I am inclined to see another confirmation of this interpretation in a well-known observation of Morgan on the regeneration of *Planarians*. He found that if a piece be cut from the body at right angles to the longitudinal axis the head will form along the whole cut edge of the piece, while if a piece be cut out obliquely a tiny head will form in the foremost corner of the cut edge. As Bardeen suggested, this would find its explanation on the assumption that the head formation is induced by the collection of certain material which will collect along the whole front when the piece is cut out of the body at right angles, while it is bound to collect in the foremost angle when the piece is cut out obliquely.

VI

When we summarize all the facts we may state that it may be inherent in each cell to grow and divide eternally under suitable conditions; and that we can understand this condition on the simple assumption of the existence of synthetic ferments or synthetic mechanisms in each cell which are formed from the food taken up by the cells. In reality, however, things do not happen in this way in multicellular organisms, and not even in their egg cells. The unfertilized egg can in most cases not grow even under the most favorable conditions and is doomed to die in spite of its potential immortality, unless it is fertilized or treated with the methods of artificical parthenogenesis. The condition of rest or growth depends in this case apparently upon the condition of the cortical layer of the egg and the alteration in the rate of oxidations connected with this condition.

In the body, cells may be at rest or growing, and we do not know whether the conditions which determine rest are identical with those determining rest in the egg. We know, however, that specific substances circulating in the blood can induce certain resting cells in the body to grow and that these substances differ apparently for different types of cells. It may be that in the body substances antagonistic to these may enforce the inactivity of the cells.

And finally we come to the conclusion that the circulation in animals or the flow of substances in plants is an important factor in the phenomena of cell rest and cell growth, inasmuch as circulation or flow determine or influence the distribution of formed cells or non-formed elements which induce or influence growth. The phenomena of regeneration seem to find to a large extent their explanation in the fact that a wound or mutilation leads to a gathering of formed or non-formed elements in spots where without the mutilation they would or could not have collected.

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foreign cells in a body, to which reference was made in an earlier part of this paper.

ALASKA SURVEYS AND INVESTIGATIONS

THE United States Geological Survey is dispatching 12 parties to Alaska to continue the systematic surveys and investigations that have been in progress for the last eighteen years. Of these parties three will be sent to southeastern Alaska, one into upper Chitina region, one to Port Valdez; two will work in the Turnagain Arm-Knik region; one will make investigations in the Yukon-Tanana region, and two in the Ruby-Kuskokwim region, and another will traverse the little-known area lying between the Ruby district and the Tanana River. One party will be engaged in general investigations in different parts of the Territory. These parties will sail from Seattle during May, so as to take full advantage of the field season. All the men needed for the work have been engaged, and the pur-

chase of horses, supplies and equipment is well under way.

One of the most important of the undertakings is the extension of the surveys in the Ruby district, on the Yukon, and in the adjacent regions. C. E. Griffin and G. L. Harrington will undertake the surveys in the Ruby district proper, which is now an important gold-placer camp. R. H. Sargent and J. B. Mertie will carry surveys southward to Takotna, on Kuskokwim River. H. M. Eakin will explore the region lying between the mouth of Cosna River, a tributary of the Tanana, and the Ruby district. The only other work in the Yukon basin is that of Eliot Blackwelder, who will make a geologic examination of the White Mountains, southwest of Circle.

The region lying between Knik and Turnagain Arm, tributary to the proposed government railroad, has been only partly mapped, and here both geologic and topographic surveys will be undertaken. The preparation of the topographic base map will be undertaken by one party under the leadership of J. W. Bagley, and the geology and mineral resources will be studied by another party under S. R. Capps.

B. L. Johnson will complete his detailed study of the geology and mineral resources of the Port Valdez district and will also investigate the mineral resources of other parts of the Prince William Sound region.

Much of the Copper River region has been surveyed in previous years. There still remains, however, the upper Chitina basin, where no geologic work has been done. This work will be undertaken by F. H. Moffit, assisted by R. M. Overbeck.

The detailed topographic mapping adjacent to Juneau, in southeastern Alaska, begun last year, will be continued by D. C. Witherspoon. The base map of this important gold lode district is essential to an exhaustive study of the district which will be undertaken next year.

The mineral resources of the Ketchikan district have been under investigation at different times in the last fifteen years, and the results embodied in reports. Detailed surveys of the two most important copper-bearing areas of the Ketchikan district have been made. Much of the district has been geologically mapped, but the work is still far from being complete, and the investigation of the geology and mineral resources in this field is to be extended by Theodore Chapin.

The marked industrial advancement in southeastern Alaska has created a great demand for information about the available water-powers, which George H. Canfield has been detailed to investigate. He will also carry on stream gaging in cooperation with the Forest Service.

The hot springs of Alaska are of importance, as many are used as local sanitariums. As no information about them is available, they are to be investigated this summer by G. A. Waring, who will visit the hot springs of Ketchikan and Sitka, in southeastern Alaska; one near Circle and the Baker and Chena hot springs, in the Tanana Valley; and one in Seward Peninsula, about 60 miles north of Nome.

Alfred H. Brooks, geologist in charge of the survey's Alaska investigations, will be engaged in office work until about the end of June. He will then leave for Alaska, and his work will probably include investigations in the Iditarod, Fairbanks and Valdez districts.

AT THE OHIO STATE UNIVERSITY

The following letters have been exchanged between the president of the Ohio State University and the dean of the College of Agriculture:

Ohio State University,
Columbus

My dear Professor Price: Since your remark this morning that you would not remain as professor of rural economics I feel impelled to write you and make an urgent appeal for you to reconsider that decision. My judgment is that you have a quarter of a century of service ahead of you here in a field not well occupied anywhere in the country. You have the esteem and good will as well as the confidence of your colleagues. I can not but feel that you would be sacrificing a highly useful career if you should leave the uni-