The United States National Museum possessed a fine collection of ethnological material from northern California, gathered by Wilkes and later explorers down to the centennial work of Stephen Powers (Cont. to N. Am. Ethnol., III). In order to bring this material into shape to illustrate the whole life of the Klamath River tribes, Lieut. P. H. Ray, U. S. Army, undertook while at Fort Gaston in 1885 to collect material for this supplementary work. Most of the pieces described in this paper are from Lieutenant Ray's collection and bear testimony to the obligation the ethnologist may be under to an army officer who will thus occupy economically the leisure of post duties.

PAPERS RELATING TO ANTHROPOLOGY.

Hoopa Valley Reservation, established in 1864 (Ind. Aff. Report, 1864, 1865, 1866), is 16 miles long and 12 miles wide. The valley contains 1,200 acres of arable land, which lies on both sides of the Trinity River 8 miles above its junction with the Klamath.

This romantic spot is reached by two days of mule travel from Arcata, in Humboldt County, 40 miles away. The whole distance presents an unchanging wildness of mountain scenery, varied with somber forests of redwood, and occasional patches of grazing land.

In all this journey the traveler's communion with nature is little interrupted with signs of human habitation until his eye rests on Fort Gaston, at the south side of Hoopa Valley.

In the northern part of California, west of the Coast range, dwelt formerly the following stocks of Indians, speaking languages so radically different that philologists are unable to ascribe to these languages a common origin.

- (1) The Pacific slope branch of the Athapascan or Tinnéan stock, in the extreme northwestern corner and far northward into Oregon.
  - (2) Ehnikan, or Karok, between 123° west and Klamath River.
  - (3) Shastian, 41° to 43° north, 122° to 123° west, in round numbers.
  - (4) Weitspekan, or Yurok, around the lower Klamath.
  - (5) Weeyotan, or Wishoskan, on lower Eel River.
  - (6) Kopean, or Wintun, west side of Sacramento River.

Upon the Hoopa Reservation were placed by the Government, in 1864, a number of bands scattered around Trinity River. To them were added subsequently, the Redwoods, Seaws, Mad Rivers, and others from the neighborhood. These bands have been at various times named as follows (Spalding's Rept., 1870):

Hoonsolton (Ath.) = Hunsating (Powers).

Miscolt (Ath.) = Miskut (Powers).

Sawmill (Perhaps Cernalton).

Hostler (Ath.) = Hosler (Powers).

Cernalton.

Matilden (Ath.) = Mitilti (Powers).

Kentuck (Ath.) = Alăăkût. Niyankéteteni, Youtochetts; Yahnihkahs (Dorsey and Mooney).

Redwood.

Tishtangatang (Ath.)=Tishtanatan; Siaws (Ath.)=Saiaz (Ind. Aff. Rept.); Humboldt.

The Indian Affairs reports of the last ten years have given Hunsatung, Hoopa, Klamath River, Miskut, Redwood, Saiaz, Sermalton, Tishtanatan.

Mr. Powers: (Cont. to N. Am. Ethnology, Vol III, 73) enumerates the Hunsatung, Miskut, Hosler, Mitilti, Tishtanatan, Waykat, Chailkulkaituk, Chantakoda, Wissomanshuh, Miskeloitok, Hasslintung.

Commencing with 1865, the population of this reservation has been reported as follows: (5) 650; (6) 623; (7) 550; (8) 725; (9) 975; (1870) 874; (1) 750; (2) 725; (3) 725; (4) 666; (5) 716; (6) —; (7) 427; (8) 427; (9) 415; (1880) 414; (1) 480; (2) 510; (3) 508.

Although a great majority of these bands belong to the Athapascan stock their arts have been so long in the leading-strings of this salmon prolific, acorn and redwood abounding region, that in houses, dress, implements, and products of industry they do not differ from their immediate neighbors. Lieutenant Ray gathered his specimens from the Natano (Tishtanatan) and Kenuck (Klamath Rivers), both assigned by Mr. Dorsey and Mr. Mooney to the Athapascan or Tinnéan linguistic stock.

The Hupa of former times are said by Mr. Powers: (Cont. N. Am. Ethnology, III, 72) to have been the finest race in all that region next after the Karok on the lower Klamath, whom they excel in statecraft. "They were the Romans of northern California in valor and the French in language. They hold in a state of semi-vassalage (I speak always of aboriginal acts) most of the tribes around them, except their two powerful neighbors on the Klamath, exacting from them annual tribute in the shape of peltry and shell money, and they compel all their tributaries to this day, to the number of about a half dozen, to speak Hupa in communication with them.

"Although they originally occupied only about 20 miles of the lower Trinity, their authority was eventually acknowledged about 60 miles along that stream, on South Fork, on New River, on Redwood Creek, on a good portion of Mad River, and Van Dusen's Fork; and there is good reason to believe that their name was scarcely less dreaded on lower Eel River, if they did not actually saddle the tribes of that valley with their idiom." This language applies to the Hupas before the mad hunger for gold had peopled California with human wolves. It is a startling but eloquent commentary upon their treatment and education to read later on: "The Hupas are not to-day any more enlightened, advanced, progressive, industrious, or better off in any way than they were when the reservation was established about twenty years ago." (Ind. Aff. Rep., 1881, 6.)

## HABITATIONS AND WOOD-WORKING.

The hills skirting the Trinity and Klamath Rivers are covered with redwood trees, most grateful wood to savage artisans. Their soft trunks