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Wikchamni Coiled Basketry

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THE original language and customs of the Native Americans who call themselves Wikchamni are nearly extinct. Members of the Yokuts linguistic family of the San Joaquin Valley in California, the Wikchamni once inhabited an area bordering the Kaweah River near Lemon Cove (Kroeber 1925:480). At present there are only a few people left who speak Wikchamni and know the art of basketmaking.

Over the past ten years, the authors have worked to record the Wikchamni language and basketry techniques. This paper is a sketch of the basic procedures involved in making coiled baskets. Cecilia Silva is a Wikchamni basketmaker who resides on the Santa Rosa Rancheria. Janette Gamble is an anthropologist and educator at California State University, Fresno. Geoffrey Gamble is a linguist and anthropologist at Washington State University.

COLLECTION AND PREPARATION OF MATERIALS

Wikchamni basketmaking begins with the collection and preparation of the requisite natural materials. The "basic" materials used in the coiling technique are white roots called *ho:pud,*[1] a type of straw grass called *ch'a:gish*, *mono:xich*—a dark root used for decoration, and *takakka*—a reddish bark used for decoration. In addition, certain tools are necessary: a bone awl, a sharp-edged scraper for paring down the roots and bark strands, another scraper for cleaning the *ch'a:gish,* and a digging stick.

In the following sections, Mrs. Silva's techniques of procuring and preparing each of the above mentioned items are described.

ho:pud

Root fibers are the principal sewing strands for coiled baskets. *ho:pud* (*Cladium californicum*, a sedge) is the root most often used. It is collected along riverbanks where the ground is sandy enough for the roots to grow quite long. It was to these riverbanks in the past that men and women would go early in the morning. The men would fish while the women dug for roots until late morning. When the heat got too intense and they got tired, they would all eat and rest. By early evening the heat would subside and the fishing and digging activities would resume.

The best time to collect the *ho:pud* is in early spring, when the underground runners of the sedge have grown long but have not yet sprouted new plants. In addition to being long, the *ho:pud* 'root' should be creamy white in color. Because opportunities to collect are limited and younger members of the culture are not continuing the basketmaking tradition,

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older Wikchamni have difficulty obtaining the most desirable material. Thus, shorter brown roots, which under other circumstances would not be acceptable, may be occasionally used. This obviously produces changes in the traditional basket style and design.

In digging for *ho:pud*, one discovers that the sedge has two types of roots: tap roots which go straight down and provide nourishment for the plant, and runners or stolens which grow horizontally just under the soil and sprout new plants. Runners are also of two types. One is called *na:shash*, which literally means 'mother'. This is a root which connects two plants together. It is older and tends to be not as light in color or as clean when stripped as the other type which is called *ba:muk'*. *ba:muk'* is the younger root of the plant which has not yet sprouted new growth and is the preferred root for basketmaking.

The digging tools included a digging stick —*chapoy*, a pick-axe, and a sickle. The *chapoy* is a strong, straight branch about four feet long, shaped to a point at one end and used mainly for digging roots. The *chapoy* owned by Mrs. Silva previously belonged to her mother, Mary Pohot. Mrs. Silva has never made one of her own, although she is certain she could. According to her, a neighboring tribe, the Tachi, call their digging stick *'achay*. This literally means 'mountain mahogany'[2] (*Cercocarpus betuloides*), and is probably the same material used for the Wikchamni *chapoy*. Mrs. Silva reports a secondary purpose of the *chapoy* is as a probe to check for rattlesnakes, which are abundant in the area.

The sickle was used to cut down the thick, tall masses of sedge and the pick to loosen the roots from the soil. The rest was done using the *chapoy* and our hands.

The location for digging was the sandy banks of a branch of the Kings River near Lemoore. We were unable to go to a favorite digging spot, because the area had been fenced off; thus, we were forced to drive along the river bank until we located the characteristic clumps of rough-edged grass from which we could get our roots.

Starting at the bases of the plants, we found roots which appeared to suit our needs. We slowly dug, pulled and maneuvered the runners as far as we could go—until each root was free from the soil but not broken. In our haste, we occasionally pulled too hard and a root snapped into pieces. Gayton (1948:86) reported the length of the favored roots to be from four to six feet. When we gathered our roots, Mrs. Silva searched for the longer ones, but none of those collected reached six feet and most were less than four feet long. Anyone who has attempted to make a coiled basket can certainly understand why the longer roots are preferred; splicing in new lengths of strand while coiling is time-consuming and tedious.

The *ho:pud* must be prepared soon after digging or it dries out. The roots are between ⅜ and ⅝ inch thick. A tough husk covers the root and its removal is a bit difficult and rough on the hands. Underneath this husk-like covering is a reddish-brown bark that can be peeled off fairly easily, leaving a tough, smooth, wire-like, inner-core with a small bulb of bark still attached at one end. This core (possibly up to four feet long) is split lengthwise into even sections, using fingers and teeth holding a portion between the teeth while pulling the other portion away with the hands, equalizing the pressure for an even split.

When all the roots have been peeled and split, each split root is hung over a line (the bulb end keeping the strips together) and the roots are allowed to dry. Afterwards groups of the prepared *ho:pud* are loosely coiled and lightly wrapped with string or another piece of *ho:pud* to keep them together. These coils can then be traded or stored for later use.

mono:xich

While *ho:pud* is used as the wrapping material for most of the basket, *mono:xich*

(*Pteridium aquilinum,* bracken fern root) [Latta 1949:157] is used for design. *mono:xich* was the most difficult material for us to collect. We dug in the summer when the ground was hard, but even when it is procured in the spring it is quite exhausting work.[3]

To gather our *mono:xich* we drove into the Sequoia National Forest just outside of Lemon Cove. It was necessary to obtain a permit from the U.S. Forest Service to dig on forest land and they designated the area where we could work. Because of this, we did not find an ideal site and our strenuous digging efforts produced very little result. An ideal site would be where the plant is growing on a steep hillside allowing the roots of the fern to grow straight down and quite deep (up to seven feet). It is obviously most advantageous to dig in toward the roots from the side of the hill rather than from the top down. Another method of digging *mono:xich*, when the plant is not growing on a hillside, is for a number of people to dig a deep trench near an area of bracken fern. They would dig for quite some time through the fern and gather the root. The area they covered could be as wide as a road.

At our not so advantageous site we were forced to dig mostly from the top down. However, a few plants were situated at the top of a small ravine and the technique we used in procuring these roots, since they were in the more favored spot, is described below.

We used a pick or a shovel to loosen the dirt around the base of the plant, careful not to cut into the long, vertically growing root, which is relatively thick (up to 1½ inches). We then used the *chapoy* and our hands, following the root down and removing soil from around it as we went, until the root was completely dislodged. Older plants have longer roots, so they are favored over newer plants. If we dug into a plant and realized that it was not mature enough, we carefully replaced the soil around its base so it could continue to grow. Some of the roots we collected reached lengths of up to four feet.

After collecting the *mono:xich* it should be prepared as soon as possible before it dries out (i.e., the same day). The outside layer of the root is peeled off revealing separate lengthwise strands layered inside. These layers easily pull apart. There were three to four layers in the roots we gathered, but there are often many more in the longer roots. Each layer had been connected to the other by a glue-like substance which had to be removed. This is done by soaking the strands in hot water and slowly working at scraping off the "glue." Next to be removed is a yellowish strip which is on one side of each strand. This peels off fairly easily with the aid of a knife and the root is then ready to be dyed. Its color at the time of gathering is dark brown. The object of dyeing is to get it as black as possible. One way of dyeing the root is to soak it in rusty water for about 48 hours. Merrill (1923:219) and Latta (1949:157) report different methods of dyeing: burying the root in dark mud or ashes or boiling it in a quantity of black mud from the sloughs or tule swamps. Soaking in rusty water is probably a fairly recent innovation. More shaping and cleaning is done during the soaking period; then the strands are coiled loosely and allowed to dry.

takakka

Another decorative wrapping material which is used by the Wikchamni is *takakka*,[4] the bark of the redbud shrub (*Cercis occidentalis*). The shrub grows in abundance in the hills around the Lemon Cove area. We merely drove along the road until the appropriate shrub was located. We removed the branches we wanted, stripped off the leaves and drove on to look for more. We collected quite a large amount in a very short time and without permanently damaging the shrub. Mrs. Silva suggested our roadside expedition because in order to clear the roads the highway workers often cut back the shrubs causing new shoots

to grow out each spring. In olden times, the constant pruning of the redbud by the women who used it insured new growth for the next year's collection.

Redbud must be collected after the first frost and before the next rainfall or else it will "fall apart." We gathered ours in late November but we were prepared to go anytime from the middle of October, depending on the weather. By this time of the year, the new shoots have grown to long, straight single shoots which have not yet branched out. They are about three feet in length with a color similar to manzanita bark, a rusty, reddish-brown. Older branches of the redbud will have branched out and often are grayish in color.

Mrs. Silva used a knife to cut the branches from the shrub. She then stripped off the leaves by simply wrapping her hand around and running it down the branch.

As with the other basket material, *takakka* must be prepared while the branch is fresh. The *takakka* is split evenly lengthwise on the day it is collected. Then the inner core of the branch is peeled out a little at a time, with the aid of a knife, until the bark is limber enough to be loosely coiled.

ch'a:gish

The foundation bundle used in this type of coiled work is what was known to pioneer cattlemen of the San Joaquin Valley as "bunch-grass" (Latta 1949:155) and is known to the Wikchamni as *ch'a:gish*. The *ch'a:gish* (*Muhlenbergia rigens* also known as *Epicampes rigens*) is ready for cutting in the summer. The grass grows in bunches about three to four feet high. Each long ridged stem is simply pulled out of its sheath and prepared for use.

All that must be done in preparation is to remove the inflorescence. To do this a piece of wood shaped to approximately 9 inches by 1½ inches wide and maybe ½ inch thick is used. A V-shape is notched into the top and then carefully split open from the bottom of the notch down the grain of the wood about an inch. Each stem is then pulled through the slit, scraping off the inflorescence (Fig. 1).[5] Mrs. Silva cannot recall a Wikchamni name for this scraper. Her mother used this type, but she also used old pieces of heavy fabric to protect her fingers. The wood scraper is possibly a recent innovation.

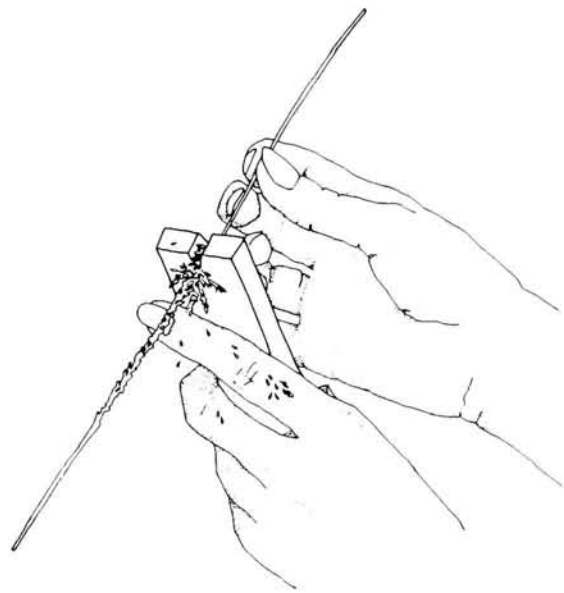

Fig. 1. Inflorescence is removed by pulling the stem through a split in the wood.

p'aw'uk' and *xɸpɸ:xi*

The awl used in Wikchamni basketmaking is called *p'aw'uk'* (Fig. 2). It is made from the cannon bone of the foreleg of a deer. After all the meat has been cleaned from the bone, it is scraped lengthwise down the center groove with a knife. The bone is split by wedging a knife between the condyles and prying it slowly apart. The bone splits lengthwise along the scraped grooves forming two awls. The condyles will serve as the handle and the other end is sharpened to a point using knife and sandstone.

Fig. 2. *p'aw'uk'* 'awl' worn down after much use.

The *xφpφ:xi* is a scraper used exclusively for the shaping of basket materials. The scraper belonging to Mrs. Silva is made from an old butcher knife; the handle and a portion of the blade was broken off to leave the blade a comfortable length with which to work. Once her father made a scraper out of a file (rather than a butcher knife), which her mother prized because it always stayed sharp.

Tools are sharpened on a piece of sandstone. Mrs. Silva's stone is about 5 x 3 inches in size and obviously much used. It once belonged to her mother and originally was about three times as large. It was worn down with use until it eventually broke in half. Mrs. Silva still uses one of the halves and has never collected her own sharpening stone.

THE COILING TECHNIQUE

In May 1970, we attended an annual gathering of Mono and Yokuts at Squaw Valley, California. Among other items (such as coils of basket roots and salt from salt grass) being traded, there were what are referred to in Wikchamni as *chumnata,* the beginning of a basket (Fig. 3). The starter is the most difficult part of basketmaking; and for some of the older women suffering from arthritis and the younger ones who don't know how to start the basket, it is helpful to obtain the *chumnata* and continue the basket from there.

Fig. 3. *chumnata* 'the beginning of the basket'.

Wikchamni basketmaking of the coiled tradition begins with *ho:pud.* The *chumnata* is composed entirely of this material. *ho:pud* is both the foundation and the weft (wrapping material) at this early stage because of its pliability. Eventually, *ch'a:gish* will be used as the foundation, but until the basket base reaches about two inches in width, *ho:pud* must serve this function since the foundation in this early stage must be flexible enough to turn sharply back on itself.

The first step is to moisten some of the root in a bowl of water until it becomes quite flexible. Then each piece must be shaped and straightened before it can be used.

The roots are straightened with the fingers and teeth. Then each is shaped into an even width (about 1/16th inch being preferred) by scraping with *xφpφ:xi* 'knife'. The finished width may vary from root to root, depending on their initial sizes, and Mrs. Silva sorts them into wide and narrow groups. She prefers to use only roots of uniform widths in a particular basket.

After a number of roots have been prepared in the above manner, two or three pieces (depending on their thickness or on how thick one wants the coils) are selected for the foundation; each end of these pieces is tapered with a knife. The tapering allows for a smooth transition when new roots are added. Another root is selected as the wrapping material (the *weft*). One end of this piece is tapered to a point—the moving end. The other end is left alone—the fag end.

Each piece of root, having been split as described in the previous section, has a flat surface and a round surface. The round,

smooth side of the *ho:pud* should show on the outside of the basket. The *ho:pud* must stay damp while it is being used. If it dries out while working, it must be moistened again (soaked in water). Otherwise it will crack as it is pulled around the foundation.

The actual coiling technique is described and illustrated in Figs. 4-8. The foundation roots are folded in half and the moving end of the moistened weft is inserted through the middle of the roots where they were folded (Fig. 4). The weft is pulled through until about a quarter of an inch of the fag end is left extended. There is also a bit of space left in the foundation area around the fag end for use as described in Fig. 7. One must be careful not to let this fag end slip through. It will eventually become constricted and so "locked" into place; but for now, it must be consciously kept under control with the left hand. The weft is wrapped around the foundation about six times (Fig. 5) or until it is long enough to be turned back (Fig. 6). The foundation always protrudes out toward the right as the basketmaker faces her work. The foundation pieces are kept under control by tying a piece of root around them. The moving end is brought back around the foundation and pushed down through the hole near the fag end at the fold of the foundation (Fig. 7). The weft is pulled to tighten the coil, and the protruding fag end can be cut off flush with the foundation. The moving end is again wrapped back and around the foundation and is again pushed through the same hole. This is done up to three times. In Fig. 8 the weft has been wrapped around the foundation seven times. It has gone through the center hole (fold) once. The awl will be used to pierce through the same hole in the foundation. The moving end will then pass through the hole left by the awl on the front side and be pulled tightly to the back.

Wrapping continues, using the awl to pierce between each consecutive turn of weft. The weft goes around the new foundation and through the hole, securing the two layers of

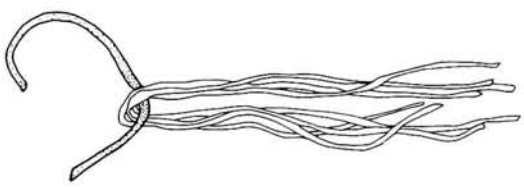

Fig. 4. The basket begins with *ho:pud* foundation and wrapper.

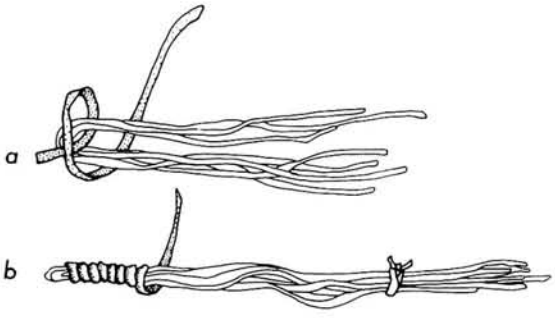

Fig. 5. *a* and *b*: The weft is wrapped around the foundation.

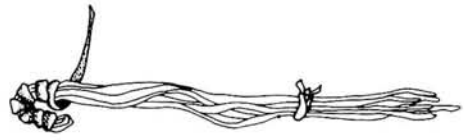

Fig. 6. The wrapped part is turned back on itself forming the first tiny coil. The foundation always sticks out toward the right.

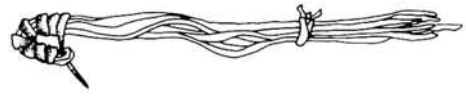

Fig. 7. The weft is pushed through the small opening at the fold of the foundation.

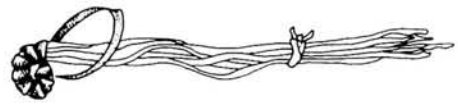

Fig. 8. The coil is tightened and the weft is reinserted through the same opening.

coil together. The amount of space between stitches is kept relatively constant. When some spaces appear too wide, the weft is sewn through the same hole twice in order to minimize the distance.

When the coil begins, a small hole is deliberately left uncovered in the center of the base. Mrs. Silva reports that as far as she knows, all her people who make baskets leave this hole. If the hole is not left, the basketmaker "will go blind." Others have not previously recorded this concept; but upon inspecting the Yokuts baskets at Lowie Museum of Anthropology, University of California, Berkeley, we noticed that some of them did have this hole. In other baskets, the hole had been stitched over, but was definitely there at one time. Mrs. Silva says that the hole could later be stitched over if the owner wanted to put liquid in the basket.

When the start reaches about an inch in diameter it becomes the *chumnata*, which can now be traded. When it reaches a width of about two inches, it is large enough to switch to *ch'a:gish* as the foundation material.

When the weft gets too short to handle, a new length of *ho:pud* is added (Fig. 9). To do this, the awl is used to reopen the same hole in which the old piece left off. The moving end of the new prepared root is then pushed through the hole until the fag end becomes nearly flush with the foundation. The end of the old root is turned back toward the basketmaker, but under (*not* over) the foundation. The old root is held secure with the left thumb while the basketmaker proceeds to wrap the new weft around the foundation a couple of times. Thus the old root end is locked into place and can be trimmed flush with the foundation, and there is barely a trace of the transition.

The foundation material also must be replenished when it runs short. When *ho:pud* is the foundation, one piece of root is added at a time; and it is added to the end of the piece that is running short. These two pieces overlap only at the very ends where they have been tapered, and thus make a smooth transition. As previously mentioned, the free ends of the foundation are kept under control by tying a piece of root around them. New pieces to be added to the foundation are drawn through this tied piece first.

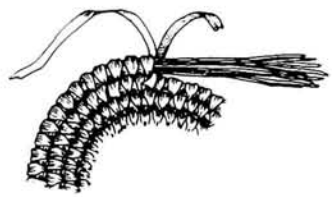

Fig. 9. Adding a new wrapping strand.

Finishing Technique

Once the beginning of the basket has reached about two inches in width, it is time to change the foundation from *ho:pud* to *ch'a:gish,* the "bunch-grass." *ch'a:gish* is added one stem at a time and every other piece is reversed endwise to make a foundation of even thickness. The coiled rows in the baskets are actually quite thin—about four or five stems of *ch'a:gish* in cross-section.

When the base of the basket has reached an appropriate size, the side is turned up. This is done by making holes with the awl at a 45 degree angle through the foundation. Work is continued on the outside of the basket, and eventually the sides reach the angle to fit the shape of the type of basket one wishes to build; then the regular 90 degree angle of insertion with the awl can be resumed. To finish a basket, one simply does not replenish the foundation and it narrows to a tapered ending.

DESIGN

Figures 10-19 represent types of designs copied from either Mrs. Silva's personal basket collection or Wikchamni baskets at the

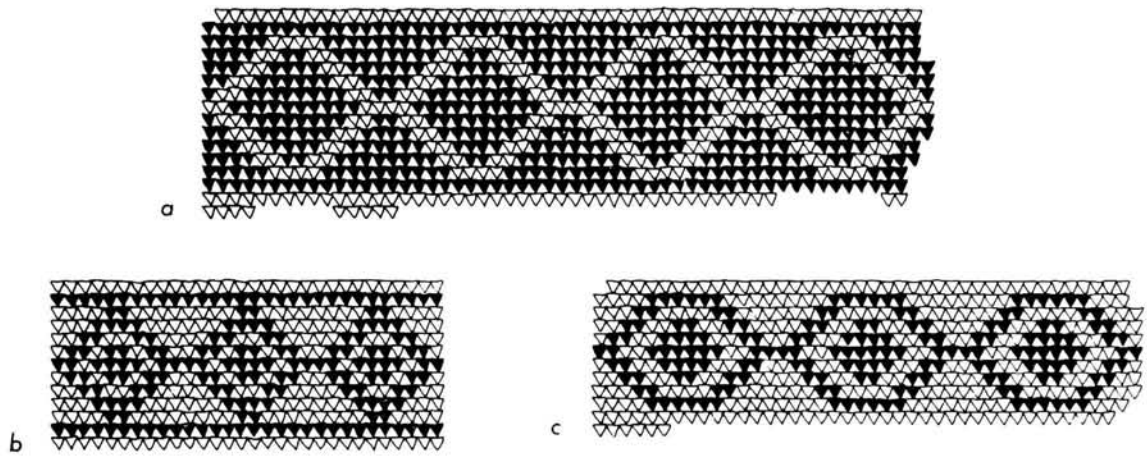

Fig. 10. *a-c*: *cø'ød* 'rattlesnake': horizontal bands which encircle the basket.

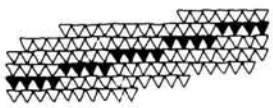

Fig. 11. *k'e:nich'* 'ants': three or four stitches often in a spiraling effect.

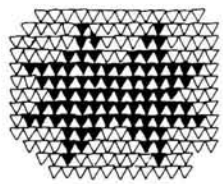

Fig. 12. *ch'oyt'ash* 'star': Lawrence Dawson reports (personal communication) that this design actually came from White women's embroidery patterns and diffused west through the beadwork of some Native Americans.

Lowie Museum. They show some individual variation among the different types. Each horizontal row of the graph represents a horizontal row in a basket. In addition to those designs illustrated, Mrs. Silva feels there is a special design for kingsnake, but cannot recall what it is.

Waterman, in his 1928 newspaper article, mentioned that "oftentimes a woman works up ideas of her own and in that case it is useless to inquire about the meaning, unless the designer herself will tell." Recently, Mrs. Silva made a basket, into the bottom of which she incorporated (with *takakka*) the numbers 1973—the year she made the basket.

In the beautiful *'o:sha*, a shouldered bottlenecked basket which Mrs. Silva jokingly calls a "show-off" basket, quail plumes are worked into the shoulder of the basket at ½ inch intervals and red yarn may also border the shoulder.

Technique in Adding Design

The wrapping material (*mono:xich* and *takakka*) must be soaked in water and shaped in the same manner described for the *ho:pud*. The designs are built up with each successive row, so the colored material must be substituted for *ho:pud* in places where a design is wanted. Colored root is added in the same manner as described for adding *ho:pud*.

The white root (*ho:pud*) is cut off when the colored root is added; then when the proper amount of wraps have been made with the design root, *ho:pud* is added and the design root cut off. Even if the design involves only

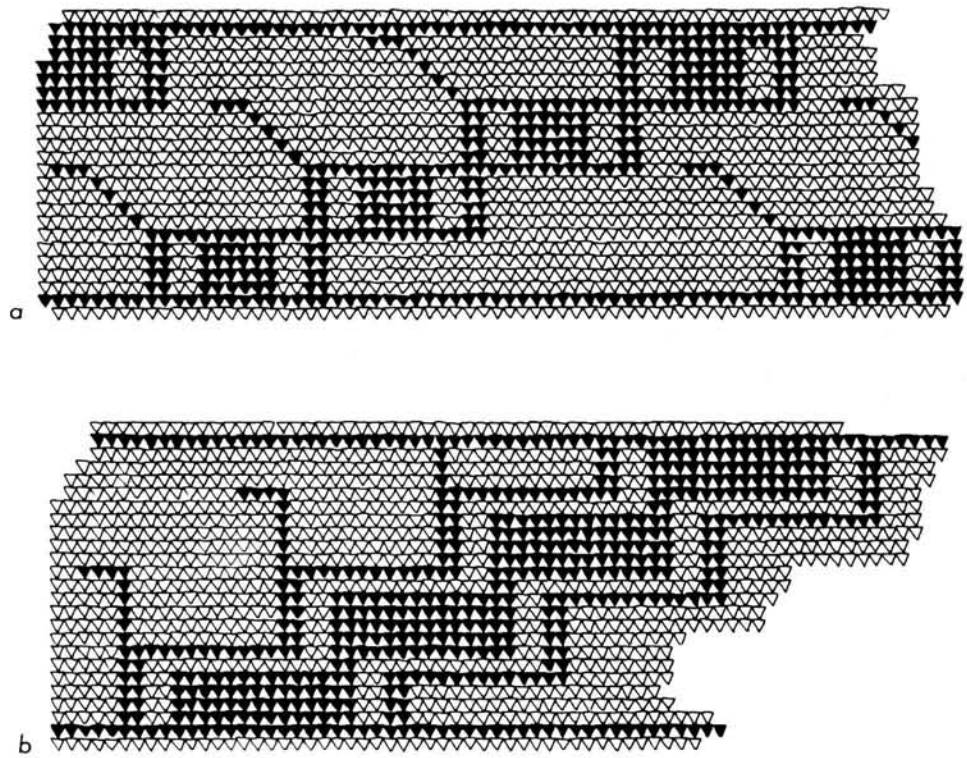

Fig. 13. *a-b*: *humundun* 'quail's crest': Note the extending "crest" or "top-knot" of the quail.

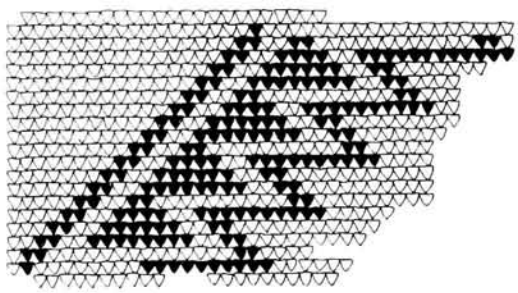

Fig. 14. Diagonal-angular design. Although Mrs. Silva could not recall a name for it, Mason (1904) labels a similar design "arrow point."

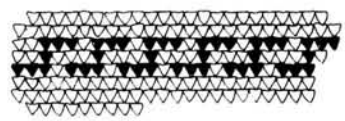

Fig. 15. *gacu* 'measuring worm' or 'inch worm': usually forms a horizontal band around the basket.

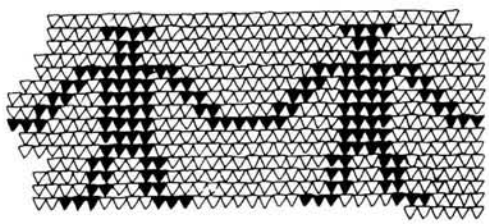

Fig. 16. *may* 'humans': apparently this design was used for special ceremonies. Mrs. Silva mentions its use at "get-well doings."

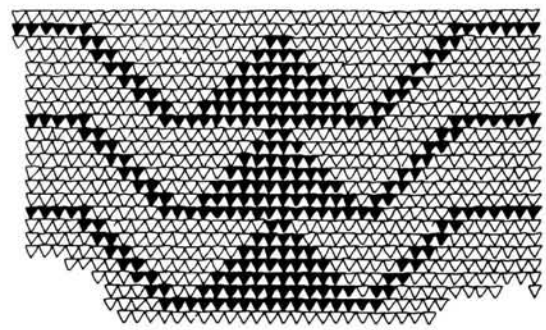

Fig. 17. Sugar-pine?: Mrs. Silva recognizes this pattern, but doesn't recall a name for it. Sugar-pine is the name given to this design by T. T. Waterman in a local newspaper article which Mrs. Silva had saved dated July 8, 1929.

one wrap around the filler in a particular row, the same method is used. Because of this the baskets are as beautiful on the inside as they are on the outside.

According to Mrs. Silva, horizontal designs (such as rattlesnake) end below the rim of the basket, while diagonal designs (such as the quail-crest) and vertical designs (such as sugar-pine) may go right up to the very top of a finished basket. The reason she gives for this is the difficulty in finding a stopping place for the diagonal and vertical designs since one part of the design finishes where another part of the design has already begun. (This is apparent in the illustrations.)

TYPES AND USES OF COILED BASKETS

Figure 20 shows some typical Wikchamni baskets. Native names and functions of often-used coiled baskets are mentioned below.

t'epnin k'ach'aw, literally 'acorn-mush basket', is a large, flared basket used for storing acorn-mush or for holding cooking- and wash-water. *k'ach'aw*, the general term for 'basket', also refers specifically to a small individual food basket used as a serving plate. *kayocu'* is a large, round, flat platter used to separate pounded corn—a winnowing tray. *t'ay'wan* is similar to the winnowing tray, but with sides turned up. It is used to shake dice for gambling games. *'o:sha*, termed 'treasure basket' by Gayton (1948:19), was apparently used for storing valuables and also as a trade basket. It is a shouldered bottle-necked basket, always elaborately decorated (the quail plumes were previously mentioned). Kroeber (1925:531) reports that the "Yokuts baskets are distinguished by [this type of] coiled jar-like vessel with flat shoulder and constricted though sometimes reflaring neck."

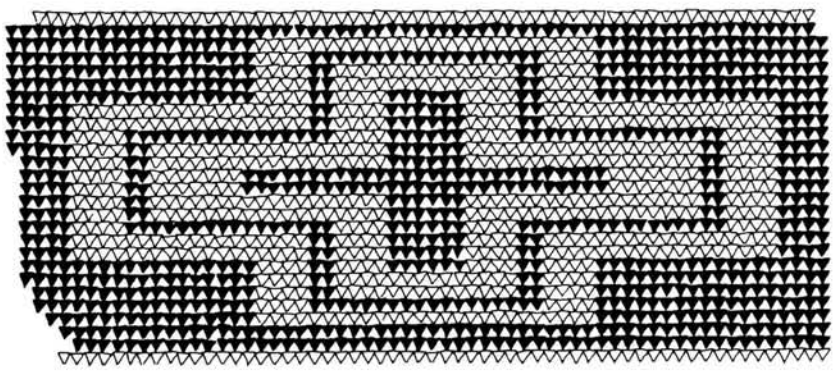

Fig. 18. Cross design.

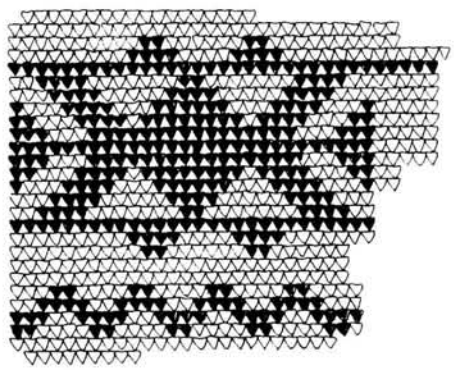

Fig. 19. Butterfly (top) and watersnake designs.

Fig. 20. Wikchamni basketmaker, Cecilia Pohot Silva.

SUMMARY

Although Wikchamni basketry tradition is near extinction, the basic features of the tradition have been retained by Mrs. Silva and covered by us in this paper.

Emphasis has been on the style of construction of the coiled basket and on collection and preparation of the natural materials used. Certain conventions of basketry designs have not been covered and will require more research. How the stitches of a design pattern are calculated so that they are equally distributed (e.g., in the horizontal band designs) and how the curvature of the basket is taken into account (especially in the diagonal designs) still need to be investigated. Other basket traditions, such as twined work, have not been mentioned, although the Wikchamni did make some twined baskets.

When Anna Gayton published her ethnography, she stated that she hadn't included much information on basketmaking "since the art was in no danger of extinction and it was hoped that some investigator would undertake its special study" (Gayton 1948:85). Today the tradition is carried on by very few Wikchamni, all of whom are in their senior years.[6]

NOTES

1. All Wikchamni words are from the unpublished lexical file of G. Gamble or from *Wikchamni Grammar* (Gamble 1978). The transcription of

native words used in this article is essentially as in Gamble (1978), with the exception of the following substitutions introduced for ease in typesetting:

Gamble (1978):

p	p^h	$\dot{p}$		
t	t^h	$\dot{t}$		
k	k^h	$\dot{k}$	ʔ	
ṭ	$\check{c}^h$	$\dot{\check{c}}$	ṣ	
ẇ	ẏ	ë	·	(length)

This paper:

b	p	p'	
d	t	t'	
g	k	k'	'
c	ch	ch'	sh
w'	y'	ø	:

2. Stanley Newman, unpublished lexical file.

3. In July 1972, at a gathering of the Mono Indians at Northfork, California, older Mono women waited for someone to bring black-root so they could trade for it. To our knowledge, no one came with any and the basketmakers were disappointed. Having experienced the hardship of collecting this root, we can see why black-root is so scarce.

4. Gayton (1948:86) reports *a'nep*; Latta (1949: 157) reports *ah'nup*. Mrs. Silva says *'ana:p* refers to the 'preparation' of *takakka* (*takakka tihin ana'pad* 'redbud they are splitting').

5. Illustrations are by Kathi Bodley, Washington State University, Pullman.

6. We are indebted to Lawrence Dawson of the Lowie Museum of Anthropology, University of California, Berkeley, for his patience, criticism, and encouragement, and to the Shell Foundation for financial assistance.

REFERENCES

Gamble, Geoffrey
1978 Wikchamni Grammar. University of California Publications in Linguistics 89.

Gayton, A. H.
1948 Yokuts and Western Mono Ethnography. University of California Anthropological Records 10(1).

Kroeber, A. L.
1925 Handbook of the Indians of California. Washington: Bureau of American Ethnology Bulletin No. 78.

Latta, F. F.
1949 Handbook of Yokuts Indians. Oildale: Bear State Books.

Mason, Otis Tufton
1904 Aboriginal American Basketry: Studies in a Textile Art Without Machinery. Washington: Annual Report of the Smithsonian Institution for 1902, Report of the U.S. National Museum.

Merril, Ruth
1923 Plants Used in Basketry by the California Indians. University of California Publications in American Ethnology 20:215-244.