

論説：四国北西部の中央構造線活断層系伊予断層の完新世活動履歴

池田倫治，後藤秀昭，堤 浩之，露口耕治，大野裕記，西坂直樹，小林修二

(118 巻 4 号 p. 220-235.)

Table 1. Description of strata exposed on the Miaki trench walls.

Table 2. Radiocarbon ages for samples from the Miaki trench site.

Table 3. Description of strata exposed on the Ichiba trench walls.

Table 4. Radiocarbon ages for samples from the Ichiba trench site.

Unit	Thickness (cm)	Colour	Description
Southeastern part of fault			
S1	10–20	Gray to gray brown	Sorted silt with minor cobbles. Overbank deposit or former cultivated soil.
S2	5–10	Dark brown to gray	Sorted silt with minor granules or pebbles. Flood loam or former cultivated soil.
S3	20–60	Brownish gray to dark brown	Sorted silt with minor pebbles. Flood loam.
S4	20–30	Gray brown to dark brown	Well-sorted silty sand with minor granules or pebbles. Flood loam.
S5a	50–100	Gray	Humic soil including a lot of plants and rare cobbles. Overbank deposit (floodbasin deposit).
S5b	10	Gray	Lamination of silt including volcanic glasses with sand. Including minor granules. Transitional deposit (channel-fill deposit).
S5c	60+	Gray to dark gray	Stratified pebble to cobble gravel. Heteropic facies with S5b. Transitional deposit (channel-fill deposit).
S6	20–50	Black	Upper part: granule gravel supported with humic clay matrix. Lower part: pebble to cobble gravel supported with humic silt matrix. Both parts include a lot of plants.
S7	60	Gray brown	Clast-supported pebble to cobble gravel. Channel deposit (channel-lag deposit).
Northwestern part of fault			
N1a	30	Dark gray	Clast-supported pebble to cobble gravel. Channel deposit (Channel-lag deposit).
N1b	40+	Dark reddish brown	Clast-supported pebble to boulder gravel. Channel deposit (Channel-lag deposit).
N2	60–80	Dark gray	Clast-supported pebble to cobble gravel. Channel deposit (Channel-lag deposit). Well sorted and stratified in the northeastern part. Random fabric in the southwestern part.
Basement rock			
Da	–	Gray white	Cataclastic fractured and alterative rock. Alternated structure of dacite and mudrock origin gouge near the fault.
Ms	–	Black to bluish gray	

Table 1
池田ほか(2011)
白黒図面
100%

Sample No.	Labo. No.*	Unit	Material	$\delta^{13}\text{CPDB}(\text{‰})$	^{14}C age** (yrBP $\pm 1\sigma$)	Calibrated age range (cal years $\pm 1\sigma$)**	Probability (%)
Northeast wall							
MCE-3	IAAA-73191	S6	charcoal	-25.67 ± 0.62	870 ± 30	A.D.1150–A.D.1220	68.2
MCE-4	IAAA-73192	S5a	charcoal	-24.91 ± 0.78	950 ± 30	A.D.1030–A.D.1060 A.D.1080–A.D.1160	16.2 52.0
MCE-6	IAAA-73194	S4	charcoal	-27.87 ± 0.63	1260 ± 30	A.D.685–A.D.755 A.D.760–A.D.775	55.8 12.4
MCE-9	IAAA-73197	S3	charcoal	-30.46 ± 0.40	190 ± 30	A.D.1660–A.D.1690 A.D.1730–A.D.1810 A.D.1930–A.D.1960	14.5 40.0 13.7
MCE-10	IAAA-731978	S3	charcoal	-33.59 ± 0.56	240 ± 30	A.D.1640–A.D.1670 A.D.1780–A.D.1800	45.1 23.1
MCE-14	IAAA-80269	S5a	wood fragment	-27.82 ± 0.48	480 ± 30	A.D.1395–A.D.1435	68.2
MCE-17	IAAA-80270	S5a	charcoal	-22.68 ± 0.50	400 ± 30	A.D.1460–A.D.1530 A.D.1570–A.D.1630	39.0 29.2
MCE-20	IAAA-80274	S3	charcoal	-28.05 ± 0.80	1180 ± 30	A.D.710–A.D.750 A.D.760–A.D.870	19.2 49.0
MCE-30	IAAA-80272	S4	charcoal	-21.75 ± 0.54	620 ± 30	A.D.1320–A.D.1350 A.D.1390–A.D.1420	33.3 34.9
Southwest wall							
MCW-1	IAAA-73200	N2	wood fragment	-28.10 ± 0.83	510 ± 30	A.D.1410–A.D.1435	68.2
MCW-2	IAAA-73201	N2	charcoal	-27.77 ± 0.61	750 ± 30	A.D.1250–A.D.1285	68.2
MCW-3	IAAA-73202	S7	wood fragment	-29.84 ± 0.61	5310 ± 30	B.C.4230–B.C.4190 B.C.4180–B.C.4050	14.8 53.4
MCW-4	IAAA-73203	S6	charcoal	-24.46 ± 0.75	1150 ± 30	A.D.780–A.D.790 A.D.820–A.D.850 A.D.860–A.D.900 A.D.910–A.D.970	1.5 7.9 27.1 31.7
MCW-6	IAAA-73205	S5a	charcoal	-27.73 ± 0.65	420 ± 30	A.D.1435–A.D.1470	68.2
MCW-8	IAAA-73207	S5a	charcoal	-29.62 ± 0.49	820 ± 30	A.D.1210–A.D.1260	68.2
MCW-9	IAAA-73208	S4	charcoal	-27.64 ± 0.72	370 ± 30	A.D.1450–A.D.1530 A.D.1590–A.D.1620	46.7 21.5
MCW-16	IAAA-73215	S2	charcoal	-26.35 ± 0.72	240 ± 30	A.D.1640–A.D.1670 A.D.1780–A.D.1800	44.5 23.7
MCW-19	IAAA-80273	S5a	wood fragment	-25.09 ± 0.53	640 ± 30	A.D.1290–A.D.1315 A.D.1355–A.D.1390	26.6 41.6
MCW-20	IAAA-80274	S5a	wood fragment	-28.49 ± 0.51	400 ± 30	A.D.1420–A.D.1450	68.2
MCW-21	IAAA-80275	S5a	wood fragment	-29.55 ± 0.52	450 ± 30	A.D.1400–A.D.1435	68.2
MCW-25	IAAA-80276	S5a	charcoal	-23.61 ± 0.80	1150 ± 30	A.D.885–A.D.905 A.D.910–A.D.970	14.6 53.6
MCW-31	IAAA-80278	S3	charcoal	-25.64 ± 0.50	900 ± 30	A.D.1040–A.D.1100 A.D.1110–A.D.1170	40.1 28.1

* All samples were analyzed by AMS at Institute of Accelerator Analysis Ltd.

** ^{14}C ages were corrected by $\delta^{13}\text{C}$ and calculated using Libby half-life of 5568 years.

*** Calibration is carried by OxCal v4.1 (Ramsey., 2009) based on IntCal09 atmospheric curve (Reimer et al., 2009).

Table 2
池田ほか(2011)
白黒図面
縮尺100%

Unit	Thickness (cm)	Colour	Description
Northwestern part of fault			
N1	10–20	Bright yellowish brown	Sorted silty sand. Flood loam or flood deposit.
N2	20–100+	Greenish gray	Cobble to boulder gravel. Channel deposit (channel-lag deposit).
N3	20–30	Dark brown	Pebble gravel. Channel deposit (channel-lag deposit).
N4	50	Yellowish brown	Pebble gravel supported with silt matrix. Including minor boulders. Channel deposit (channel-lag deposit).
N5	100+	Yellowish brown	Silt including a lot of plants and charred materials. Overbank deposit (floodbasin deposit).
N6	50–100	Dark brown	Clast-supported pebble to boulder gravel. Channel deposit (channel-lag deposit).
Southeastern part of fault			
S1	20–50	Yellowish brown	Well-sorted silt. Flood loam or flood deposits.
S2	50	Dark greenish brown	Clast-supported pebble to cobble gravel. Including rare boulders. Channel deposit (channel-lag deposit).
S3	10–30	Dark brown	Matrix-supported pebble gravel. Channel deposit (channel-lag deposit).
S4	30–100	Yellowish brown	Well-sorted silty sand. Including minor pebbles.
S5	10–150	Dark brown	Matrix-supported weathered pebble gravel with minor boulders. Channel deposit (channel-lag deposit).
Deformed zone			
D1	–	–	Parts of some different units are intermixed.
Basement rock			
Da	–	Gray white	Cataclastic fractured and alterative rock. Alternated structure of dacite and mudrock origin gouge near the fault.
Ms	–	Black to bluish gray	

Table 3
池田ほか(2011)
白黒図面
100%

Sample No.	Labo. No.*	Unit	Material	$\delta^{13}\text{CPDB}(\text{‰})$	^{14}C age** (yrBP $\pm 1\sigma$)	Calibrated age range (cal years $\pm 1\sigma$)***	Probability (%)
Trench A (Northeast wall)							
IC-1	IAAA-80204	N6	soil	-23.05 ± 0.50	23340 ± 100	B.C.21490-B.C.21280****	
IC-2	IAAA-80205	N4	soil	-20.30 ± 0.64	7450 ± 40	B.C.6380-B.C.6330	28.7
						B.C.6320-B.C.6250	39.5
IC-3	IAAA-80206	N3	soil	-24.18 ± 0.76	7540 ± 40	B.C.6445-B.C.6390	68.2
IC-4	IAAA-80207	D1	soil	-21.15 ± 0.61	7860 ± 40	B.C.6760-B.C.6640	68.2
IC-5	IAAA-80208	S4	humic soil	-21.91 ± 0.63	4140 ± 30	B.C.2870-B.C.2830	14.3
						B.C.2820-B.C.2800	5.5
						B.C.2760-B.C.2660	44.2
						B.C.2650-B.C.2630	4.3
IC-6	IAAA-80209	S1	humic soil	-25.01 ± 0.59	2760 ± 30	B.C.970-B.C.960	4.9
						B.C.940-B.C.890	37.2
						B.C.880-B.C.840	26.1
Trench B (Northeast wall)							
IC-7	IAAA-80210	S5	soil	-22.63 ± 0.71	13870 ± 60	B.C.14780-B.C.14360	68.2
Trench B (Southwest wall)							
IC-8	IAAA-80211	N5	charcoal	-24.28 ± 0.55	6010 ± 40	B.C.4945-B.C.4840	68.2
IC-9	IAAA-80212	D1	soil	-23.26 ± 0.75	2980 ± 30	B.C.1270-B.C.1120	68.2
IC-10	IAAA-80213	S1	soil	-19.82 ± 0.65	6500 ± 40	B.C.5520-B.C.5460	51.5
						B.C.5440-B.C.5420	3.7
						B.C.5410-B.C.5380	13.0
Trench C (Southeast wall)							
IC-11	IAAA-80214	S5	soil	-21.75 ± 0.74	6950 ± 40	B.C.5880-B.C.5770	68.2
IC-12	IAAA-80215	S5	soil	-21.41 ± 0.68	6990 ± 40	B.C.5980-B.C.5950	13.2
						B.C.5920-B.C.5830	55.0
IC-13	IAAA-80216	S1	soil	-22.82 ± 0.69	7890 ± 40	B.C.6810-B.C.6650	68.2
IC-14	IAAA-80217	S1	soil	-19.58 ± 0.77	1990 ± 30	B.C.40-A.D.30	57.7
						A.D.35-A.D.50	10.5
Trench C (Northwest wall)							
IC-15	IAAA-80218	S4	soil		6910 ± 40	B.C.5835-B.C.5820	7.9
						B.C.5815-B.C.5740	60.3
Trench D (Southeast wall)							
IC-16	IAAA-80219	N6	soil	-19.25 ± 0.77	7520 ± 40	B.C.6440-B.C.6380	68.2
IC-17	IAAA-80220	N5	humic soil	-24.42 ± 0.59	9050 ± 40	B.C.8290-B.C.8250	68.2
IC-18	IAAA-80221	N4	soil	-21.79 ± 0.66	7180 ± 40	B.C.6065-B.C.6010	68.2
IC-19	IAAA-80222	N1	soil	-22.03 ± 0.64	8320 ± 40	B.C.7460-B.C.7330	68.2
IC-20	IAAA-80223	N1	soil	-25.19 ± 0.43	7000 ± 40	B.C.5980-B.C.5940	16.0
						B.C.5920-B.C.5840	52.2

* All samples were analyzed by AMS at Institute of Accelerator Analysis Ltd.

** ^{14}C ages were corrected by $\delta^{13}\text{C}$ and calculated using Libby half-life of 5568 years.

*** Calibration is carried by OxCal v4.1 (Ramsey., 2009) based on IntCal09 atmospheric curve (Reimer et al., 2009).

**** Out of calibration range.

Table 4
池田ほか(2011)
白黒図面
縮尺100%