

UNIVERSITY OF TOKYO RADIOCARBON MEASUREMENTS III

JUN SATO*, TOMOKO SATO**, YASUKO MATSUI**,
and HISASHI SUZUKI†

Carbon Dating Laboratory, University of Tokyo, Japan‡

Radiocarbon measurements in this list were made from Sept. to Dec., 1968. They are based on acetylene counting in an Oeschger-Houtermans-type proportional counter (1 L) at pressure 1 atm. All data are based on duplicated measurements. For calculation of ages, 95% activity of NBS oxalic acid is used as the modern standard and value of 5570 ± 30 years is used for the half-life of C^{14} . Dates are expressed in years B.P. (before A.D. 1950). Error corresponds to 1σ deviation of sample net counting rate as well as modern standard and background. Details of procedures are given in previous reports (R., 1968, v. 10, p. 144-148; 1969, v. 11, p. 509-514).

Descriptions of samples are given by collectors and submitters. We express our thanks to M. Kishi for secretarial assistance.

SAMPLE DESCRIPTIONS

I. GEOLOGIC SAMPLES

A. Japan

TK-56. Nakai-machi Sakai **6740 ± 400**
4790 B.C.

Cone of *Picea bicolor* Mayr, id. by Y. Kimura, Univ. of Tokyo, from black soil under pumice flow, Sakai, Nakai-machi, Kanagawa pref. ($35^{\circ} 21' N$ Lat, $139^{\circ} 12' E$ Long). Coll. 1967 and subm. 1968 by N. Katayama, Univ. of Tokyo. *Comment* (N.K.): from paleoclimatic point of view, specimen should be older than 10,000 yr. Contamination by younger carbon may have occurred.

TK-57. Waki-machi **$>50,000$**

Wood from sand layer, ca. 1.5 m thick, ca. 40 to 50 cm below surface of fan, NW of Waki-machi, Mima-gun, Tokushima Pref. ($34^{\circ} 04' 07'' N$ Lat, $134^{\circ} 08' 44'' E$ Long). Coll. 1968 by A. Okada; subm. 1968 by S. Iwatsuka, Univ. of Tokyo.

TK-59. Yatate-toge **8760 ± 250**
6810 B.C.

Charred wood from Ito pyroclastic flow, NW of Yatate-tôge, Mimata-cho, Miyazaki pref. ($31^{\circ} 43' 45'' N$ Lat, $131^{\circ} 15' 50'' E$ Long). Coll. and subm. 1968 by S. Aramaki, Univ. of Tokyo.

* Department of Chemistry, Faculty of Science, University of Tokyo

** Department of Anthropology, Faculty of Science, University of Tokyo. Yasuko Matsui, née Otomori.

† Chairman, Carbon Dating Committee, University of Tokyo

‡ Mailing address: c/o Department of Anthropology, Faculty of Science, University of Tokyo, Bunkyo-ku, Tokyo, Japan

TK-60. Iidani

2460 ± 350

510 B.C.

Charred wood from Ito pyroclastic flow, Iidani, Kobayashi city, Miyazaki pref. (32° 0' 30" N Lat, 131° 0' 40" E Long). Coll. and subm. 1968 by S. Aramaki.

B. Israel

TK-33b. Amud Cave

4630 ± 470

2680 B.C.

20% H₂SO₄-leached portion of TK-33, animal bone from Amud Cave, Israel (32° 52' 30" N Lat, 35° 30' 09" E Long). Coll. 1964 by Univ. of Tokyo Scientific Expedition to W Asia and subm. 1967 by F. Takai, Univ. of Tokyo. *Comment* (F.T.): material was obtained from middle horizon of Bed B of Amud Cave, characterized by occurrence of Neanderthal skeletons and stone implements of transitional type between Levallois-Mousterian and Upper Paleolithic. Stratigraphic and paleontologic correlations of Bed B with surrounding Quaternary deposits suggest geologic age is Middle Würm, probably interstadial between Early and Main Würm. Radiocarbon age is remarkably younger than age expected from prehistoric as well as stratigraphic and paleontologic correlations. Bone carbonate of same sample gave 10,500 ± 140 (TK-33 a, R., 1969, v. 11, p. 511). Dating by ionium-growth method for same material of TK-33 shows minimum age of 27,000 ± 5000 yr (Suzuki and Takai, 1970).

II. ARCHAEOLOGIC SAMPLES

A. Japan

TK-61. Onnemoto

2310 ± 90

360 B.C.

Charred timber on floor of dwelling pit No. 2 at Onnemoto, Nemuro city, Hokkaido (43° 23' N Lat, 145° 47' E Long). Excavation 1967 by N. Kokubu, Tokyo Univ. of Educ. Pottery is of Okhotsk type. Coll. 1967 by T. Iwasaki, Tokyo Univ. of Educ., and subm. 1968 by N. Watanabe, Univ. of Tokyo. *Comment* (N.W.): obsidian arrowhead and flake from same dwelling pit yielded fission track dates 1060 ± 160 and 1150 ± 440, respectively (Watanabe and Suzuki, 1969). Comparable dates for Okhotsk type pottery are 1420 ± 170, 990 ± 140, 1310 ± 120 (Gak-189-191, R., 1963, v. 5, p. 117; 1230 ± 100, 1180 ± 100 (TK-2, 9, R., 1968, v. 10, p. 147; and 1240 ± 90 (TK-54, R., 1969, v. 11, p. 513).

B. Korea

TK-55. Oksokni dwelling site

2980 ± 100

1030 B.C.

Charcoal from floor of pit covered by large flat stone of dolmen at Oksokni, P'aju, Korea (36° 50' N Lat, 126° 43' E Long). Coll. 1967 and subm. 1968 by S. Izumi, Univ. of Tokyo. *Comment* (S.I.): date is acceptable, as this is somewhat earlier than Dolmen period (Kim and Youn, 1967).

REFERENCES

- Kigoshi, K. and Endo, K., 1963, Gakushuin natural radiocarbon measurements II: Radiocarbon, v. 5, p. 109-117.
- Kim, C. and Youn, M., 1967, Studies of dolmen in Korea. Report of the Research of Antiquities of the National Museum of Korea, Seoul, v. 6, p. 4-5.
- Sato, Jun, Sato, Tomoko, Otomori, Yasuko, and Suzuki, Hisashi, 1969, University of Tokyo radiocarbon measurements II: Radiocarbon, v. 11, p. 509-514.
- Sato, Jun, Sato, Tomoko, and Suzuki, Hisashi, 1968, University of Tokyo radiocarbon measurements I: Radiocarbon, v. 10, p. 144-148.
- Suzuki, Hisashi and Takai, F. (eds.), 1970, The Amud man and his cave site: Tokyo, Acad. Press of Japan, p. 440, pl. 60.
- Watanabe, N. and Suzuki, M., 1969, Fission track dating of archaeological glass materials from Japan: Nature, v. 222, p. 1057-1058.