

civilizations.

"The eagle, however, occurs but rarely on Christian monuments," says Dr. Newbold. "It has never been found in Christian art prior to the fourth century."

The reason for this he ascribed to the fact that the Christians must have strongly disliked the eagle because, "it was the most familiar symbol of the hated persecuting Empire, and it was itself a pagan idol. The eagle perched upon the standard of the Roman legion was the soldiers' peculiar divinity; to it sacrifices were offered and by it the most sacred of oaths was ratified."

"These facts supply negative data of some importance for the date of the chalice," he concluded. "The holder would probably belong either to the earliest period of the Church's history, before Nero's persecution, while Christianity, as a Jewish sect, was still a protected religion, or else it belongs to the age of peace which followed the edict of Milan in 313, when the monogram of Christ had replaced the eagle on the soldiers' standards. It is probable that the eagle could have been used as a Christian symbol at any time after the middle of the fourth century without giving general offense."

Dr. Newbold declines to decide which of the two periods produced the famous cup, though he states that "the evidence now in hand is distinctly in favor of a first century date for the holder."

VESUVIUS ERUPTION PREDICTED BY ITALIAN VOLCANO SCIENTIST

The recently reported activity of Mount Vesuvius, which may be only the prelude to a really important eruption, was prophesied several months ago by Dr. A. Malladra, noted Italian volcanologist, according to Dr. Henry S. Washington, of the Geophysical Laboratory of the Carnegie Institution of Washington.

"I was in Rome last summer when a report of a Vesuvius eruption excited the city," said Dr. Washington. "I wired to Dr. Malladra, who said that it was only a rumor, as such reports frequently are, but invited me to come down to Naples and go out for a look at the mountain anyhow."

"He showed me a place on the side of the volcano where in his opinion the next outbreak was due to come; and from what I can tell from reports that have reached me the new lava flows seem to be breaking out at this spot."

Vesuvius is no stranger to Dr. Washington. He has visited it every year or two for a long period, and took part in a special study of its last great eruption, which took place in 1906.

"Though this eruption is not to be compared with the cataclysm of 79 A.D., which wiped out Pompeii and Herculaneum," Dr. Washington stated, "it was really very severe. One or two hundred feet of the summit was blown off, and the crater was considerably widened. After the eruption the new crater had a depth of about 1200 feet, with very steep sides."

"Since that time it has been slowly filling up again, and a small cone, two or three hundred feet high, has been building. Last fall the lava level was up to within one hundred feet of the lowest point in the rim."

"Vesuvius, however, seldom sends lava flows over the rim of the

crator; they usually break out on the sides of the mountain, accompanied with the eruption of vast clouds of smoke and ashes. The production of lava from Vesuvius is much smaller, proportionately, than that from Etna. Etna, of course, is a greater mountain, being 12,000 feet high as against the 4,000 feet of Vesuvius; and its lava is much more copious and also more fluid than that of the smaller volcano."

Dr. Washington scouted the idea that the volcanic activities in Alaska had anything to do with those in Italy. "Not only are these two widely separated regions quite independent of each other so far as their volcanoes go," he said, "but even in Italy the earthquakes that have been shaking Tuscany have nothing to do with the eruption of Vesuvius. The earthquakes of northern Italy are normal earthquakes, caused by the slipping of faults, or blocks in the crust of the earth, just as the Montana and Santa Barbara quakes were caused. Volcano tremors are local affairs, and are rarely felt even at moderate distances."

PLAN TO ALTER SOUTH AFRICAN CLIMATE

"Rainfall over the whole of the central portion of the Union of South Africa is steadily decreasing year by year, and if this goes on at the present rate, the time will come when vast areas now supporting a farming and grazing population will be given over to the wild beasts of the desert. This process can, however, be checked. Its causes are known, and, being known, can be remedied."

This startling statement is not that of a sensational journalist in search of a thrilling story, but the considered judgement of a scientist, Professor Schwartz, of the University of Stellenboach.

Put in a nutshell, the reason for this gradual decrease in rainfall is the drying up of the big tract known as the Kalahari, 400 miles from the Orange River, in the south to Lake M'gami in the North.

Up to comparatively recently this area was traversed by a whole system of rivers dotted with several lakes. This water system connected Lake M'gami with the Orange River. But the lake which acted as a feeding reservoir for this system is drying up owing to the silting up of the streams that fed it from the north. What water it still gets and holds has been diverted by some mysterious play of Nature and now, instead of flowing towards the South directly, flows eastward into the Zambesi and westward into the Kunene and Okarango rivers.

So far has this process gone that of recent years the term "desert" has come to be generally applied to the Kalahari, although the word is a misnomer. The area is not by any means waste land yet; it is a vast undulating plain, partly covered with forest and partly with rich long grass whenever there is the slightest rainfall. It borders on one of the best cattle raising districts in South Africa, Bechuanaland. The forests are, however, fast dying; there is ample underground water supply which may be tapped by artesian wells, but the water lies too deep to affect the roots of the trees. For mile after mile, one may see wilted and withered remains of what once were luxuriant growths.

To remedy this state of affairs, three schemes have been proposed, and