as you term it, to the free expression of our own opinion.

Very respectfully,
(Signed) GEO. OTIS SMITH,
Director

LOS GATOS, CAL., July 17, 1907.

DR. GEO. OTIS SMITH,
Director.
U. S. Geological Survey,
Washington, D. C.

Sir: I am in receipt of your letter of June 11 acknowledging my resignation from the survey, and referring to the protest accompanying it. I had intended to write to you to assure you that nothing in that protest referred to you personally; but, from your last letter, I am sorry to learn that your attitude in the matter is apparently hopelessly opposed to mine.

You mention, somewhat vaguely, "administrative responsibility," "official oaths" and "congressional enactments." Now, in my conception, the supreme responsibility of the scientist is to discover the truth and to tell it, in accordance with the clearest vision vouchsafed him; and this responsibility can not be superseded by the demands of any administrative position nor abrogated by any official oath. As for the "letter and spirit of the congressional enactments," if these should ever happen to come into conflict with scientific truth (which does not seem to me a very probable contingency, so long as congress and the Geological Survey confine themselves to the accepted limits of their respective fields of work), I would venture to suggest that congressional enactments are more easily changed than the facts of the universe, and that it is not necessary, in the interest of the former, to suppress or falsify even an individual conception of the latter.

But you say that in joining the survey the individual surrenders a part of the "inalienable right" of the scientist. Here, apparently, is the crucial point of the whole discussion. If this were generally accepted as a basic principle of the survey, it could not long support the claim of being a scientific organization, for no scientist with the highest conception of his calling would ever voluntarily accept such conditions of service; and the organization would speedily become, what your principle would logically make it, an artificial structure of red tape, reared by "administrative responsibility" (which easily becomes a synonym for autocratic privilege) on the foundation of "congressional enactments," and inspired by nothing higher than the ambition to secure more appropriations. In contrast to this bureaucratic conception, let me quote President Eliot's words with reference to scientific investigators: "They must set their own standards of excellence; for society can not supply men capable of supervising, regulating or stimulating them. . . . The scientific investigator must be a law unto himself. The utmost that governments or universities can do for him is to provide suitable facilities and conditions for his work, and to watch for results."

Since your letter was written in your official capacity, I suppose that you will not object to its being published, together with mine, as a contribution to a discussion of general interest to the scientists of the country.

With sincere regret for the difference of opinion which has developed between us, I am

Very respectfully,
(Signed) W. S. TANGIER SMITH

TYPE OF THE GENUS ASTACUS

TO THE EDITOR OF SCIENCE: Within the last decade, a good deal of controversy has been engaged in anent the type of the crustacean genus *Astacus*. These differences of opinion have arisen owing to authors having disregarded Degeer 1778 ("Mem. Ins.," VII.), who fixed as type *A. fluviatilis* Fabr. (= *Cancer astacus* Linné).

G. W. KIRKALDY

SPECIAL ARTICLES

COLOR VARIETIES OF THE RABBIT AND OF OTHER RODENTS; THEIR ORIGIN AND INHERITANCE[1]

IN the issue of SCIENCE for January 25, 1907, I have shown that the agouti, or wild type of coat of the guinea-pig, results from the simultaneous presence of three factors, which are separately heritable unit characters, namely, black pigment, yellow pigment and a factor causing the two pigments to be disposed in bands. In uniformly colored (or self) varieties of the guinea-pig, at least one of these three factors is wanting. If the lacking factor is supplied by a cross with a variety which possesses it, then reversion is obtained, that is a return to the wild type of coat.

It is the purpose of the present note to

[1] Published by permission of the Carnegie Institution of Washington.