could it be found afterwards near its predicted place. It is still doubtful whether this was the expected comet.

During the year, ten new asteroids or minor planets have been discovered, making the total number now known two hundred and forty-five. The new-comers are as follows: (236) Honoria, discovered by Dr. J. Palisa, at Vienna, April 26; (237) Hypatia, by Palisa, June 27; (238) by Knorre, at Berlin, July 1; (239) by Palisa, Aug. 18; (240) Vanadis, by Borelly, at Marseilles, Aug. 27; (241) Germania, by Dr. R. Luther, at Düsseldorf, Sept. 12; (242) Kriemhild, by Palisa, Sept. 22; (243) by Palisa, Sept. 29; (244) by Palisa, Oct. 14; (245) by Palisa, Oct. 27 (at first taken for Andromache). W. C. Winlock.

FURTHER NOTES ON BOGOSLOFF ISLAND.

An examination of the official report of Capt. Healy, Lieut. Cantwell, and Dr. Yemans, of the U. S. revenue-cutter Corwin, and of the drawings and photographs by which it is accompanied, affords a few further notes of interest in regard to this remarkable island. It may be recalled that the new peak was first seen, so far as now known, by Capt. Anderson of the Matthew Turner, Sept. 27, 1883, and that therefore the application to it of the name of Capt. Hague, on the ground that he was the discoverer, as suggested by Lieut. Stoney, is erroneous. We prefer to retain the prior name of Grewingk, who first collected and discussed all the existing data in relation to the island and its changes.

BOGOSLOFF ISLAND AND SHIP ROCK. FROM A PHOTOGRAPH BY LIEUT. G. H. DOTY, 1884.

In regard to the Bogosloff peak, the new observations determine that it contains a dike or central longitudinal wall of laminated rock, probably volcanic, of which Ship Rock may be an outlying spur. The top and ends of Bogosloff are entirely, and the sides partly, uncovered by the disintegration of a very friable rock of different character from the core. The high sharp pinnacles observed in 1873 appear to have been destroyed by the commotions attending the upheaval of Grewingk. The highest (east) point is now about three hundred and thirty-four feet, the centre two hundred and ninety feet, and the west part three hundred and twenty-four feet in height. These differ slightly from Stoney's figures, and considerably from previous measurements. Allowing for all the probable diminution in height, due to various causes, we are convinced that a large part of the discrepancy is due to error in earlier measurements, including our own; since the length of the peak, which cannot have changed much, is only about a thousand feet. The earlier estimates of the height of Grewingk were about double its real height. The tendency is always toward overestimating a height when there is nothing adjacent for comparison, and accurate measurements from on shipboard are extremely difficult. The south spit of Bogosloff has certainly increased greatly in length since recent disturbances, and now measures about eighteen hundred feet, when previously it did not exceed one-third the length of Bogosloff. The north end of Bogosloff rises nearly vertically with a sort of cave at its base. The shores of both peaks are fringed with large water-worn bowlders of hard rock. The axis of the old peak and spit is in a south-east by east direction. There was not the slightest sign of recent vulcanism about it; and the crags were the haunt of myriads of birds, but too crumbling to scale. There are no birds on the new peak, and those accidentally entering its vapors are quickly suffocated. Ship Rock rises eighty-seven feet, and has been elevated about twenty feet above its old level, judging by the barnacles still clinging to its sides. The apex has crumbled a little, and is less squarely cut than formerly.

Grewingk is less sharp than Bogosloff. As nearly as could be determined through the steam-jets, the highest peak of Grewingk is less than four hundred and fifty feet, and its base is somewhat over three thousand feet long. A deep ravine which apparently represents the crater, but is too full of steam to afford a fair view, extends in a north-easterly direction through the upper third of the mass, and cuts off a peak south-east from it, estimated to be four hundred feet high and about one-fifth the volume of the whole summit. The sides of Grewingk rise with a slope varying from ten to forty-five degrees; near the base it is gentler; and the surface of soft ashes, thickly covering broken rock. The slope, after the first three hundred feet, becomes steeper, and chiefly of loosely piled rocks; at two-thirds of the total height from the base, a wall of volcanic pudding-stone checks further progress. On the north-west side many irregular rocks appear: the other sides are more thickly strewn with ashes. There is no lava. Many steam-jets are visible, but are noiseless or only purr slightly. In one place, two-thirds of the way up, there is a group of fifteen jets on a nearly horizontal plane, which were notable for the force with which the vapor was emitted, and for their intermittent regular pulsing. All the vents were surrounded with dendritic sulphur crystals.

There were but few and slight earth-trembles experienced by the party while on the island. It is quite possible that the spit now connecting the two peaks is a later formation, not existing at the time of Hague's visit. Such spits may be formed or destroyed in a single winter storm. The Corwin party, however, thought this had merely been elevated from the sea-bed with Ship Rock, but without the participation of the old peak. It is at present composed of fine black sand, and gray, black-spotted, water-worn pebbles, without vegetation, and may be covered with breakers during heavy storms. It is less than four thousand feet long, and about three hundred and twenty-six feet wide at its narrowest part. W. H. DALL.

THE CHOLERA EPIDEMIC IN PARIS AND IN YPORT.

WE reproduce to-day two diagrams, showing the course of the epidemic of cholera in Paris in November. They are both taken from recent numbers of the *Revue scientifique.*

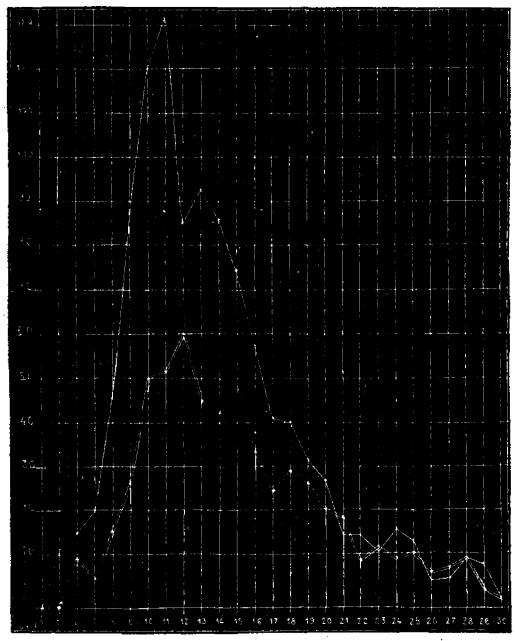

FIG. 1.

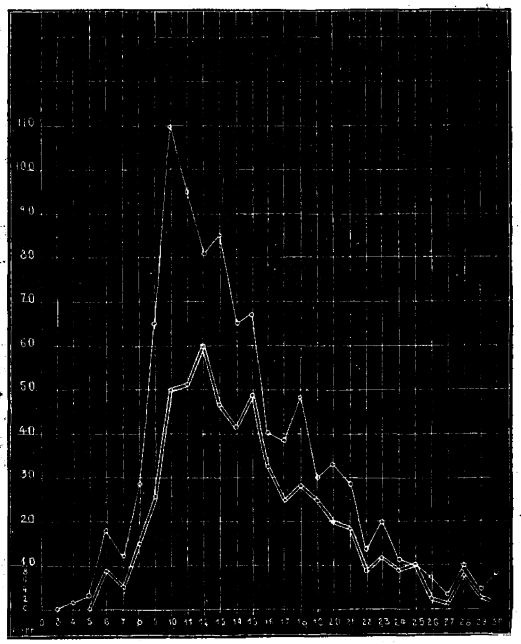

FIG. 2.

In both of them the double line is the curve of deaths; but in fig. 1 the single line is the curve of cases admitted to the hospital, whilst in fig. 2 it indicates the total number of deaths in the city and hospitals taken together.

The numbers along the foot of the diagram indicate the days of the month. The vertical columns show the number of entries and of deaths in fig. 1, and the number of deaths in fig. 2.

Examining the first diagram, we find that the first case entered the hospital on Nov. 4; that on the 5th there were ten new cases; and that the number ran up very rapidly, until, on the 11th of November, one hundred and thirty-two new cases were reported from the hospitals alone. From this date the number of cases diminished, until, on Nov. 30, there were but two new cases, and two deaths; and immediately after this the activity of the epidemic became suspended. Taking the total number of cases recorded (1,002), and comparing it with the number of deaths (573), we have a mortality of 57%, — a rather startling result, under the circumstances; for it may be taken for granted, that under the care of a hospital staff, if anywhere, the best results are to be obtained in the treatment of this disease. It may be said, and with how much truth we do not know, that only the worst cases were entered at the hospitals, and that many of these were moribund at the time of entrance. Our impression is, however, that the cases were a fair representation of the average.

This diagram presents also the usual characteristics of a cholera epidemic, the stage of increase (Nov. 4–10), the stationary stage (Nov. 10–14), and the period of decline (Nov. 14–30). This, of course, is but a representation in miniature of what occurs in outbreaks that are spread over a greater extent of time. The suddenness of the decline of the epidemic may be due, in part, to the vigorous measures taken to stamp it out; but its disappearance is to be ascribed mostly to the frosts of the last of the month, which were frequent and rather severe.