon) into the Klamath River. There is some evidence that in extremely high water stages of the Klamath River the flow through the Lost River Slough was in the opposite direction: from the Klamath River into the Lost River and thence into Tule Lake. Ancient shore lines in Lower Klamath Lake and Tule Lake basins show that at one time these two formed a single lake, far greater in extent than anything known in historic times. The level and area of the waters in the three lake basins are today controlled by systems of dams and levees constructed by the Bureau of Reclamation, Klamath Project.

Ethnographically, the area is entirely within the territory of the historic Modoc. Private collecting of artifacts, no doubt considerably stimulated by the renown gained by the Modoc during and after the Modoc War of 1872-1873, has seriously despoiled the surface archaeology, and in late years to some extent the buried deposits, of this region. This activity has rendered a seriation of surface sites based upon the sequence determined by excavation very difficult and in numerous cases impossible.

The pioneer work of Crossman in the Lower Klamath Lake basin in 1940 resulted in the definition of two early complexes.<sup>3</sup> The earliest of these, the Narrows culture, is characterized by long fossilized bone pieces (possibly atlath dart foreshafts) with beveled bases and sharp points, large heavy leaf shaped and side notched obsidian projectile points, and manos. An association with extinct fauna was found in situ in one location. This culture was dated by Cressman as early postpluvial (Anathermal) on the strength of the faunal association.<sup>4</sup>

The other early culture was found by Cressman in the Lairds Bay region of Lower Klamath Lake. The Lairds Bay materials include large and medium size leaf shaped, side notched and corner notched obsidian projectile points, bone awls, perforated stone disks, flat biface and oval manos, and probably the portable bowl mortar. The association of these materials with ancient peat beds in the lake bottom led Antevs, who collaborated with Cressman in this work, to suggest an early late postpluvial (early Medithermal?) age for the culture.



Other materials found by Cressman around the historic shoreline of Lower Klamath Lake were grouped by him into a single cultural horizon which he regarded as essentially the culture of the protohistoric Modoc. It is mainly to this last period that we have directed our attention during the past few seasons. Our work began in 1952 with a survey of the surface archaeology of the Lava Beds National Monument, located at the southern end of Tule Lake basin. This was followed by another season (1953) during which we excavated in three rockshelter sites in Tule Lake basin and did further survey work. The last season in the area (1954) was spent in the excavation of two open sites on Lower Klamath Lake, which were in the process of destruction for materials for levee construction.

Artifact yields from the excavated sites in this region appear never to be especially high and in two of our sites were definitely poor. The recovered materials together with their physical associations point to a sequence of two, or possibly three, phases of the late cultural horizon. The following brief descriptions will give an outline of the principal features of each.

We have given the designation <u>Tule Lake Phase</u> to the latest phase. This is in all likelihood the culture of the late prehistoric and protohistoric Modoc. This phase is characterized by numerous small projectile points of a variety of types, with the small triangular and small side-notched, concave base ("Shoshoni") types being the most abundant. Large obsidian blades are common. The basketry is twined. Split mammal bone awls and antler and bone flaking tools occur frequently. Bird and mammal bone beads, bird bone tubes, <u>Dentalia</u>, <u>Olivella</u> and <u>Glycymeris</u> beads and pine nut beads are frequent finds. Clam shell disk beads are rare and so far have been found only with cremations having Caucasian artifacts. The principal food-grinding implement was the hoppered slab mortar, with the thin grinding slab somewhat less common and the portable bowl mortar rare. Disposal of the dead was predominantly by cremation, either singly or in communal cremation areas. Burials apparently belonging to this phase have been found but these are rare.

Associated with former high lake levels in Tule Lake and in one site stratigraphically earlier than the Tule Lake Phase is another phase which we have termed the Gillem Bluff Phase. Projectile points are relatively rare in this phase and classify into fewer types than in the Tule Lake Phase. The small triangular and small side notched, concave base points, common in the Tule Lake Phase, appear to be rare or absent here. Large and medium size points predominate in numbers. Large obsidian blades are fairly common. Split mammal bone awls and stone mauls occur. The thin grinding slab is common, while the hoppered slab mortar appears to be rare. No portable bowl mortars have been found in the Gillem Bluff Phase sites or in surface sites tentatively assigned to this phase. The burial complex is at present a subject of uncertainty. It is possible that a number of burials in rock piles found in crevices around the shores of Tule and Lower Klamath lakes are of this phase, but we lack positive evidence of this. If these burials should prove to be of the Gillem Bluff Phase, we should then have examples of the textiles of this phase, several specimens of which were found with the burials. The Gillem Bluff Phase appears to be a logical cultural antecedent of the Tule Lake Phase.

The excavations of 1954 in two open sites on Lower Klamath Lake revealed materials which differ in certain respects from those of any of the phases

mentioned above. We have elected to set these apart for the time being under a separate phase designation, the Indian Bank Phase, named for the location of one of the sites. Projectile points are rare and limited in number of types in this phase. Large points tend to be more common than small. Flexed burials occurred in concentrated areas in both sites. Stone mauls of two types, antler wedges, antler flaking tools, ulna and split mammal bone awls occur. Bird and mammal bone beads, oblong edge-incised Haliotis pendants and several types of Olivella beads were found. Bird bone whistles, bone pins and perforated bone pendants occurred in association with burials. Five tubular stone pipes were found with burials in one site of this phase. These appear to be Californian rather than Great Basin or Northern in type. The principal food grinding implement found was the portable bowl mortar, whole and fragmentary specimens of which were common. Only a few fragments of thin grinding slabs occurred and evidence of the hoppered slab mortar is lacking.

The temporal and cultural position of these remains with respect to the other materials in this region is unknown at present. The general condition of the middens and the relatively good state of preservation of the burials and animal remains argue for a comparatively late age for the sites in this phase. Preservation conditions have proved to be unreliable as an age indicator in other areas, however, and may well be so here. We might expect the materials of this phase to be either a part of or closely related to those of our Gillem Bluff Phase, but the poor inventory of the latter phase prohibits a detailed comparison. Our speculations as to the relative age of the Indian Bank Phase must therefore depend upon a limited trait comparison.

It is conceivable that we have in the Indian Bank phase simply a somewhat richer and more complete manifestation of the Gillem Bluff Phase. Some differences in projectile point types from those recovered in Gillem Bluff Phase sites are apparent, however; and there is moreover, the marked difference in the food grinding complex. In the Gillem Bluff Phase we find the grinding slab in fair numbers, while the hoppered slab mortar is rare and the portable bowl mortar is absent. The Indian Bank Phase, on the other hand, shows the portable bowl mortar commonly, with the grinding slab less common and the hoppered slab mortar absent. These differences may well reflect important differences in the economy and may by themselves in time justify our setting the Indian Bank Phase apart as a separate cultural entity.

Kroeber has discussed the apparent virtual abandonment of the portable bowl mortar in northern California at a time somewhat earlier than the more recent cultures of this region. Our area appears, from a comparison of the surface materials with the ethnographic and late prehistoric archaeological evidence, to have been affected by whatever influence was operative in this virtual abandonment. It is possible, therefore, that the Indian Bank Phase may pre-date the Gillem Bluff Phase. The ethnographic occurrence of the portable bowl mortar both to the east and north of our area is sufficient, however, to caution against the conclusion at the present time that the manufacture and widespread usage of the bowl mortar ceased entirely and at the same time in the Modoc area as elsewhere in northern California.

We have not yet attempted a detailed comparison of our excavated materials with those recovered by Cressman in Lower Klamath Lake. It is apparent,

however, that some typological correspondence exists between what we have termed the Indian Bank Phase and the materials described by Cressman from Lairds Bay: mortars and pestles, manos, split mammal bone and ulna awls, and certain projectile point types. Whether or not any close relationship is indicated by these similarities cannot be decided without a detailed analysis of all the cultural materials and some conclusive evidence as to the antiquity of the Indian Bank Phase. Certainly we have nothing which suggests anything approaching a late Altithermal-early Medithermal age for this phase. Typologically, our Indian Bank Phase materials probably correspond most closely with the early phase of the Late Horizon in Central California.

The surface reconnaissance during our three seasons in the area has resulted in the recording of 332 new sites. These, together with the few sites previously known, give us a fair body of material from which to draw some inferences as to population density, settlement patterns and subsistence pursuits. I shall not attempt to review these data here, other than to note that the evidence points overwhelmingly, as might be expected, to a mode of life primarily oriented toward the lake basins for all known periods. Only in the immediate neighborhood of the lake shores have we seen evidence of occupation of any appreciable duration.

Our efforts to derive population figures and settlement patterns for the various phases have been considerably weakened by the effects of private collecting on the surface archaeology. This activity has naturally centered on the areas which were richest in surface artifacts, the lake basin shorelines. As a result, we have found it impossible to make surface collections from a great many sites sufficient to seriate these on the basis of the excavated sites. Enough remains, however, to allow some conclusions to be made, although these might too often be based on incomplete data.

Among the surface materials there are indications of a cultural complex hitherto unreported from this area of northern California. This complex includes ground stone objects, commonly referred to as "boat-shaped stones" or "boatstones," apparently in association with large obsidian and chert projectile points. These objects are of sporadic occurrence throughout the central regions of the state, and of respectable antiquity. Several sites bearing them have been recorded in our area. Plans are being laid for the excavation of at least one of these sites in the near future.

## NOTES

- 1. As presented at the Great Basin Conference on August 31, 1955, this paper was accompanied by a series of color slides. The present paper has been rewritten to eliminate any reference to or dependence upon the color slides. The field work described here was conducted from August 6 to September 4, 1952; August 5 to September 3, 1953; and August 7 to August 24, 1954.
- 2. Cressman, 1942, p. 98.
- 3. <u>Ibid.</u>, pp. 97-102.
- 4. <u>Ibid.</u>, p. 102; Cressman, 1940, p. 305; Cressman, 1943, p. 239.
- 5. Antevs, 1940, p. 309; see also Crossman, 1940, p. 305.
- 6. Cressman, 1942, pp. 101-102.
- 7. Kroeber, 1925, pp. 926-927 and elsowhere in this work.
- 8. Heizer and Elsasser, 1953, pp. 26-30.

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