

Observations with kites at Blue Hill during the past ten years, and with balloons elsewhere, show that inversions of temperature occur at some height in the free air under almost all weather conditions. In a discussion of the kite observations at Blue Hill, published in 1897 in part i., vol. xlii., *Annals of the Astronomical Observatory of Harvard College*, Mr. H. H. Clayton probably first pointed out that marked inversions of temperature at heights of from a quarter to half a mile in the free air occur in the rear of anti-cyclones. He gives one example of a rise of 26° F. between 2180 feet and 2530 feet, accompanied by a corresponding fall of 50 per cent. in the relative humidity, this rise of temperature being more than twice that mentioned by Mr. Dines.

Prof. Hergesell's soundings with kites on board the Prince of Monaco's yacht last July, in the permanent high barometric pressure south of the Azores, showed a decrease of temperature of 6° F. up to about 1800 feet, when the temperature suddenly rose 14° F., and so remained throughout a stratum 3000 feet thick, above which it fell at the adiabatic rate, the relative humidity decreasing 50 per cent. with the rise in temperature. It would appear, therefore, that such inversions of temperature and relative humidity at a moderate height are characteristic of areas of high barometric pressure, both over the land and water.

A. LAWRENCE ROTCH.

Blue Hill Meteorological Observatory, Hyde Park,
Mass., U.S.A., March 13.

The Planet Fortuna.

ONE point of interest to Airy's brother men of science has not been noticed—that he either misunderstood or wilfully misapplied the lines of Juvenal. The "Purists" urged that planets had always been named after deities, and that Fortuna was not a deity. Airy said that she was, and quoted "nos te, nos facimus, Fortuna, deam." What did Juvenal really say? He said, "the wise see no divinity in Fortune; it is only human folly that calls her goddess, and assumes for her a place in heaven." As Gifford renders it:—

"We should see
If wise, O Fortune, nought divine in thee;
But we have deified a name alone,
And fixed in heaven thy visionary throne."

"Nullum numen abest" belongs to a numerous class of misquotations, and spoils the whole tenor of the passage. The supreme authority on Juvenal, J. E. B. Mayor, does not even condescend to cite it. W. T.

CITY DEVELOPMENT.¹

THE elegant volume under notice was written by Prof. Patrick Geddes in response to an invitation by the Carnegie Dunfermline Trust. The report is copiously illustrated, and embodies a very great amount of valuable and important information, plans, and suggestions as to the laying out of the public park, and as to the buildings, in or around it, needed or desirable for carrying on the work of the trust.

The author set to work by having a complete photographic survey made of the park and its environments. All those photographs, however, could not be incorporated in the report, but they will be preserved as a permanent record of the appearance of the park and its surroundings before any changes were inaugurated by the trust. Not content with mere photographs and maps, the author strongly recommends the construction of a relief model of the park, bearing on its surface pasteboard models of the new buildings proposed, in order that the general effect of these buildings on their surroundings may be clearly anticipated, and thus the erection of structures out of harmony with their surroundings may be avoided.

¹ "City Development, a Study of Parks, Gardens, and Culture Institutions." A Report to the Carnegie Dunfermline Trust. By P. Geddes. Pp. 232. (Westminster: Geddes and Co., 5, Old Queen Street.) Price 21s. net.

At the beginning of the report a general plan of the park is given, showing the proposed improvements. At first sight the plan appears very elaborate and overcrowded with detail, but this is due



FIG. 1.—View down House Dene, showing back of old Mansion-house to left (south), and on opposite bank, a little nearer than the large tree, Wallace's Well, fallen in. Old paths effaced. From "City Development."

to the fact that its designer has endeavoured to show all the essential details in the plan, in order to reduce the number of blocks in the text, and a little study is all that is required to show that the proposed improvements are not of such a radical nature as a first impression might convey. The proposed treatment is essentially a conservative one, and the suggested changes and improvements have been designed to interfere as little as possible with the existing features, views, and even details of the park and glen.

About one-half of the report is devoted to a detailed consideration of the park, its environs, gardens, and nature museums. The possible approaches and entrances are carefully considered and selected. These must render easy access to, and be in keeping with, the important centre to which they lead. The park must not end abruptly where the town begins, but its environs or setting should be such that a harmonious blending—one with the other—is secured, and in this connection the author seems to have made the most of the material at his disposal.



FIG. 2.—The same view, with Wallace's Well simply re-built, and roughly rustic foot-bridge, uniting old paths now renewed. The Mansion-house shows also one of the proposed new turrets. From "City Development."

As regards the laying out of the park, the proposed lakes, gardens, tennis courts, cricket pitches, bowling greens, and other recreation grounds, its pavilions, band-stands, museums, walks, and groves,

are too numerous to be noticed individually here. Shortly stated, the author has given the benefit of his extensive knowledge and wide experience in the planning, equipment, and arrangement of parks and all their accessories. Every practical expedient that ingenuity can suggest to encourage that open-air life and physical exercise so necessary and beneficial for young and old has been adopted in the schemes and plans submitted by the author of the report.

A word or two about the nature palace may not be out of place. This very important building has been designed to serve several different purposes, such as a winter garden adapted to receptions and conversazioni, and it also could be used as a promenade and popular assembly room, and as a centre for bazaars, periodic industrial exhibitions, flower shows, &c. The author further proposes to give this building the additional and educational interest of a great museum—a museum which, however, should not aim at having a large general collection of geological, botanical, zoological, and anthropological material, such as those which already exist in larger cities. Indeed, the author points out that it would be cheaper for the trust to send whole schools to the museums of Edinburgh than to attempt to possess an independent institution containing, say, the sixth best collection of skeletons in Scotland or the like. This museum in the nature palace is to be something apart from any existing type of museum; in the words of the author, "A museum not primarily of geology, botany, natural history, anthropology, and so on, yet the whole of these within the living unity of nature, scene by scene—in short, a museum of geography." So far as the special requirements of the various natural sciences are concerned, the author recommends as a model the Perth Museum, with its well chosen collection of types.

The latter half of the report, forming book ii., deals with the culture uses of museums and institutes. In this part of the volume, art, music, history, and science are all provided for and suitably housed, with a view not merely to their immediate wants, but ample allowance and provision are made for the future development and expansion of each and every phase of human activity bearing on culture and industry.

In this handsome volume, the author has included a vast amount of detailed information and convincing arguments to show the value of parks, gardens, museums, and culture institutes in the social advancement, education, and well-being of communities.

NATURE'S WAYS.¹

UNLIKE the great majority of works of the same class, this little volume takes no notice of birds, but, as its title implies, is entirely devoted to the lower forms of life which may be met with during rambles in different parts of the country, including both animals and plants. As in the case of his earlier book, all the articles have previously been published in various periodicals and journals; and the opportunity for revision given by their re-publication ought to have enabled the author to correct certain deficiencies in style and expression by which the present issue is disfigured.

For example, on p. 29, Mr. Ward manages to introduce the word "which" three times in the course of a single sentence without the use of any higher stop than a comma. On p. 2 we find an obtrusive instance of the *ego et rex meus* class; and on p. 172 we are told that *occasionally* examples of a

¹ "Peeps into Nature's Ways; being Chapters on Insect, Plant, and Minute Life." By J. J. Ward. Pp. xvii + 302; illustrated. (London: Isbister and Co., 1905.)

certain organism are not *uncommonly* met with. Again, on p. 204 the reader, owing to the misuse of the pronoun "they," is informed that the jaws of a snail possess neither jaws nor teeth; while in the

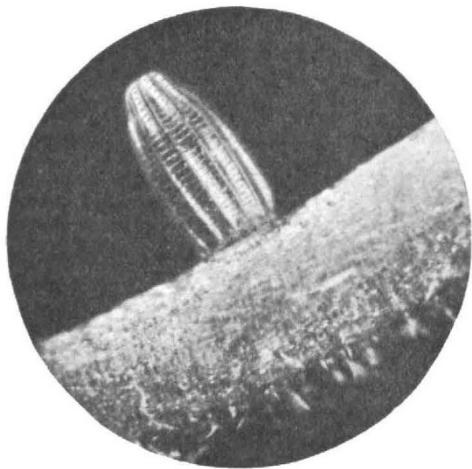


FIG. 1.—Magnified egg of the orange-tip butterfly, on a flower-stalk. From "Peeps into Nature's Ways."

second paragraph on p. 91 we observe a plural pronoun used in connection with a substantive in the singular. The misprint in the first sentence on p. 181 is perhaps excusable; but the statement (p. 186) that

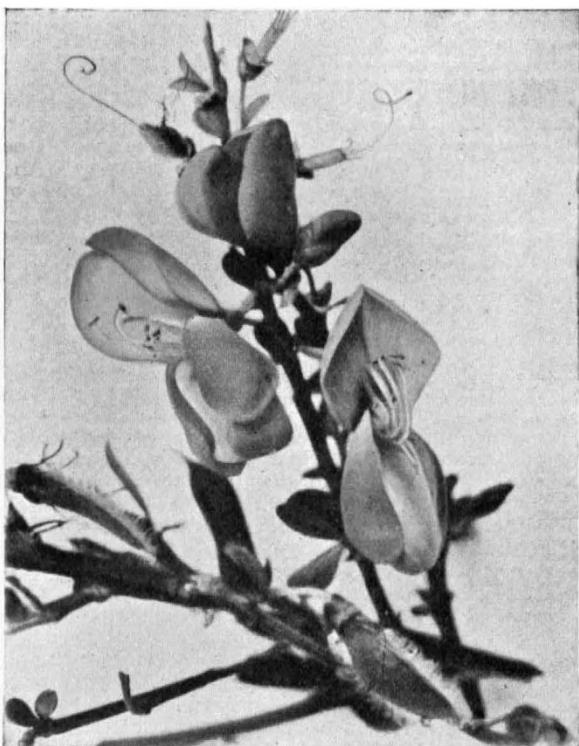


FIG. 2.—A sprig of broom, showing fertilised and unfertilised flowers. From "Peeps into Nature's Ways."

carbon chemically combines with the water sucked up by plants is scarcely an exact definition of what takes place.

Apart from blemishes like the above, the author may