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money. If this offer is accepted they exchange moneys (not necessarily in equal amounts) and harmony is at once restored.

Courtship is also conducted by means of money among the Klamath and Trinity River tribes. A wife seldom brings less than half a string, and when she belongs to an aristocratic family, is pretty and skillful in making acorn bread and weaving baskets, she sometimes costs as high as two strings, say \$80 or \$100.

No marriage is legal or binding unless preceded by the payment of money, and that family is most aristocratic which pays the highest price for the wife. So far is this shell aristocracy carried that the children of a woman for whom no money was paid are accounted no better than bastards, and the whole family is contemned.

In Placer County, Cal., the Nishinam Indians dun their debtors with a device called *sanchest*, which is thrown into the wigwam of the tardy individual. (Fig. 113.) A number of sticks 4 inches long and about  $\frac{1}{4}$  of an inch thick are arranged on a string like a rope ladder. These sticks are painted with streaks of black and red, and represent the amount and character of the debt.

## GAMBLING AND MEDICINE.

For gambling they have a bunch of small wands, one of which has a black band around the center. The game is played by any number that wish to engage in betting. Two dealers sit opposite each other on a blanket, each backed by two or more singers and a drummer, and the game commences by one of the dealers taking the sticks in both hands, about equally divided, and holding them behind his back, shuffling them from hand to hand, after which he brings them in front of his body with both hands extended and the sticks grasped so the players can not see the centers. The opposite dealer clasps his hands together two or three times and points towards the hand which he thinks holds the stick with the black center. Should he guess correctly he takes the deal, and holds it until his opponent wins it back in like manner. For each failure a forfeit is paid, and one is also demanded when the dealer loses the deal.

Friends of each party make outside bets on the dealers, and each dealer's band plays and sings as long as he holds the deal.

There is another game, essentially the same as the one above described, except that they use a smaller number of sticks, and the joker is blackened only in the center and the others at both ends and centers. Both games are called *kiu*.

Rattles employed by medicine men and in gambling are composed of many hoofs and hooflets of the black-tail deer. Each piece is pierced through the apex and suspended on a short thread upon which four white beads are also strung. These pendants are then fastened to a long belt of cloth or leather and worn around the waist or held in the hand. The hoofs striking together produce a sharp rattling sound. A small THE RAY COLLECTION FROM HUPA RESERVATION. 235

graceful lens-shaped rattle mounted on a stick is held in the hand of the dancer. (Fig. 115.)

The Hupa drum is a rectangular box covered with leather and has little merit as a musical instrument. (Fig. 115.)

The Hupa make tolerably agreeable music on a small bone whistle made either single or double. (Figs. 115–118.) Dr. Abbott describes and figures a collection of prehistoric whistles of bone from southwestern California so similar to those of the Hupa that the continuity of music in prehistoric and recent times is made out. (Wheeler, Vol. VII, 23.)

It is an important principle which archæologists sometimes overlook that arts may survive and obey the laws of technic evolution even though the men through whose instrumentality they live and have their being have had no immediate blood relationship.

Among the Karoks of California there are two kinds of Shamans the root doctors and the barking doctors. The latter (women mostly) squat like a dog before the patient and bark for hours. The root doctor with potions, poultices, etc., medicate the parts where the ailment is discovered. They believe that witches cause a snake, frog, lizard, or other reptile to fasten to the body and to grow through the skin into the viscera. The barking doctor first discovers the seat of the disease and then sucks until the blood flows. She then takes an emetic and vomits up a frog, which she pretends came from the patient.

## ABORIGINAL BOTANY.

The following-named plants enter in some manner into the daily life and experience of the northern California Indians. The list is far from exhaustive, but an effort in the right direction, which it is hoped may be followed up and corrected with reference to all aboriginal peoples. Most of the information is drawn from Mr. Powers, Dr. Watson, and the Wheeler Report, Vol. VI:

AESCULUS CALIFORNICA, Nutt. Buckeye. The shoots used for arrowshafts and the pounded nuts used in stupefying fish, also eaten in times of scarcity.

ALLIUM CEPA, Lunkup, in Yokuts. Eaten as food.

ALLIUM SATIVUM. Eaten raw or roasted.

ALLIT. A kind of salt used for seasoning greens. The Indians pull up the grass in low alkaline grounds when the dew is on, and soak off the salt, or they sweep a stick through the grass and wash it to procure the salt, which is strongly impregnated with alum.

ALNUS. Alder.

- AMENOPSIS CALIFORNICA, Hooker. Yerba Mansa, Lipits, in Yokuts. A piperaceous plant whose root is soaked in water and the infusion drank for a bad stomach.
- ANGELICA. Chehinkinku, in Huchnom, Muhachakolen, in Hupa. The root is used as medicine and also as a charm by many tribes. The tender shoots are eaten as greens in spring.