

Radiocarbon Dating Reports of Tohoku University No.8

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Radiocarbon Dating Committee of Tohoku University*

This date list is a continuation of Tohoku University Radiocarbon Measurement VII (Omoto 1979).

Instrument and techniques are essentially the same as those used for that previous report.

The dates are expressed based on the Libby's half-life of 5,570 years for ^{14}C ; errors are calculated as one standard deviation ($\pm 1\sigma$). The modern reference standard is 95% of the activity of NBS oxalic acid.

Sample descriptions were written by the submitters in a form as follows;

Code no.	Name of sampling site	Radiocarbon age of sample
1.	Place name of sampling site (latitude and longitude)	
2.	Altitude above sea level and depth of sampling site	
3.	Materials of sample	
4.	Date of sampling (submitter)	
5.	Date of measurement (operator)	
6.	Method of pretreating	
7.	Comments	

The committee wishes to express the appreciation to the submitters for their descriptions and comments on the samples.

Sample Descriptions

1. Geomorphic and geologic samples

Shichigashuku Series

TH-524. Shichigashuku (2) 3,870 \pm 130

1. Nametsu, Shichigashuku-cho, Miyagi Pref. (38°00'22.7"N, 140°24'43.0"E)
2. 400 m a.s.l., 4 m below surface
3. humic soil
4. Aug. 13, 1979 (S. Yoshinaga)
5. Jan. 17, 1980 (S. Yoshinaga)

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7. The two buried humic soil samples, TH-524 and TH-525, were imbedded in angular gravel layers of debris flows, which make an alluvial cone. These soils suggest a pause in accumulation of gravels. The dates obtained indicate the last phase of soil forming. (S. Yoshinaga)

TH-525 Shichigashuku (3) 2,990±120

1. Nametsu, Shichigashuku-cho, Miyagi. Pref. (38°00'22.7"N, 140°24'43.0"E)
2. 400 m a.s.l., 2 m below surface
3. humic soil
4. Aug. 13, 1979 (S. Yoshinaga)
5. Jan. 31, 1980 (S. Hirano)

Iwaizumi Series

TH-526 Iwaizumi (2) 3,040±130

1. Miyamoto, Iwaizumi-cho, Iwate Pref. (39°50'17.2"N, 141°54'04.1"E)
2. 30 m a.s.l., 1 m below surface
3. humic soil
4. Nov. 30, 1979 (S. Yoshinaga and D. Higaki)
5. Feb. 5, 1980 (S. Yoshinaga)
7. TH 526-528 were collected from buried humic soils imbedded in debris flow deposits. These deposits build the latest alluvial cone, which covers unconformably a terraced alluvial fan, having been formed during the last glacial age. The dates indicate that the latest alluvial cone has been formed during the Holocene.

TH-527 Iwaizumi (3) 2,340±120

1. Miyamoto, Iwaizumi-cho, Iwate Pref. (39°50'17.2"N, 141°54'04.1"E)
2. 30 m. a.s.l., 0.5 m below surface
3. humic soil
4. Nov. 30, 1979 (S. Yoshinaga and D. Higaki)
5. Jan. 22, 1980 (S. Yoshinaga)

TH-528 Iwaizumi (4) 3,730±130

1. Miyamoto, Iwaizumi-cho, Iwate Pref. (39°50'17.2"N, 141°54'04.1"E)
2. 30 ml. a.s.l., 2 m below surface
3. humic soil
4. Nov. 30, 1979 (S. Yoshinaga and D. Higaki)
5. Jan. 23, 1980 (S. Yoshinaga)

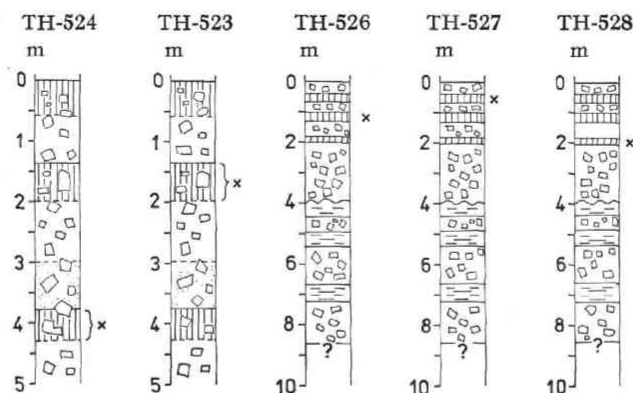


Fig. 1 Columnar sections (see also Fig. 7 as for legend).

TH-529 Iwaizumi (5)

2,480±110

1. Sunago, Iwaizumi-cho, Iwate Pref. (39°53'22.7"N, 141°37'21.8"E)
2. 370 m a.s.l., 1 m below surface
3. humic soil
4. Dec. 1, 1979 (S. Yoshinaga and D. Higaki)
5. Feb. 4, 1980 (S. Hirano)
7. The sample was collected from buried humic soil imbedded in debris flow deposits, which make an alluvial cone. This soil suggests the pause in accumulation of angular gravels. This age indicates the last phase of soil forming.

TH-592 Kawai (1)

older than 34,700

1. North of Saruishi, Kawai-mura, Iwate Pref. (39°39'35.4"N, 141°23'4.8"E)
2. 840 m a.s.l., 2.5 m below surface
3. Burried black soil
4. May 10, 1980 (D. Higaki)
5. Aug. 11, 1980 (D. Higaki)
6. Total carbon, treated with 1N HCl (Miyazaki 1971)
7. The age indicates that the gentle slope formation began before about 35,000 BP. This is also indicated by the tephrochronological data in the north-westerh Kitakami Mountains (Higaki 1981) (D. Higaki).

TH-594 Kuzumaki (1)

30,480±^{3,120}_{2,250}

1. Tadami, Kuzumaki-cho, Iwate Pref. (39°58'47.4"N, 141°21'21.0"E)
2. 565 m a.s.l., 3.3 m below surface
3. burried black soil

4. May 11, 1980 (D. Higaki, K. Hirakawa, T. Miyagi, M. Toyoshima, H. Yamanaka, S. Yoshinaga, and H. Umeyama)
5. Oct. 24, 1980 (D. Higaki)
6. Total carbon, treated with 1N HCl (Miyazaki 1971)
7. This indicates the age of the Oide Black Ash (OBA) fall, which is concordant with the previous reports (Inoue 1979) (D. Higaki).

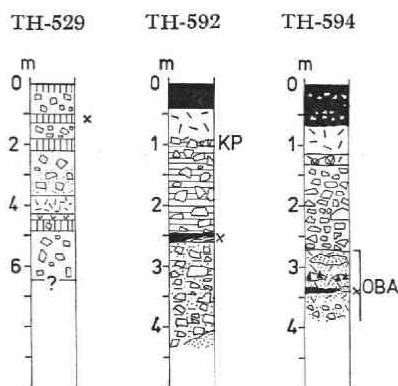


Fig. 2 Columnar sections.

Nanyō Series

TH-598 Nanyō (1)

5,360±160

1. North of Akayu, Nanyō, Yamagata Pref. (38°04'36.2"N, 140°11'41.1"E)
2. 274 m a.s.l., 105–120 cm below surface
3. peat
4. May 2, 1980 (M. Toyoshima, T. Nakayama, D. Higaki, H. Matsumoto, T. Miyagi)
5. Dec. 26, 1980 (T. Nakayama)
7. TH-598-603 indicate that Kawato moorland formed before at least 37,500 yr BP and the rate of sedimentation of peat is about 2 mm/year. (T. Nakayama)

TH-599 Nanyō (2)

29,330±3,010

1. North of Akayu, Nanyō, Yamagata Pref. (38°04'36.2"N, 140°11'41.1"E)
2. 274 m a.s.l., 540~555 cm below surface
3. peat
4. same as TH-598
5. Aug. 18, 1980 (T. Nakayama)

TH-600 Nanyō (3) 21,600±1,010

1. North of Akayu, Nanyō, Yamagata Pref. (38°03'36.2"N, 140°11'41.1"E)
2. 274 m a.s.l., 405~420 cm below surface
3. peat
4. same as TH-598
5. Aug. 14, 1980 (T. Nakayama)

TH-601 Nanyō (4) 14,370±410

1. North of Akayu, Nanyō, Yamagata Pref. (38°04'36.2"N, 140°11'41.1"E)
2. 274 m a.s.l., 255~270 cm below surface
3. peat
4. same as TH-598
5. Aug. 19, 1980 (T. Nakayama)

TH-602 Nanyō (5) 28,400±2,420

1. North of Akayu, Nanyō, Yamagata Pref. (38.°01'36.2"N, 140°11'14.1"E)
2. 274 m a.s.l., 585~600 cm below surface
3. peat
4. same as TH-598
5. Aug. 15, 1980

TH-603 Nanyō (6) Older than 37,500

1. North of Akayu, Nanyō, Yamagata Pref. (38°04'36.2"N, 140°11'41.1"E)
2. 274 m a.s.l., 705~720 cm below surface
3. peat
4. same as TH-598

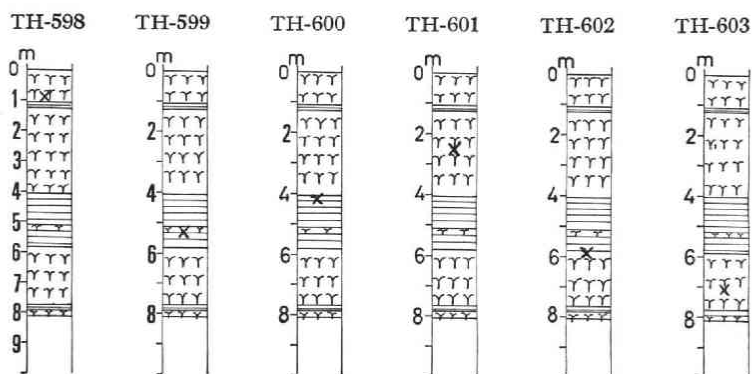


Fig. 3 Columnar sections.

5. Aug. 16, 1980 (T. Nakayama)

Tanna Series

1. Northern part of Tanna Basin, Kannami-cho, Tagata-gun, Shizuoka Pref.
(35°06'04.7"N, 139°01'09.9"E)

2. 236 m a.s.l., 1~3 m below surface (shown in Fig. 4)

6. Kigoshi (1976), treated with 2%-NaOH and 2N-HCl

TH-663 Kannami (1)	1,040±70
3. Wood pieces	
4. Oct. 26, 1980 (S. Hirano)	
5. Oct. 14, 1981 (S. Hirano)	
TH-664 Kannami (2)	940±70
3. Wood	
4. Oct. 26, 1980 (S. Hirano)	
5. Nov. 9, 1981 (S. Hirano)	
TH-665 Kannami (3)	1,130±70
3. Wood	
4. Oct. 26, 1980 (S. Hirano)	
5. Dec. 8, 1981 (S. Hirano)	
TH-666 Kannami (4)	2,400±80
3. Wood	
4. Oct. 26, 1980 (T. Matsuda and A. Okada)	
5. Oct. 21, 1981 (S. Hirano)	
TH-667 Kannami (5)	1,460±90
3. Wood	
4. Oct. 26, 1980 (H. Sawa)	
5. Dec. 16, 1981 (S. Hirano)	
TH-668 Kannami (6)	1,510±100
3. Wood pieces	
4. Oct. 26, 1980 (H. Sawa)	
5. Jan. 24, 1981 (S. Hirano)	
TH-669 Kannami (7)	1,080±100
3. Wood	
4. Oct. 29, 1980 (S. Hirano)	
5. Dec. 21, 1981 (S. Hirano)	

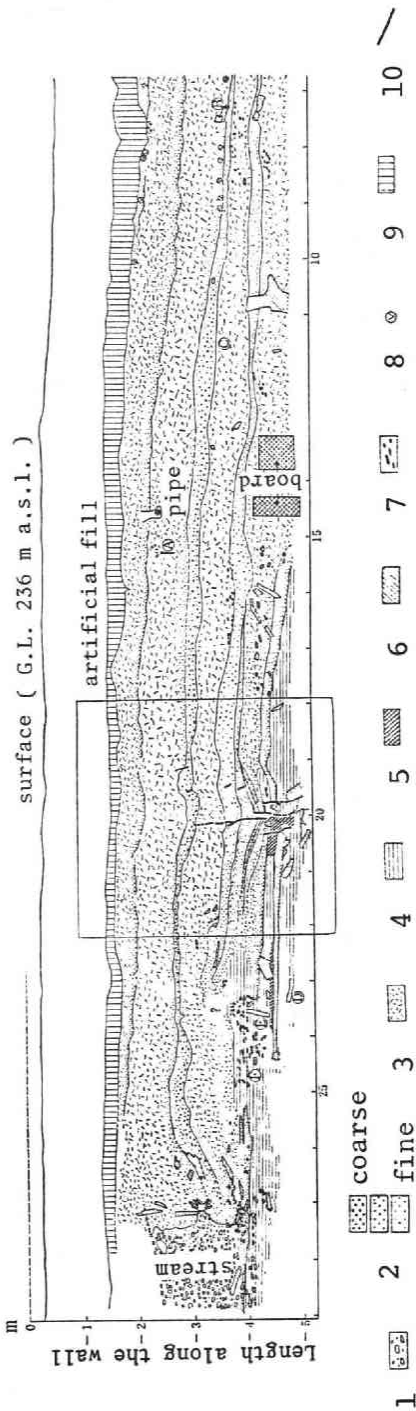


Fig. 4 Northwall of the Tanna trench. (A)~(F) indicate collection sites of sample. (A): TH-663, (B): TH-664, (C): TH-665, (D): TH-666, (E): TH-667, (F): TH-618. 1. gravel, 2. sand, 3. silt, 4. clay, 5. peat, 6. wood (fragment), 7. charcoal, 8. scoria, pumice 9. cultivated soil, 10. fault

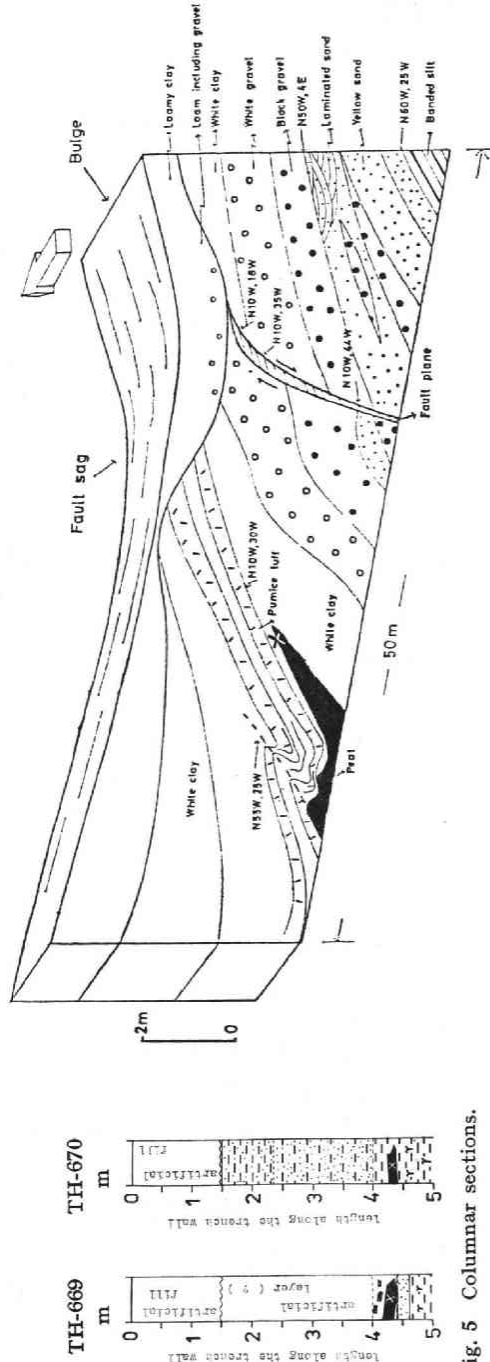


Fig. 5 Columnar sections.

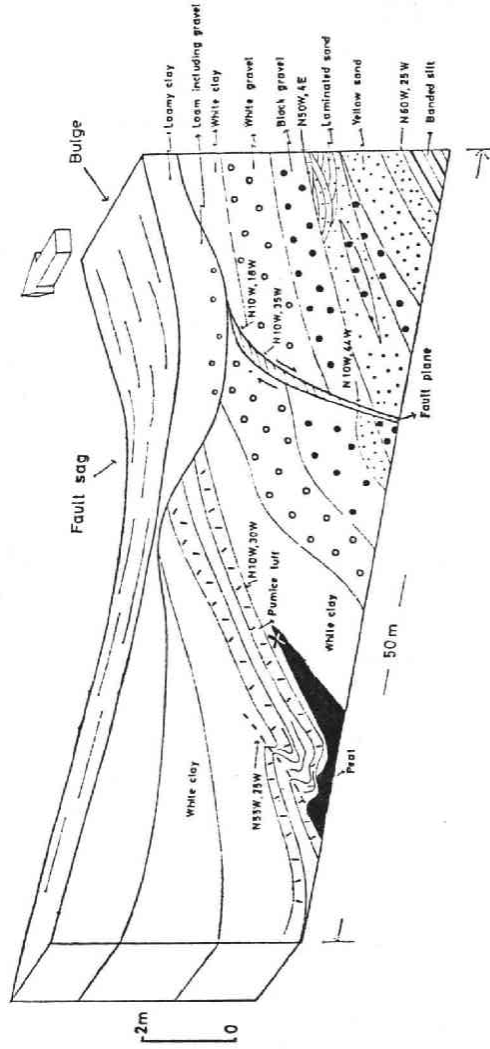


Fig. 6 Section at collection site of TH-676.

TH-670 Kannami (8) 1,510±70

3. Wood
4. Oct. 29, 1980 (S. Hirano)
5. Nov. 4, 1981 (S. Hirano)
7. In order to clarify the data of the prehistoric earthquakes on the Tanna fault. Wood samples were taken from the trench across the trace of 1930 A.D. earthquake fault (Tanna fault), at the northern part of Tanna Basin, Izu Peninsula. The data of two samples (TH-664, 665) indicate that the layer including them accumulate after the occurrence of pre-1930 event (841 A.D. earthquake). Other samples data (TH-666, 667, 669) indicate the sedimentation before the 841 A.D. earthquake. (S. Hirano)

Other Samples**TH-676 Kuromatsunai (1) older than 35,700**

1. East of Shirozumi, Kuromatsunai-cho, Hokkaido (42°42'40.3"N, 140°19'21.1"E)
2. 89 m a.s.l., 3 m below surface
3. Peat
4. Nov. 8, 1980 (S. Hirano and T. Imaizumi)
5. Sep. 13, 1981 (S. Hirano)
6. Total carbon, treated with 1N-HCl (Miyazaki 1971)
7. This sample was collected from the older fan terrace underlying the younger fan gravels, which was deformed by the Shirozumi active fault. The age indicates that the fault has been inactive at least 30,000 years. (S. Hirano)

TH-677 Nasu (1) 15,770⁺⁴³⁰₋₄₂₀

1. Osawa, Nasu, Tochigi Pref. (37°00'40.5"N, 140°04'03.8"E)
2. 540 m a.s.l., 3 m below surface
3. Wood
4. Oct. 27, 1980 (T. Sone)
5. Feb. 6, 1981 (T. Sone)
7. The date indicates the age of eruption of the Osawa pyroclastic flow. (T. Sone)

2. Palynological Sample**TH-482 Iinogawa (1) 3,960±90**

1. Iino, Kahoku-cho, Miyagi Pref. (38°31'53"N, 141°02'19"E)
2. 7 m a.s.l., 4 m below surface
3. Peat

4. Apr. 18, 1979 (T. Uchiyama)
7. The submitter estimated the age to be ca 3,000 yr BP, judging from the former report of Wako (1978), and expected that the age would indicate the start of cultivation around the area. (T. Uchiyama)

3. Archaeological Sample

TH-593 Nishine (1)

 $5,970^{+180}_{-170}$

1. Shirishida (South of Higashi-Obuke Station), Nishine-cho, Iwate Pref. (39°53' 26.8"N, 141°8'32.1"E)
2. 232 m a.s.l., 2.3 m below surface
3. Burried black soil in the Wakare volcanic ash
4. Nov. 17, 1979 (D. Higaki, K. Ogami, and M. Hatamura)
5. Aug. 13, 1980 (D. Higaki)
6. Total carbon, treated with 1N HCl (Miyazaki 1971)
7. The estimated age is concordant with the *Jomon* type pottery discovered from the same bed (BS-2 horizon in the Wakare volcanic ash, Ogami and Doi 1978) (D. Higaki, K. Ogami, and M. Hatamura).

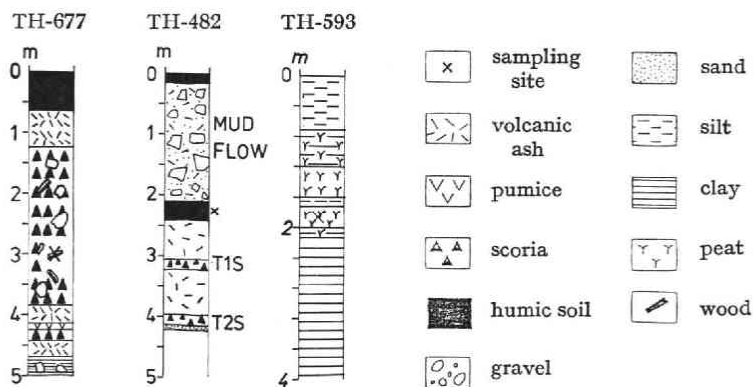


Fig. 7 Columnar sections and Legend for Fig. 1, 2, 3, 5 and 7.

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