Pacific volcano

Transient Iwojima calf

Tokyo

THE Japanese islands burst into life last month when a submarine volcano south of Iwojima broke surface, sending a plume of smoke and ash billowing skywards. Within a day, a crescent-shaped island almost 1 km in length had formed around the volcanic vent, but, as with previous attempts to join the Japanese archipelago, the island will probably disappear again.

The submarine volcano Fukutokuokanoba lies 1,300 km south of Tokyo at a point 5 km north-east of Minami (south) Iwojima (24° 17' N, 141° 29' E). Its first recorded eruption began on 14 November 1904. By 1 February 1905, an island 5 km in circumference and 150 m high had formed and was named Shin (new) Minami Iwojima. But by June of that year, it was reduced to a shoal 150 m in circumference and, by 1910, the point where the island had been was 424 m deep.

Infrared satellite images indicate that the present eruption began on the night of 18 January. Activity peaked on 20 January when a column of smoke 50 m wide rose to 3,000 m, blocks of volcanic rock up to 10 m in diameter were hurled hundreds of metres into the air and a plume of discoloured water spread for about 20 km in a

south-easterly direction. The island was reported to be 700 m long from east to west, 500 m wide and 15 m high, but a week later it was 500 m in length and showed signs of rapid erosion.

The little island's big brother, Minami Iwojima, is a 3.5 km² uninhabited jungle-capped cone of basalt. It lies at the south-

ern end of a 1,250-km-long strip of active volcanoes that starts at Mount Fuji and then runs along the edge of the Philippine plate through the Izu Seven Islands (Shichito).

While most of the islands of the Shichito-Iwojima chain are composed of tholeiitic basalt typical of the front of volcanic island arcs, the rocks of Minami Iwojima and Iwojima (also known as Naka (middle) Iwojima) belong to the alkali suite usually found at the backside of island arcs. Rock collected from the temporary islands formed in 1904 and 1914 and from the top of Fukutokuokanoba in 1982 were all olivine-augite trachyandesite with high alkali contents. The new volcanic island is thus probably closer in composition to Naka Iwojima 50 km to the north-west than to nearby Minami Iwojima which is composed of alkali basalts, according to Shigeo Aramaki of Tokyo University's Earthquake Research Institute.

In contrast, Kita (north) Iwojima, about 70 km north of Naka Iwojima, is a tholeiitic basalt volcano. The abrupt change to alkali volcanics at the southern end of the Shichito-Iwojima ridge is puzzling. Alkali-rich magmas are thought to form at high pressures at the lower end of the plate subducting beneath the volcanic island arc. Thus, according to Teruaki Ishii of Tokyo University's Ocean Research Institute, the occurrence of alkali volcanics in the southern half of the group of islands may be related to the steep dip of the subducting Pacific plate as the Ogasawara Plateau, a large guyot riding on the Pacific plate, plunges into the Izu-Bonin trench immediately opposite the islands. Ishii points out, however, that this explanation fails to account for the lack of tholeiitic basalt volcanoes between Iwojima and the trench. **David Swinbanks**

AIDS

Academy looks for strategy

Washington

A NATIONAL agenda on research and health care for acquired immune deficiency syndrome (AIDS) is the objective of a six-month project of the National Academy of Sciences and the Institute of Medicine (IOM) in the United States; the approach so far is considered to have been random and uncoordinated.

A single report will be generated from the work of two panels, one on research and development, the other on health care and public health. According to Sam Thier, president of IOM, the report is not to be a definitive treatise on AIDS, but rather part of "a continuum of effecting national action".

The panel on research and development will examine current research efforts to determine if they are properly organized and sufficiently well supported. IOM hopes to weigh up whether a programme on the scale of the Manhattan Project or Project Apollo is justified by the size of the current health problem, and whether such a large-scale programme would provide a return commensurate with its costs.

"It is critical to be sure that for an area as important as this that the research agenda and strategy is as well crafted as we can have it", says Thier. "We have to be sure that all segments of the research community are integrated into the effort, and if necessary recruited into it where they are not as actively involved."

The other panel will investigate the social and public policy questions raised by AIDS. It is still unclear how the health-care delivery system can most effectively cope with a disease for which there is as yet no cure. Some rational strategy that takes into account the needs of the AIDS patient and the needs of society must be developed.

Almost any active steps to control the AIDS epidemic will of course cost money, a conclusion that troubles law makers in these days of the Gramm-Rudman Act and it will force budget reductions. While Thier acknowledges these financial problems, he considers the IOM effort should not have to be sidetracked by the uncertainties of funding.

"It's all well and good to say we have Gramm-Rudman, and there are cutbacks and so on", says Thier. "But that is not going to stop the progress of this disease."

The IOM report is being put on a fast track. Thier is anxious to see this and other IOM projects completed faster than the 18 months typical for reports in the past. IOM could then play a larger role in affecting national policy on the critical health issues.

Joseph Palca

Trials on ice

Washington

AFTER a lively public hearing last week at Salinas, California, Advanced Genetic Sciences (AGS) announced that it will postpone for thirty days the environmental release of its genetically altered bacteria designed to protect plants from frost damage (see *Nature* 319, 254; 1986).

Monterey County Supervisors scheduled the hearing to air questions about the safety of the release. Sam Karas, chairman of the board of supervisors, said some of the most influential evidence came from Dr Lee Cavalieri, retired member of the Sloan Kettering Institute for Cancer Research. Karas left the meeting with the understanding that Cavalieri was suggesting there is evidence that the experiment may pose some cancer risk, but Cavalieri emphatically denies making any such statement.

AGS has already won approval from the Environmental Protection Agency and the California Department of Food and Agriculture to proceed with the test on a farm near Salinas, but local opposition brought its plans up short. Despite vocal opposition, AGS plans to proceed with the trial, but not before it has satisfied the local authorities that the bacteria poses no threat to residents. A compromise may be to move the site of the trial to a less populous part of the region.

Joseph Palca