

"Ash Predictions, How Successful Were they?" by AW Hurst and BJ Scott (IGNS), *EQS funded report 97/268- October 1998*.

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**WORLD EARTHQUAKES OF MAGNITUDE 6.0 AND GREATER
July - September 1999.**

Data from the U.S. National Earthquake Information Service.

Date	Lat.	Long.	Depth (km)	Mag.	
Jul 02	49.4N	128.9W	10	6.0	Vancouver Island region.
Jul 03	26.3N	140.46E	43	6.1	Bonin Islands region.
Jul 07	49.3N	155.55E	33	6.1	Kuril Islands.
Jul 09	6.49S	154.87E	33	6.3	Solomon Islands.
Jul 11	15.8N	88.34W	10	6.7	Honduras. One person killed and another person died from a heart attack; at least 40 people injured in the Izabal-Puerto Barrios area, Guatemala. Seven houses destroyed, forty-one houses sustained considerable damage; three bridges damaged and damage to highways in the Izabal-Puerto Barrios area, Guatemala. Damage to buildings at a U.S. Military base at Puerto Barrios, Guatemala. Minor damage in western Honduras. Felt throughout most of Honduras and in eastern Guatemala. Felt in Belize, El Salvador, and at Villahermosa, Mexico.
Jul 19	28.6S	177.62W	49	6.4	Kermadec Islands region.
Jul 26	5.07S	152.09E	33	6.2	New Britain region, P.N.G. Felt strongly in the Kokopu area.
Jul 28	28.8S	177.47W	33	6.1	Kermadec Islands region.
Jul 28	30.3S	178.03W	33	6.3	Kermadec Islands, New Zealand.
Aug 01	30.4S	177.86W	33	6.6	Kermadec Islands, New Zealand.
Aug 17	40.7N	29.99E	17	7.7	Turkey. At least 12,018 people killed, 33,000 injured, thousands missing and extensive damage in the provinces of Istanbul, Kocaeli and Sakarya. Felt as far east as Ankara. Surface rupture approximately 40 km long with 2.7 metres of strike-slip offset observed in the region between Sapanca Lake and the Izmit Gulf.
Aug 20	9.2N	84.13W	33	7.0	Costa Rica. Some damage in western Panama. Felt throughout Costa Rica and in southern Nicaragua and much of western Panama.
Aug 21	58.2S	13.05W	10	6.3	Southwestern Atlantic ocean.
Aug 22	40.4S	74.85W	33	6.4	Off coast of southern Chile. Felt (IV) at Valdivia; (II) at Chiloe; Curacautin, Llanquihue, Loncoche Osorno, Palena, Victoria and Villarrica.
Aug 22	16.1S	168.01E	33	6.5	Vanuatu Islands.
Aug 26	10.4N	126.19E	33	6.1	Philippine Islands region. Felt (IV RF) at Surigao, Mindanao

						and on Camiguin. Felt (II RF) at Cagayan de Oro, Mindanao; Cebu, Cebu Island and Duero, Bohol. Felt (I RF) at Dipolog, Mindanao. Also felt strongly at Tacloban, Leyte.						
Aug 26	3.55S	145.83E	10	6.3		Near N coast of New Guinea, PNG.	Sep 20	23.78N	121.27E	33	6.0	Taiwan.
Aug 26	3.25S	145.53E	33	6.2		Near N coast of New Guinea, PNG.	Sep 20	23.59N	121.33E	33	6.3	Taiwan.
Aug 28	1.36S	77.56W	189	6.3		Ecuador.	Sep 20	23.70N	121.20E	33	6.1	Taiwan.
Sep 07	38.1N	23.66E	15	6.0		Greece. At least 122 people killed, 20 missing, more than 1,600 injured, 50,000 homeless and over 18,700 buildings damaged or destroyed in the Athens area. Felt in much of central Greece and as far as Izmir, Turkey.	Sep 20	23.73N	121.26E	33	6.2	Taiwan.
Sep 15	20.9S	67.28W	215	6.4		Southern Bolivia. Felt (II) at Arequipa, Peru. Felt at Tarija. Also felt at Antofagasta, Chile.	Sep 20	23.35N	121.09E	33	6.5	Taiwan.
Sep 17	13.74S	167.16E	197	6.3		Vanuatu Islands.	Sep 21	23.77N	121.20E	33	6.4	Taiwan. Additional damage and landslides (VI JMA) in the epicentral area. Felt (V JMA) at Hua-lien and Tai-chung; (IV JMA) at Chia-i; (III JMA) at I-lan, Kao-hsiung, Taipei and Tai-tung. Felt in much of Taiwan. Also felt (IV JMA) on Peng-hu Tao; (III JMA) on Lan Yu; (I JMA) on Iriomote-shima, Ishigaki-shima and Yonaguni, Ryukyu Islands.
Sep 18	51.18N	157.59E	61	6.2		Near east coast of Kamchatka.	Sep 21	23.67N	121.16E	33	6.0	Taiwan. Felt (V JMA) in the epicentral area; (IV JMA) at Chia-i, Hua-lien and Tai-chung; (III JMA) at I-lan; (II JMA) at Taipei and Tai-tung. Felt in much of Taiwan. Also felt (III JMA) on Peng-hu Tao and (I JMA) on Lan Yu.
Sep 20	23.73N	121.06E	33	7.7		Taiwan. At least 2,146 people killed, 8,139 injured, 311 trapped, 68 missing and 6,243 houses destroyed; damage to roads and utilities disrupted on Taiwan. Most of the casualties and damage occurred in Nantou and Tai-chung Counties. Landslides blocked a river in Yunlin County. Felt as far as Hong Kong and Quanzhou, China.						

SIGNIFICANT NEW ZEALAND EARTHQUAKES. July-September 1999.

The locations of these earthquakes are preliminary as final analyses have not been completed.

Lat.	Long.	Depth (km)	Mag.		
Jul 08	40.9S	174.72E	67	4.2	24 km west of Paraparaumu. Felt from Wanganui to Wellington.