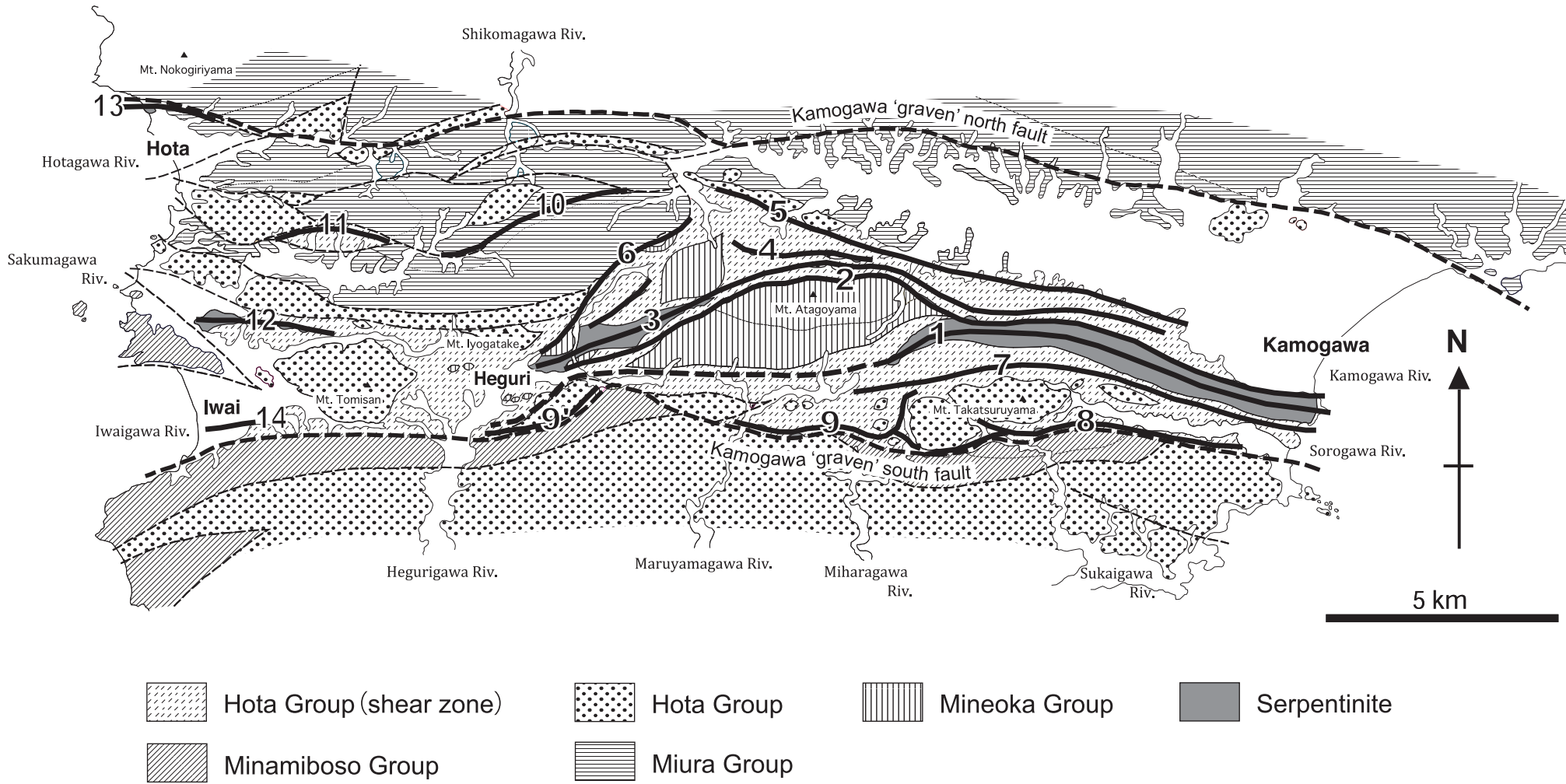
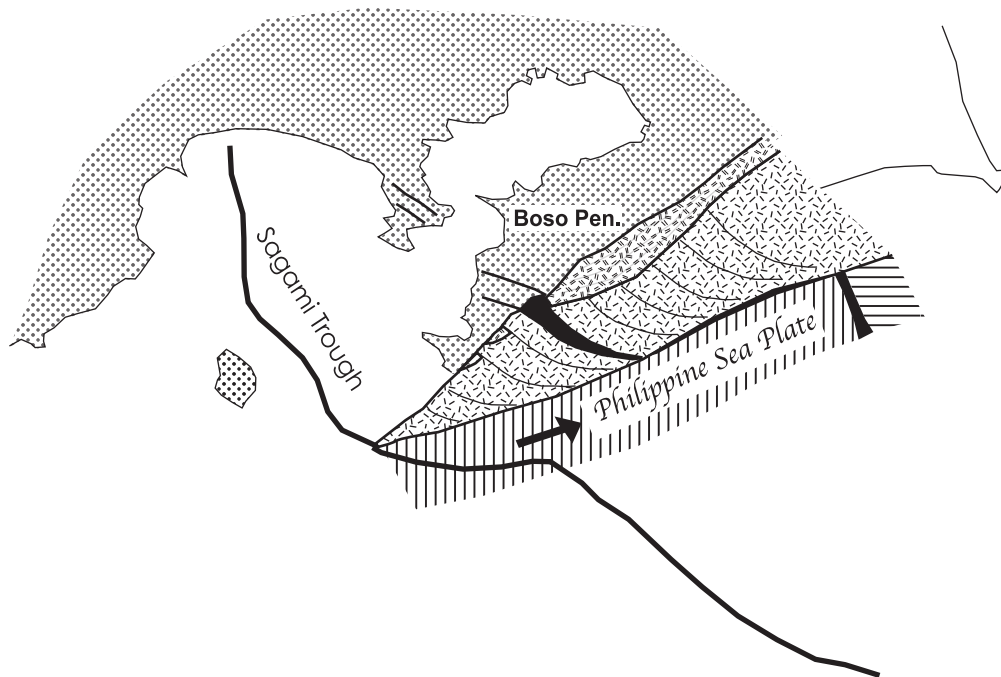




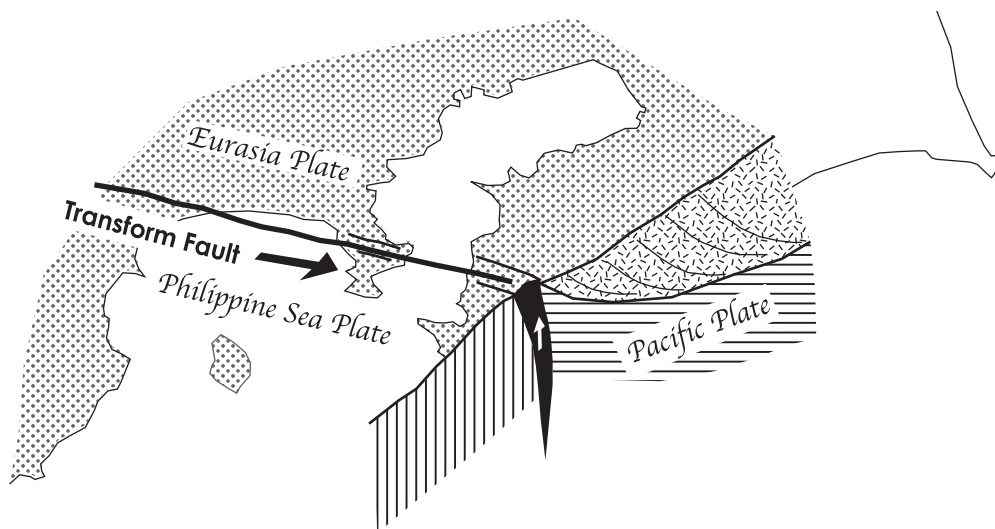
高橋直樹ほか Appendix 1



Recent

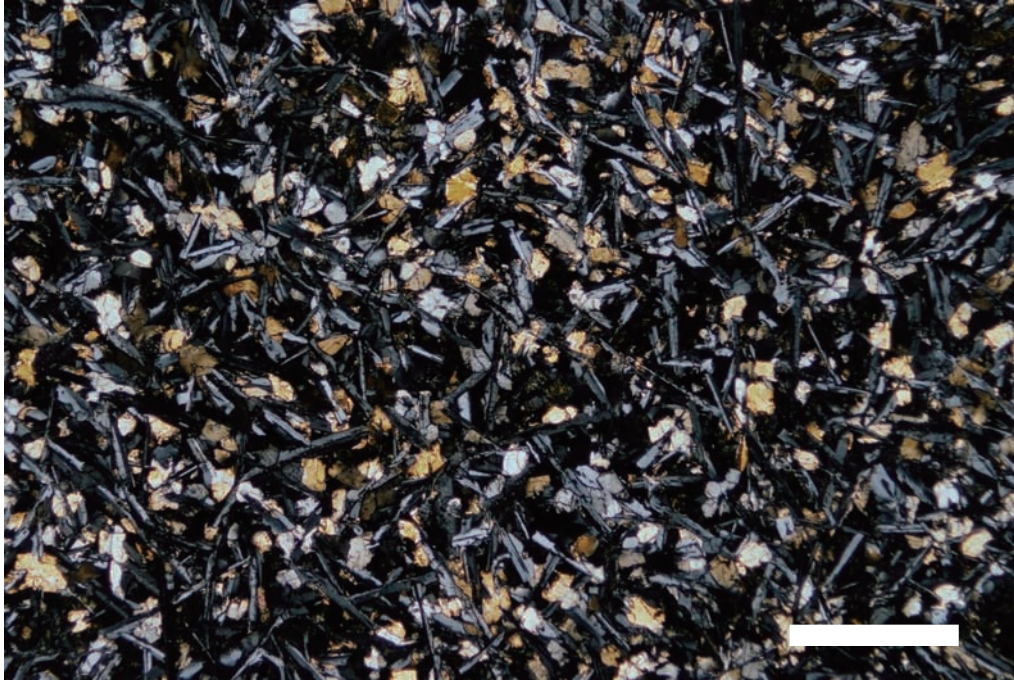


Early Miocene





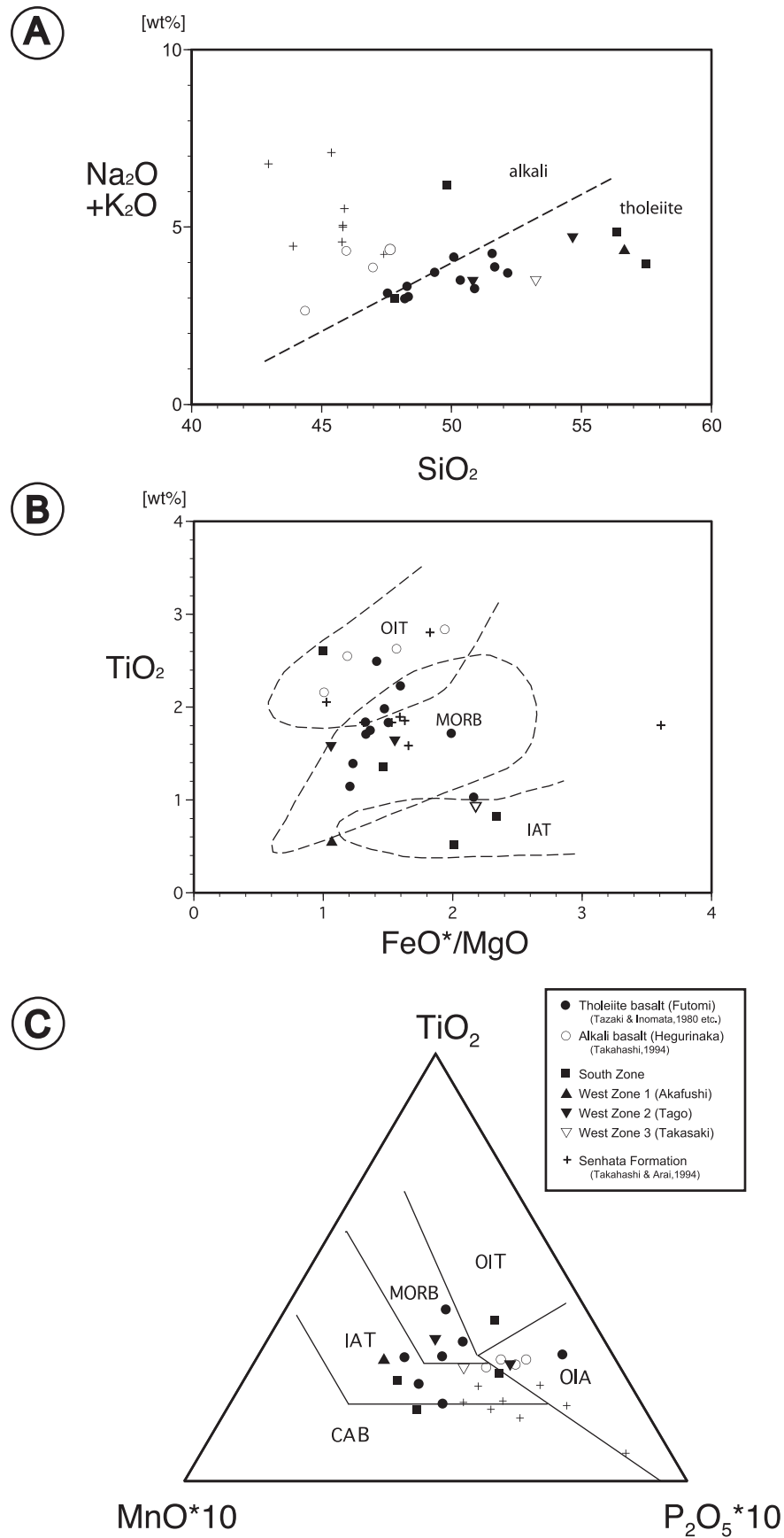
高橋直樹ほか Appendix 4

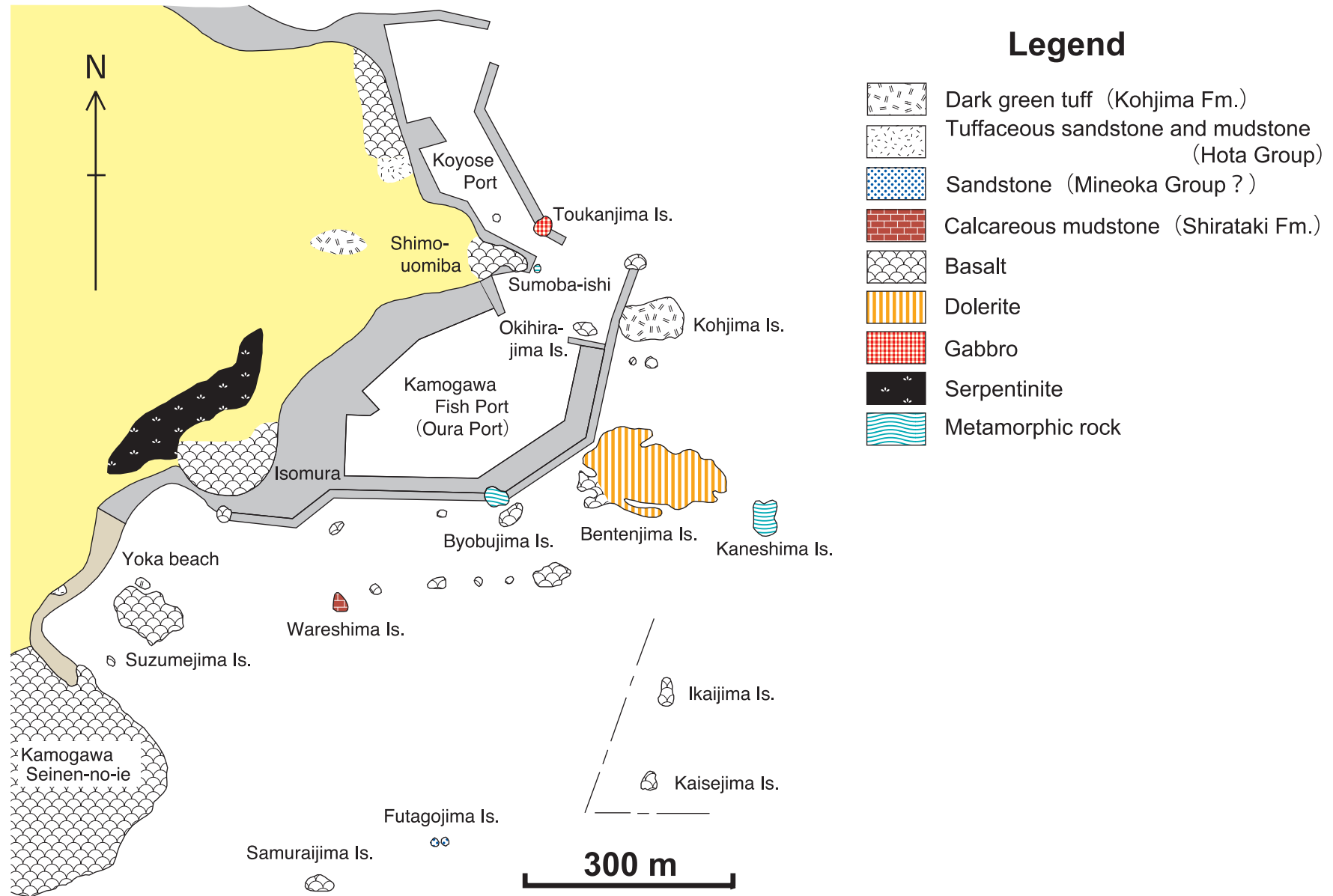


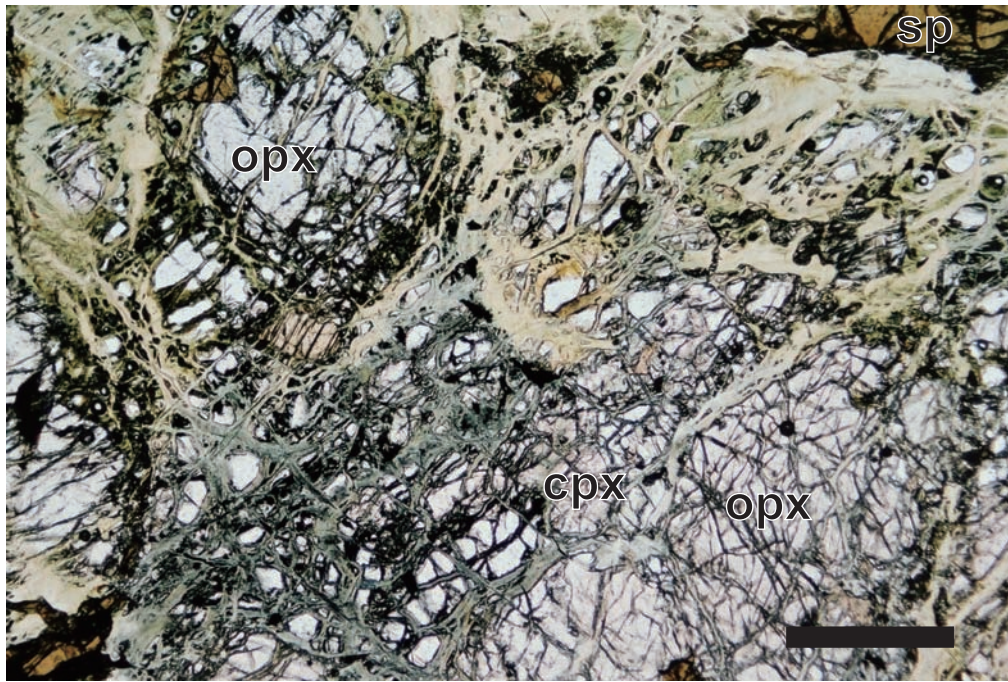
高橋直樹ほか Appendix 5

高橋直樹ほか Appendix 6

Rock type	tholeiite basalt	dolerite	alkali basalt	alkali basalt	tholeiite basalt	dolerite	alkali basalt	alkali basalt	alkali basalt	alkali basalt
Formation	Mineoka Group	Mineoka Group	Mineoka Group	Mineoka Group	Mineoka Group	Mineoka Group	Senhata Fm.	Senhata Fm.	Hayama Group	Hayama Group
Locality	Shin-yashiki	Shin-yashiki	Hegurinaka	Toge	Tago	Tago	Fudojwa	Fudojwa	Hirasaku	Suigenchi
SiO ₂	50.14	48.38	46.02	47.70	50.81	54.65	45.74	45.80	47.98	50.50
TiO ₂	1.75	1.72	2.63	2.84	1.58	1.64	1.83	1.89	3.30	3.25
Al ₂ O ₃	14.16	15.04	16.65	14.06	14.71	14.52	19.45	17.57	14.32	15.86
Fe ₂ O ₃	4.11	4.26	7.74	8.62			5.22	7.64		
FeO	5.68	7.85	2.80	4.06	8.18	8.64	3.25	1.81	10.44	8.58
MnO	0.25	0.20	0.16	0.21	0.16	0.13	0.15	0.28	0.12	0.33
MgO	6.82	5.84	6.17	6.04	7.73	5.57	5.23	5.49	10.06	4.60
CaO	9.85	10.54	9.54	9.46	11.59	7.55	8.92	7.83	8.08	8.84
Na ₂ O	3.53	2.83	3.75	3.77	3.19	3.78	3.68	3.42	4.89	4.23
K ₂ O	0.65	0.21	0.60	0.60	0.29	0.93	1.34	2.07	0.18	1.04
P ₂ O ₅	0.18	0.22	0.50	0.55	0.16	0.31	0.49	0.55	0.41	1.29
Cr ₂ O ₃									0.03	0.01
V ₂ O ₅									0.01	0.00
NiO									0.02	0.04
H ₂ O(+)	1.53	1.46	2.28	2.29			3.53	4.19		
H ₂ O(-)	0.85	1.02	0.72	0.30			0.77	1.10		
CO ₂	0.13	0.01								
total	99.63	99.58	99.56	100.50	98.40	97.72	99.60	99.64	99.84	98.57
Data source	Nakajima et al. (1981)	Nakajima et al. (1982)	Takahashi (1994)	Takahashi (1994)	Takahashi et al. (2012)	Takahashi et al. (2012)	Takahashi and Arai (1994)	Takahashi and Arai (1994)	Taniguchi and Ogawa (1990)	Taniguchi and Ogawa (1990)







高橋直樹ほか Appendix 9



高橋直樹ほか Appendix 10

Hegurinaka-West

Hegurinaka-East

