

Tree Ring Chronology in Chaco Canyon

During the year 1932:

Wood specimens collected from Chetro Ketl	39
Wood specimens collected from Pueblo Pintado	4
Wood specimens collected from Kinklizin	5
Wood specimens collected from Kinbiniola	22
Wood specimens collected from Una Vida	2
Wood specimens collected from Kinya A	10
Wood specimens collected from Tsinklitsin	2
Wood specimens collected from Penasco Blanco	25
Wood specimens collected from Garage Room	2
Total	111

Charcoal from excavations in east dump—being counted and dates in connection with study of pottery sequences as shown in dump. Apparently the dump is composted not only of strata of daily accumulated trash from household sweepings but also of such material once thrown out and then moved, so that some of the latest dates are toward the bottom of the dump. This will explain, when the work is finished, something of the peculiar pottery sequences previously puzzling, for the best pottery seemed to be at the bottom of the dump. The upper material, twice moved, is probably evidence of their having cleaned out old rooms or kivas previously used as dumps, or possibly of having moved an old dump—rather unlikely, in their late building operations. Dates on dump material cannot be given out until the work is completed during this summer. No more excavation seems to be necessary in the dump itself.

The charcoal dating done on this material from the dump represents the first work ever attempted by anyone in this line. The pieces are small, averaging about $\frac{1}{2}$ inch in diameter, from piñon branches once used for firewood. This work has lead to study of modern branches, to see how far branch records may be expected to correlate with stem records from trees. Such observation checks the dates obtained on the C. K. dump.

On Chetro Ketl the earliest and latest dates so far obtained are 993 and 1,116 respectively. The earliest in the valley are from Una Vida, 861; Penasco Blanco, 898; and Kinbiniola, 941, 2 and 3. In each case, later dates were likewise obtained from the same villages. The masonry types are being correlated with the dates obtained from roof timbers. The latest dates so far obtained from villages are as follows—Kinbinola, 1124; Yellow House, 1123; Kinklizin, 1084; Tsinklitsin, 1111; Kinya-A, 1106; and Pueblo Pintado, 1061.

It is planned that the work on tree ring study be carried on in the Chaco region for a month following August 15, this summer, 1933, by myself and Roy Lassatter, my able assistant of last season. During the field season of 1931 a kiva pilaster support was obtained which sent the general tree ring chronology back about 100 years; at present there are kiva pilaster supports visible in the west tower kiva which is to be excavated in the early part of this summer. As soon as specimens of this material are sent to the Tucson laboratory, I will work them over in the hope of further pushing the calendar backward.

As a supplementary issue to tree ring study in the Chaco, Mr. Lassatter and I have been making a study of the general subject of forest recession due to humanly applied injuries, of the newest trees in the Chaco region at present, of the effects of forest recession on drought, (sic) and of drought (sic) on human movements, as seen in historical semi-nomadic and sedentary cultures. Reports considering effects of forest on rainfall, on temperature, on water conservation have been consulted to supplement the field work.

Hawley, Florence M. "Tree Ring Chronology in Chaco Canyon." *El Palacio* 34 (June 21-28, 1933): 204-205.