

of difficulty, but to so arrange the observatory that the influence of the wind shall be either measured and subtracted, or avoided altogether. Place the barometer in an air-tight box, made partly of glass for purposes of observation, and connect this box by a tube with an opening on the roof so adjusted that it shall always sustain the same relation to the wind. It is possible that a form of opening can be devised such that the wind will neither compress nor dilate the air within the box; but, if this cannot be done, it is certainly possible, by a proper system of experiments, to determine for a given arrangement of aperture the proper correction to apply to the barometer-reading for each measured velocity of wind. The matter should receive thorough investigation.

G. K. GILBERT.

Washington, June 19.

I infer from Prof. John LeConte's letter in your last issue (*Science*, vol. vii. p. 550) that he does not feel entirely satisfied with the explanation I have offered of the slight fluctuations of the barograph observed at Blue Hill during high winds. He says, "The observed facts are, that fluctuations of wind-velocity correspond with fluctuations of air-pressure. In some cases it may be difficult to decide which is cause, and which is effect." In this case, the fact, as stated in my last letter, that I could produce these fluctuations at will by merely opening and closing a hatchway in the top of the building, seems to me to prove conclusively that the wind was the cause, and the change in the pressure the effect. In regard to his suggestion that a comparison should be made between a barograph inside and one outside of the building, I think, before satisfactory results could be obtained, it would first have to be proven that the wind in blowing across the top of the barometer cistern, or at right angles to the crevices of such cistern, would not have the same effect of lowering the readings of the barometer outside as well as inside of the building.

Mr. E. B. Weston of Providence has informed me that he has noticed during high winds small oscillations of his barograph, similar to those observed at Blue Hill, and has prevented them by opening the windows, so as to give a free draught of air. I tried the same at Blue Hill during a late high wind, and found that the oscillations, which at most were slight, were reduced by it.

In regard to those large differences between the observed and estimated pressure on Mount Washington, referred to in my last as collected by Professor Loomis, it is probable, that, in these extreme cases, other causes than that suggested by me become factors in the result; such, for instance, as a lagging of the time of minimum pressure at the top as compared with the base, and a more violent cyclonic circulation of the wind at that height,—causes which have been suggested by Professor Loomis in his twentieth paper (*Amer. Journ. Sc.*, vol. xxviii. July, 1884).

H. HELM CLAYTON.

Blue Hill meteor. observ., June 19.

A most extraordinary structure.

Referring to P.Z.S. 1885, p. 908, pl. lxi. fig. 3, *h*, where my amiable young friend Dr. Shufeldt describes and figures the humerus of a humming-bird as 'a most extraordinary structure,' I may be permitted to suggest that some of the alleged 'eccentricities' of this 'unique' bone might seem less if he

had not got the bone turned hind part before by one of those strokes of genius which a prosaic world, steeped in materialism, is slow to appreciate.

A THEOSOPHIST.

Smithsonian institution,
Washington, June 15.

Aspects of the economic discussion.

I have just read Professor Newcomb's article (*Science*, vii. No. 176) on the new school of political economy. It seems to me that the professor asks for too much in the way of results from the new school. As I understand it, this is simply a question of methods. The new school professes the historical method, as opposed to the deductive method of the so-called orthodox school. If the historical method is right, the results eventually arrived at will, nay must, be right. But to stop them on their way as if with a revolver, and demand a categorical statement of their views on such disputed points as state interference before they are allowed to finish their journey, is certainly unwarranted.

Whatever results the new school may reach, it is tolerably certain that they will eliminate from the books that monster of imagination the 'economic man,' and that other *chimaera bombans in vacuo*, the hypothetical 'consumer,' who does nothing in this world but eat.

When they shall have rebuilt the science on their new foundation, it will be soon enough to demand from them an account of their views on such questions as Professor Newcomb propounds.

WM. A. INGHAM.

333 S. 16th St., Philadelphia, June 18.

Distribution of colors in the animal kingdom.

In the notice of Camerano's 'Distribution of colors in the animal kingdom' (*Science*, vii. p. 557) I notice the astonishing statement that green 'never occurs among mollusks.' On the contrary, it is one of the most common colors of mollusks, especially among fresh-water species. Examples will occur to the most superficial observer in the genera *Anodonta*, *Unio*, *Campeloma*, *Anculotus*, etc. Among land-shells the arboreal helices of tropical countries are noted for their magnificent greens. Among marine shells, it is notable in many species of *Mytilus*, *Modiola*, *Tellina*, *Prasina*, etc., among pelecypods; *Neritina*, *Chlorostoma*, *Turbo* (where the calcareous operculum, also, is often stained with green), *Haminea*, and many other gastropods; not to speak of the nudibranchs, which frequently exhibit different shades of green. The rarest color among mollusks is pure blue (as distinguished from the rather common bluish violet), but even this color is found of great brilliancy in some cases. The assertion objected to is one more bit of evidence to the general neglect among biologists, otherwise well equipped, to gain any general knowledge of the Mollusca, except that supposed to be afforded by theoretical views taken from out worn text-books. There are perhaps a dozen first-class general conchologists in the world, none of whom are young. The prospect now is that the next generation will not have any. The reasons seem to be, among others, the shocking state into which amateurs and superficial students have brought the nomenclature, and the fact that the scientific training to be had in our best colleges leads in altogether different directions.

WM. H. DALL.